

BRIHANMUMBAI MUNICIPAL CORPORATION

BRIDGES DEPARTMENT



VOLUME-I

UNIFIED SCHEDULE OF RATES

FOR

BRIDGE WORKS-2023

SALIENT FEATURES OF SOR FOR ROAD AND BRIDGE

Abbreviations

AASHTO: American Association of State Highway and Transportation Officials

ASTM: American Society for Testing and Materials

BS: British Standard published by the British Standards Institution

BOQ: Bill of Quantities forming part of the contract

CBR: California Bearing Ratio

IRC: Indian Road Congress

IS: Indian Standard published by the Bureau of Indian Standards

WC: Water Cement Ratio

CRRI : Central Road Research Institute

UCS: Unconfined Compressive Strength

WBM: Water Bound Macadam

SAM: Stress Absorbing Membrane

SAMI : Stress Absorbing Membrane Interlayer

MoRTH: Ministry of Road Transport and Highways

PCC: Plain cement Concrete

RCC: Reinforced cement concrete

PSC: Pre-stressed concrete

HYSD: High Yield Strength Deformed Bars

EJ: Expansion joints

FBEC: Fusion Bonded Epoxy Coating

RE: Reinforced Earth

ESU: Elastomeric slab unit



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Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
I SUBSOIL INVESTIGATION				
		A) WORKS TO BE CARRIED OUT IN HAND		
		Note: Contractors will have to submit proof of sufficient technical competence of agency undertaking items below. The contractors will not be entitled to additional reimbursement for employing alternative agency, if Engineer-in-charge so desires.		
1	R3-BW-1-01	Providing and transporting necessary and adequate plant and equipment to site within a lead of 50 km for taking trial bores for subsoil investigations including conducting an initial survey for establishing datum RLS and locations at trial bores including installation of the drilling equipment of the first bore location etc. complete as specified and directed.	Each unit	35,000.00
2	R3-BW-1-02	Shifting and locating the drilling equipment from one location to another within a lead of 500 m between successive locations including surveying the spot for establishing bore hole location, fixing ground levels with reference to datum RLs and observing groundwater level during boring operation etc. complete as specified and directed.	Each shift	2,705.00
	R3-BW-1-03	Taking trial bores upto 150 mm dia. for subsoil investigation through overburden and soil of all sorts including providing of temporary casing and cleaning the bottom of holes before conducting field tests or collecting samples at various depths etc. complete as specified and directed.		
3	R3-BW-1-03-a	a) Depth upto 6.0m below ground surface	Rmt	1,500.00
4	R3-BW-1-03-b	b) Depth beyond 6.0 m upto 20.0 m below ground surface	Rmt	1,700.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
	R3-BW-1-04	Taking trial bores for subsoil investigation through rock using rotary drilling equipment with NX size diamond core drilling bits to obtain approximately 54 mm dia. rock cores including provision of wooden boxes for storage of cores, indexing the core samples at site of work and conveying the same to the headquarters of concerned office etc. complete as specified and directed.		
5	R3-BW-1-04-a	a) Depth upto 10.0 m below ground surface	Rmt	1,800.00
6	R3-BW-1-04-b	b) Depth beyond 10.0 m upto 20.00 m below ground surface	Rmt	2,000.00
7	R3-BW-1-04-c	c) Beyond 20 mtr.	Rmt	2,400.00
	R3-BW-1-05	Taking trial bores for subsoil investigation through rock using rotary drilling equipment with NX size diamond core drilling bits and double tube core barrel to obtain approximately 54 mm dia. rock cores including provision of wooden boxes for storage of cores, indexing the core samples at site of work and conveying the same to the headquarters of concerned office etc. complete as specified and directed.		
8	R3-BW-1-05-a	a) Depth upto 10.0 m below ground surface	Rmt	2,200.00
9	R3-BW-1-05-b	b) Depth beyond 10.0 m upto 20.00 m below ground surface	Rmt	2,500.00
10	R3-BW-1-05-c	c) Depth beyond 20mtr.	Rmt	2,800.00
11	R3-BW-1-06	Conducting Standard penetration test as per specifications in soil at various levels of bore holes and reporting the results in the approved format etc. complete as specified and directed.	No.	243.00
	R3-BW-1-07	Collecting disturbed samples of soil from bore holes as per specifications and delivering the same to the testing laboratory anywhere in Greater Mumbai as directed etc. complete as specified and directed.		
12	R3-BW-1-07-a	a) In M.S. Black tube 50 mm dia. 150 mm. long including the cost of tube	No.	361.00
13	R3-BW-1-07-b	b) In polythene bags by driving 100 mm size tube.	No.	237.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
14	R3-BW-1-08	Collecting undisturbed samples of soil as per specifications at any depth in M.S. black tube 100 mm dia. 450 mm long, sealed at both ends with paraffin wax and delivering the same to the testing laboratory anywhere in Greater Mumbai etc. complete as specified and directed.	No.	551.00
		B) WORKS TO BE CARRIED OUT IN WATER CREEK		
		Note: 1) The Contractors will have to submit proof of sufficient technical competence of agency undertaking items below. The Contractor will not be entitled to additional reimbursement for employing agency, if Engineer-in-charge so desires.		
		2) The Contractor will have to make their own arrangements for boats, barges, pontoons, floating platforms etc. for carrying out the works covered under 1.009 to 1.016 below for which no extra, payment what so ever will be made.		
15	R3-BW-1-09	Providing and transporting to site necessary and adequate plant and equipment for taking trial bores for subsoil investigations including conducting an initial survey for establishing datum RLS and locations of trial bores including installation of the drilling equipment of the first bore location etc. complete as specified and directed with reference to T.H.D.	Each Unit	53,000.00
16	R3-BW-1-10	Shifting and locating the drilling equipment from one location to another within a lead of 500 m between successive locations including surveying the spot for establishing bore hole location, fixing ground levels with reference to datum RLS and observing ground water level during boring operation etc. complete as specified and directed.	Each Unit	4,202.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
	R3-BW-1-11	Taking trial bores upto 150 mm dia. for subsoil investigation through overburden and soil of all sorts including cleaning the bottom of holes before taking field tests at various depths etc. complete as specified and directed.		
17	R3-BW-1-11-a	a) Depth upto 6.0 m below ground surface	Rmt	2,000.00
18	R3-BW-1-11-b	b) Depth beyond 6.0 m upto 20.0 m below ground surface	Rmt	2,800.00
	R3-BW-1-12	Taking trial bores for subsoil investigation through rock using rotary drilling equipment with NX size diamond core drilling bits to obtain approximately 54 mm dia. rock cores including provision of wooden boxes for storage of cores, indexing the core samples at site of work and conveying the same to the head quarters of concerned office etc. - complete as specified and directed.		
19	R3-BW-1-12-a	a) Depth upto to 10.0 m below ground surface.	Rmt	3,000.00
20	R3-BW-1-12-b	b) Depth beyond 10.0 m upto 20.00 m below ground surface	Rmt	3,400.00
21	R3-BW-1-12-c	c) Depth beyond 20 m to 30 m	Rmt	3,749.00
	R3-BW-1-13	Taking trial bores for sub soil investigation through rock using rotary drilling equipment with NX size diamond core drilling bits and double tube core barrel to obtain approximately 54 mm dia. rock cores including provision of wooden boxes for storage of cores, indexing the core samples at site of work and conveying the same to the headquarters of concerned office etc. complete as specified and directed.		
22	R3-BW-1-13-a	a) Depth upto 10.0 m below ground surface	Rmt	2,900.00
23	R3-BW-1-13-b	b) Depth beyond 10.0 m upto 20.00 m below ground surface	Rmt	3,300.00
24	R3-BW-1-14	Conducting Standard penetration test as per Specifications in soil at various levels of bore holes and reporting the results in the approved format etc. complete as specified and directed.	No.	332.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
	R3-BW-1-15	Collecting disturbed samples of soil from bore holes as per specifications and delivering the same to the testing laboratory anywhere in Greater Mumbai as directed etc. complete as specified and directed.		
25	R3-BW-1-15-a	a) In M.S. Black tube 50 mm dia. 150 mm. long including the cost of tube	No.	456.00
26	R3-BW-1-15-b	b) In polythene bags by driving 100 mm size tube.	No.	332.00
27	R3-BW-1-16	Collecting undisturbed samples of soil as per specifications at any depth in M.S. black tube 100 mm dia. 450 mm long, sealed at both ends with paraffin wax and delivering the same to the testing laboratory anywhere in Greater Mumbai etc. complete as specified and directed.	No.	645.00
28	R3-BW-1-17	Collecting soil samples and sub-soil water samples in glass or plastic bottles / jars from trial bore holes and getting the same chemically analyzed in an approved laboratory for determination of sulphate and chloride contents and pH value etc. complete as specified and directed.	No.	119.00
29	R3-BW-1-18	Carrying out Plate Load Test complete with necessary and adequate Kentledge loads, equipments and instruments etc. as per specifications for determination of bearing capacity of soil etc. complete as specified and directed and submitting reports in duplicate.	No.	1,04,407.00
		(C) SUB-SURFACE EXPLORATIONS		
30	R3-BW-1-19	Preparing and submitting reports and drawings in triplicate for location depth and details of underground pipe lines, cables and services as existing according to standard technique as specified upto whatever depth of excavation and including all equipment, material, and labour of technical expertise as directed excluding excavation.	Each Trench	23,729.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
	R3-BW-1-20	Taking trial pit in soil of all sorts excluding rock including shoring and strutting as required, collecting disturbed & undisturbed samples at 1 m intervals and trial depth, collecting water samples & transporting all soil & water sample to lab., visual inspection for description of strata / recording water table encountered, dewatering manually and refilling at end etc. complete as specified and directed.		
31	R3-BW-1-20-a	a) Upto 2 mt. depth	Cum	2,600.00
32	R3-BW-1-20-b	b) 2 m to 4 m depth	Cum	3,700.00
33	R3-BW-1-20-c	c) 4 m to 6 m depth	Cum	6,000.00
		(D) LABORATORY TESTING		
	R3-BW-1-21	Carrying out tests as per specifications for determination of:		
34	R3-BW-1-21-a	i) Natural moisture Content (NMC) of soil by Oven Drying method	No.	243.00
		ii) Atterberg limits		
35	R3-BW-1-21-b	a) Liquid limit	No.	243.00
36	R3-BW-1-21-c	b) Plastic limit	No.	243.00
37	R3-BW-1-21-d	c) Shrinkage limit	No.	182.00
		iii) Grain size analysis including grain size distribution curves in accordance with IS 2720 (part 4)		
38	R3-BW-1-21-e	a) Sieve Analysis	No.	250.00
39	R3-BW-1-21-f	b) Hydrometer Analysis	No.	400.00
40	R3-BW-1-21-g	iv) In-situ density of soil samples	No.	204.00
41	R3-BW-1-21-h	v) Specific gravity	No.	204.00
42	R3-BW-1-21-i	vi) Unconfined compressive strength of rock samples, including determination of percentage of water absorption and density.	No.	655.00
43	R3-BW-1-22	Carrying out Vane Shear Test at various levels of bore holes as per specifications laid down in IS:4434 and reporting results thereof as per prescribed proforma etc. complete as specified and directed. (Including mobilization of necessary and adequate equipment)	No.	18,000.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
44	R3-BW-1-23	Providing and transporting to site necessary and adequate plant and equipment for performing DPT etc. complete as specified and directed.	Each Unit	24,000.00
45	R3-BW-1-24	Shifting and locating plant and equipment from one location to another location for performing DPT etc. complete as specified and directed.	Each Shift	1,310.00
	R3-BW-1-25	Performing Dynamic cone penetration test in accordance with IS 4968 and reporting the results in the approved format etc. complete as specified and directed.		
46	R3-BW-1-25-a	a) Conducting probing test by using lighter probing rod and light weight hammer (18 kg)	No.	4,200.00
47	R3-BW-1-25-b	b) Conducting probing test using a-drill and SPT hammer (65 kg)	No.	4,300.00
48	R3-BW-1-26	Conducting Direct Shear Test in accordance with IS:2720 (part 13) and reporting results thereof as per prescribed proforma etc complete as specified and directed.	No.	690.00
49	R3-BW-1-27	Conducting Consolidation test on undisturbed soil sample or soil sample compacted to specified density in accordance with IS 2720 (part-15),reporting results including unit weights, specific gravity, e-log p curve, virgin curve, PO, eo, Cc, Cv and mv for all pressure increments etc. complete as specified and directed.	No.	1,220.00
50	R3-BW-1-28	Conducting Unconfined compression test on undisturbed soil samples or soil samples compacted to specified density in accordance with IS : 2720 (part 10) and reporting results thereof as per prescribed Proforma etc. complete as specified and directed.	No.	520.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
II		FOUNDATION		
A) EXCAVATION				
51	R3-BW-2-1	Excavation for foundation in any type of Marshy or creek land upto a depth of 3.0 m by Manual means	Cum	564.00
52	R3-BW-2-1-a	Cost for dewatering, where required for Item No. BW -2-1	Cum	109.00
53	R3-BW-2-1-b	Cost for Shoring & strutting, where required for Item No. BW -2-1	Cum	55.00
		<i>It is assumed that Marshy Soil will be available upto 3 m depth only. For deeper excavation below 3 m depth, refer Common Schedule Earth Work Chapter</i>		
54	R3-BW-2-2	Excavation for foundation in any type of Marshy or creek land upto a depth of 3.0 m by Mechanical Means	Cum	289.00
55	R3-BW-2-2-a	Cost for dewatering, where required for Item No. BW -2.1.2	Cum	50.00
56	R3-BW-2-2-b	Cost for Shoring & strutting, where required for Item No. BW -2.1.2	Cum	25.00
		<i>It is assumed that Marshy Soil will be available upto 3 m depth only. For deeper excavation below 3 m depth, refer Common Schedule Earth Work Chapter</i>		
57	R3-BW-2-3	Back Filling in Marshy Foundation Pits	Cum	536.00
58	R3-BW-2-4	Excavation for foundation in earth, soil of all sorts excluding rock by any method as required and / or directed including shoring and strutting as necessary, removing down vegetation, bailing out water manually, removing the excavated materials upto a safe distance as directed including all lifts and leads, preparing the bed for foundation, backfilling with approved materials, ramming, watering and disposing off the surplus excavated material and cleaning the site etc. complete as specified and directed (0 to 2m.)		Refer R3-CS-EW-2-a

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
59	R3-BW-2-5	Excavationfor foundation in earth, soil of all sorts excluding rock <u>by any method</u> as required and / or directed including shoring and strutting as necessary, removing down vegetation, bailing out water manually, removing the excavated materials upto a safe distance as directed including all lifts and leads, preparing the bed for foundation, backfilling with approved materials, ramming, watering and disposing off the surplus excavated material and cleaning the site etc. complete as specified and directed (above 2m upto 4m.)		Refer R3-CS-EW-2-b
60	R3-BW-2-6	Excavationfor foundation in earth, soil of all sorts excluding rock <u>by any method</u> as required and / or directed including shoring and strutting as necessary, removing down vegetation, bailing out water manually, removing the excavated materials upto a safe distance as directed including all lifts and leads, preparing the bed for foundation, backfilling with approved materials, ramming, watering and disposing off the surplus excavated material and cleaning the site etc. complete as specified and directed (above 4m upto 6m.)		Refer R3-CS-EW-2-c
61	R3-BW-2-7	E.O for Excavation for foundation in soft rock <u>by any method</u> as required and / or directed including bailing out water manually, removing the excavated materials upto a safe distance as directed including all lifts and leads, preparing the bed for foundation, backfilling with approved materials, watering and disposing off the surplus excavated materials and cleaning the site etc. completed as specified and directed (any depth).		Refer R3-CS-EW-3

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
62	R3-BW-2-8	E.O for Excavation for foundation in hard rock by blasting including bailing out water manually, removing the excavated materials upto a safe distance as directed, stacking the serviceable materials neatly and disposing off the unserviceable materials as directed including all leads and lifts, preparing the bed for foundation backfilling with approved materials and disposing off the surplus excavated materials and cleaning the site etc. complete as specified and directed (any depth).		Refer R3-CS-EW-6
63	R3-BW-2-9	Excavation for foundation in hard rock by chiseling /wedging / line drilling without blasting including bailing out water manually, removing the excavated materials upto a safe distance as directed, stacking the serviceable materials neatly and disposing off the unserviceable materials as directed including all leads and lifts, preparing the bed for foundation, backfilling with approved materials and disposing off the surplus excavated materials and cleaning the site etc. complete as specified and directed (any depth).		Refer R3-CS-EW-4
64	R3-BW-2-10	Filling Annular Space Around Footing in Rock (Lean cement concrete 1:3:6 nominal mix).	Cum	5,622.00
65	R3-BW-2-11	Sand Filling in Foundation as per Drawing & Technical Specification	Cum	2,432.00
66	R3-BW-2-12	Dewatering on Horse Power basis by using water pumps including diversion of streams, providing earthen bunds, cofferdams etc. as may necessary for foundation and other parts of structure including pumping out water during and after excavation until work for foundation and sub-structure above natural water is completed etc. completed as specified and directed.		Refer CS-EW-10
		MASONRY ITEMS		

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
67	R3-BW-2-13	Providing and laying Dry Rubble stone packing having thickness 230 mm and above in foundation including hand packing in regular line and level, filling interstices with small pieces of stone, thoroughly ramming and consolidating including watering as necessary etc. complete as specified and directed.	Cum	1,894.00
68	R3-BW-2-14	Providing Coursed rubble masonry1st sort of trap stone in cement mortar 1:5 in superstructure including scaffolding, racking out / striking out joints, watering etc. complete as directed and specified.	Cum	6,192.00
	R3-BW-2-15	Providing random rubble stone masonry of trap stone in cement mortar 1:3 in foundation / sub structure as per drawing and specification striking joints of non exposed faces and pointing the exposed faces with cement mortar 1:3 including scaffolding and watering including bailing out water manually etc. complete.		
69	R3-BW-2-15-a	Square Rubble Coursed rubble masonry(first sort)	Cum	6,251.00
70	R3-BW-2-15-b	Random Rubble Masonry	Cum	5,784.00
		(B) PLAIN AND R.C.C. FOR OPEN FOUNDATIONS		
		Notes: Applicable for all cement concrete items in the BRIDGE Schedule.		
		All concrete shall be procured from RMC and mix design shall got approved from Engr-In-Charge.		
71	R3-BW-2-16	Providing and laying in position M-10 plain cement concrete to fill up loose pockets of foundations bed for making required levels, curing, annular filling around abutments, piers, columns for foundation.	Cum	4,727.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
72	R3-BW-2-17	Providing and placing in position controlled cement concrete of M-15 grade for foundation work with minimum cement 400 kg./cum. and water cement ratio not exceeding 0.4 for PCC raft foundation slab with V notches Sloped / flat / strip footings, pile caps tie beams to required lines / levels including leveling, compacting by vibrators, curing including shuttering, centering as necessary and required etc. complete as specified and as directed.	Cum	5,869.00
73	R3-BW-2-18	Providing and placing in position controlled cement concrete of M-20 grade for foundation work with minimum cement 400 kg./cum. and water cement ratio not exceeding 0.4 for PCC raft foundation slab with V notches Sloped / flat / strip footings, pile caps tie beams to required lines / levels including leveling, compacting by vibrators, curing including shuttering, centering as necessary and required etc. complete as specified and as directed.	Cum	6,293.00
	R3-BW-2-19	Providing and placing in position controlled cement concrete of M-20 grade for foundation work with minimum cement 400 kg./cum. and water cement ratio not exceeding 0.4 for RCC raft foundation slab with V notches Sloped / flat / strip footings, pile caps tie beams to required lines / levels including leveling, compacting by vibrators, curing including shuttering, centering as necessary and required etc. complete as specified and as directed but excluding reinforcement.		
74	R3-BW-2-19-a	a) Using concrete mixer		DELETED
75	R3-BW-2-19-b	b) With RMC and Concrete Pump	Cum	6,371.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
	R3-BW-2-20	Providing and placing in position controlled cement concrete of M-25 grade for foundation work with minimum cement 400 kg./cum. and water cement ratio not exceeding 0.4 for PCC raft foundation slab with V notches Sloped / flat / strip footings, pile caps tie beams to required lines / levels including leveling, compacting by vibrators, curing including shuttering, centering as necessary and required etc. complete as specified and as directed.		
76	R3-BW-2-20-a	a) Using concrete mixer		DELETED
77	R3-BW-2-20-b	b) With RMC and Concrete Pump	Cum	6,953.00
	R3-BW-2-21	Providing and placing in position controlled cement concrete of M-25 grade for foundation work with minimum cement 400 kg. /cum. and water cement ratio not exceeding 0.4 for RCC raft foundation slab with V notches Sloped / flat / strip footings, pile caps tie beams to required lines / levels including leveling, compacting by vibrators, curing including shuttering, centering as necessary and required etc. complete as specified and as directed but excluding reinforcement.		
78	R3-BW-2-21-a	a) Using concrete mixer		DELETED
79	R3-BW-2-21-b	b) With RMC and Concrete Pump	Cum	6,953.00
	R3-BW-2-22	Providing and placing in position controlled cement concrete of M-30 grade for foundation work with minimum cement 400 kg. /cum. and water cement ratio not exceeding 0.4 for PCC raft foundation slab with V notches Sloped / flat / strip footings, pile caps tie beams to required lines / levels including leveling, compacting by vibrators, curing including shuttering, centering as necessary and required etc. complete as specified and as directed.		
80	R3-BW-2-22-a	a) Using concrete mixer		DELETED
81	R3-BW-2-22-b	b) With RMC and Concrete Pump	Cum	7,181.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
	R3-BW-2-23	Providing and placing in position controlled cement concrete of M-30 grade for foundation work with minimum cement 400 kg. /cum. and water cement ratio not exceeding 0.4 for RCC raft foundation slab with V notches Sloped / flat / strip footings, pile caps tie beams to required lines / levels including leveling, compacting by vibrators, curing including shuttering, centering as necessary and required etc. complete as specified and as directed but excluding reinforcement.		
82	R3-BW-2-23-a	a) Using concrete mixer		DELETED
83	R3-BW-2-23-b	b) With RMC and Concrete Pump	Cum	7,181.00
	R3-BW-2-24	Providing and placing in position controlled cement concrete of M-35 grade for foundation work with minimum cement 400 kg./cum. and water cement ratio not exceeding 0.4 for RCC raft foundation slab with V notches Sloped / flat / strip footings, pile caps tie beams to required lines / levels including leveling, compacting by vibrators, curing including shuttering, centering as necessary and required etc. complete as specified and as directed but excluding reinforcement.		
84	R3-BW-2-24-a	a) Using concrete mixer		DELETED
85	R3-BW-2-24-b	b) With RMC and Concrete Pump	Cum	7,632.00
86	R3-BW-2-25	Providing and placing in position controlled cement concrete of M-40 grade for foundation work with minimum cement 400 kg. /cum. and water cement ratio not exceeding 0.4 for RCC raft foundation slab with V notches Sloped / flat / strip footings, pile caps tie beams to required lines / levels including leveling, compacting by vibrators, curing including shuttering, centering as necessary and required etc. complete as specified and as directed but excluding reinforcement.	Cum	7,977.00
		(C) PILE FOUNDATIONS		

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
	R3-BW-2-26	Providing and installing in position controlled concrete of grade M-30 (RMC) with minimum cement content as 440 kg/cum. and W.C. ratio not exceeding 0.40for RCC work in cast-in-situ bored piles each of load capacity as per design and of specified diameter using maximum 20 mm size of aggregate including boring through all strata except rock, including placing of concrete by tremie arrangement through mild steel casing to the required depth through all strata except rock, compaction as necessary with drawl of mild steel casing including chipping / dressing of piles to required levels, cleaning the reinforcement etc. complete as specified and directed (Excluding reinforcement) .		
87	R3-BW-2-26-a	1) 400 mm dia	Rmt	1,622.00
88	R3-BW-2-26-b	2) 450 mm dia	Rmt	2,052.00
89	R3-BW-2-26-c	3) 500 mm dia	Rmt	2,534.00
90	R3-BW-2-26-d	5) 600 mm dia	Rmt	3,649.00
91	R3-BW-2-26-e	8) 750 mm dia	Rmt	5,701.00
92	R3-BW-2-26-f	11) 1000 mm dia	Rmt	10,135.00
93	R3-BW-2-26-g	13) 1200 mm dia	Rmt	14,594.00
	R3-BW-2-27	Providing and installing in position controlled concrete of grade M-35 (RMC) with minimum cement content as 440 kg/cum. and W.C. ratio not exceeding 0.40for RCC work in cast-in-situ bored piles each of load capacity as per design and of specified diameter using maximum 20 mm size of aggregate including boring through all strata except rock, including placing of concrete by tremie arrangement through mild steel casing to the required depth through all strata except rock, compaction as necessary with drawl of mild steel casing including chipping / dressing of piles to required levels, cleaning the reinforcement, removal of excavated earth with all lifts and lead upto 1000 m. etc. complete as specified and directed (Excluding reinforcement) .		

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
94	R3-BW-2-27-a	1) 400 mm dia	Rmt	1,676.00
95	R3-BW-2-27-b	2) 450 mm dia	Rmt	2,121.00
96	R3-BW-2-27-c	3) 500 mm dia	Rmt	2,619.00
97	R3-BW-2-27-d	4) 550 mm dia	Rmt	3,169.00
98	R3-BW-2-27-e	5) 600 mm dia	Rmt	3,771.00
99	R3-BW-2-27-f	6) 650 mm dia.	Rmt	4,426.00
100	R3-BW-2-27-g	7) 700 mm dia.	Rmt	5,133.00
101	R3-BW-2-27-h	8) 750 mm dia.	Rmt	5,892.00
102	R3-BW-2-27-i	9) 800 mm dia.	Rmt	6,704.00
103	R3-BW-2-27-j	10) 900 mm dia.	Rmt	8,485.00
104	R3-BW-2-27-k	11) 1000 mm dia.	Rmt	10,475.00
105	R3-BW-2-27-l	12)1100mmdia.	Rmt	12,675.00
106	R3-BW-2-27-m	13) 1200 mm dia.	Rmt	15,084.00
	R3-BW-2-28	Extra over rates quoted in items BW-2-26 and BW-2-27 for chiseling through soft / weathered rock / hard rock / large boulders / old foundations / masonry / concrete etc. using a chisel weighing not less than 750 kg.		
107	R3-BW-2-28-a	1) 400mmdia	Rmt	1,472.00
108	R3-BW-2-28-b	2) 450 mm dia	Rmt	1,863.00
109	R3-BW-2-28-c	3) 500 mm dia	Rmt	2,300.00
110	R3-BW-2-28-d	4) 550 mm dia	Rmt	2,783.00
111	R3-BW-2-28-e	5) 600 mm dia	Rmt	3,312.00
112	R3-BW-2-28-f	6) 650 mm dia	Rmt	3,887.00
113	R3-BW-2-28-g	7) 700 mm dia	Rmt	4,508.00
114	R3-BW-2-28-h	8) 750 mm dia	Rmt	5,174.00
115	R3-BW-2-28-i	9) 800 mm dia	Rmt	5,887.00
116	R3-BW-2-28-j	10) 850 mm dia	Rmt	6,646.00
117	R3-BW-2-28-k	11) 900 mm dia	Rmt	7,451.00
118	R3-BW-2-28-l	12) 1000 mm dia	Rmt	9,199.00
119	R3-BW-2-28-m	13) 1100 mm dia	Rmt	11,131.00
120	R3-BW-2-28-n	14) 1200 mm dia	Rmt	13,247.00
121	R3-BW-2-28-o	Empty boring through over burden including road crust upto the bottom of pile cap for all diameters of piles.	Rmt	2,713.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
	R3-BW-2-29	Chipping and dressing of the RCC piles to remove surplus concrete up to one meter height only above cut off level without damaging the projecting reinforcement including clearing reinforcement and removing the dismantled materials etc. complete as specified and directed.		
122	R3-BW-2-29-a	1) 400 mm dia	Rmt	348.00
123	R3-BW-2-29-b	2) 450 mm dia	Rmt	441.00
124	R3-BW-2-29-c	3) 500 mm dia	Rmt	544.00
125	R3-BW-2-29-d	4) 550 mm dia	Rmt	659.00
126	R3-BW-2-29-e	5) 600 mm dia	Rmt	784.00
127	R3-BW-2-29-f	6) 650 mm dia	Rmt	920.00
128	R3-BW-2-29-g	7) 700 mm dia	Rmt	1,067.00
129	R3-BW-2-29-h	8) 750 mm dia	Rmt	1,225.00
130	R3-BW-2-29-i	9) 800 mm dia	Rmt	1,393.00
131	R3-BW-2-29-j	10) 900 mm dia	Rmt	1,763.00
132	R3-BW-2-29-k	11) 1000 mm dia	Rmt	2,177.00
133	R3-BW-2-29-l	12) 1100 mm dia	Rmt	2,634.00
134	R3-BW-2-29-m	13) 1200 mm dia	Rmt	3,135.00
	R3-BW-2-30	Providing and installing in position controlled concrete of grade M-35 (RMC and Concrete Pump) with minimum cement content as 440 kg/cum. and W.C. ratio not exceeding 0.40 for RCC work in driven cast-in-situ vertical piles each of load capacity as per design and of specified diameter using maximum 20 mm size of aggregate including boring through all strata except rock, including placing of concrete by tremie arrangement through mild steel casing to the required depth through all strata except rock, compaction as necessary with drawl of mild steel casing including chipping / dressing of piles to required levels, cleaning the reinforcement etc. complete as specified and directed (Excluding reinforcement).		
135	R3-BW-2-30-a	a) 750 mm dia	Rmt	5,872.00
136	R3-BW-2-30-b	b) 1000 mm dia	Rmt	9,232.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
137	R3-BW-2-30-c	c) 1200 mm dia	Rmt	13,512.00
138	R3-BW-2-31	Providing and placing in position M-35 RCC precast piles of 500 mm dia in preformed bores made with hydraulic rig drilling / boring through all type of strata including hard rock using portland cement with minimum cement content as 400 kg. Per cum. and water cement ratio not exceeding 0.40 each with a load capacity as per design, transporting the precast pile from casting yard to site of work, hoisting and holding the pile truly vertical with the help of crane of required capacity, placing the pile in position including grouting the annular space with cement grout (1 :2) (1 cement, 2 fine sand) between the pile and the preformed bore including cutting off the surplus length of pile and dressing neatly including providing M.S. black tube 30 mm dia through the centre of pile for grouting etc. complete including cost of all boring work through all type of strata as specified and directed but excluding the cost of reinforcement.	Rmt	3,441.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
139	R3-BW-2-32	Providing and placing in position M-35 RCC precast piles of 600 mm dia in preformed bores made with hydraulic rig drilling / boring through all type of strata including hard rock using portland cement with minimum cement content as 400 kg. Per cum. and water cement ratio not exceeding 0.40 each with a load capacity as per design, transporting the precast pile from casting yard to site of work, hoisting and holding the pile truly vertical with the help of crane of required capacity, placing the pile in position including grouting the annular space with cement grout (1 :2) (1 cement, 2 fine sand) between the pile and the preformed bore including cutting off the surplus length of pile and dressing neatly including providing M.S. black tube 30 mm dia through the centre of pile for grouting etc. complete including cost of all boring work through all type of strata as specified and directed but excluding the cost of reinforcement.	Rmt	4,061.00
140	R3-BW-2-33	Providing and placing in position M-35 RCC precast piles of 450 mm dia in preformed bores made with hydraulic rig drilling / boring through all type of strata including hard rock using portland cement with minimum cement content as 400 kg. Per cum. and water cement ratio not exceeding 0.40 each with a load capacity as per design, transporting the precast pile from casting yard to site of work, hoisting and holding the pile truly vertical with the help of crane of required capacity, placing the pile in position including grouting the annular space with cement grout (1 :2) (1 cement, 2 fine sand) between the pile and the preformed bore including cutting off the surplus length of pile and dressing neatly including providing M.S. black tube 30 mm dia through the centre of pile for grouting etc. complete including cost of all boring work through all type of strata as specified and directed but excluding the cost of reinforcement.	Rmt	3,170.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
141	R3-BW-2-34	Providing and placing in position M-35 RCC precast piles of 750 mm dia in preformed bores made with hydraulic rig drilling / boring through all type of strata including hard rock using portland cement with minimum cement content as 400 kg. Per cum. and water cement ratio not exceeding 0.40 each with a load capacity as per design, transporting the precast pile from casting yard to site of work, hoisting and holding the pile truly vertical with the help of crane of required capacity, placing the pile in position including grouting the annular space with cement grout (1 :2) (1 cement, 2 fine sand) between the pile and the preformed bore including cutting off the surplus length of pile and dressing neatly including providing M.S. black tube 30 mm dia through the centre of pile for grouting etc. complete including cost of all boring work through all type of strata as specified and directed but excluding the cost of reinforcement.	Rmt	5,220.00
142	R3-BW-2-35	Providing and placing in position M-35 RCC precast piles of 1000 mm dia in preformed bores made with hydraulic rig drilling / boring through all type of strata including hard rock using portland cement with minimum cement content as 400 kg. Per cum. and water cement ratio not exceeding 0.40 each with a load capacity as per design, transporting the precast pile from casting yard to site of work, hoisting and holding the pile truly vertical with the help of crane of required capacity, placing the pile in position including grouting the annular space with cement grout (1 :2) (1 cement, 2 fine sand) between the pile and the preformed bore including cutting off the surplus length of pile and dressing neatly including providing M.S. black tube 30 mm dia through the centre of pile for grouting etc. complete including cost of all boring work through all type of strata as specified and directed but excluding the cost of reinforcement.	Rmt	8,234.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
143	R3-BW-2-36	Providing and installing in position permanent M.S. liners for piles of specified diameter and fabricated from 6.0 to 8.0mm thick plates as per detailed drawings and designs including cutting, bending to required shape, welding, painting with Red Oxide paint etc. complete as specified and directed.	MT	82,168.00
144	R3-BW-2-36-a	Providing and installing in position temporary M.S. liners for piles (empty boring) of specified diameter and fabricated from 6.0 to 8.0mm thick plates as per detailed drawings and designs including cutting, bending to required shape, welding, painting with Red Oxide paint etc. complete as specified and directed.	MT	60,705.00
145	R3-BW-2-37	Levelling course for Pile cap - Providing and laying of PCC M15 levelling course 100mm thick below the pile cap.	Cum	4,825.00
	R3-BW-2-38	Providing and cutting bending, hooking, laying in position and tying Mild steel / HYSD bars for reinforcement (including lapping) as per detailed drawings for R.C.C.work.		
146	R3-BW-2-38-a	a) HYSD bars	MT	71,289.00
147	R3-BW-2-38-b	b) Mild Steel bars	MT	87,889.00
		(D) WELL FOUNDATIONS		
	R3-BW-2-39	Providing and constructing temporary island 16 m diameter for construction of well foundation for 8m dia. Well.		
148	R3-BW-2-39-a	Assuming depth of water 1.0 m and height of island to be 1.25m.	Each	69,924.00
149	R3-BW-2-39-b	Assuming depth of water 4.0 m and height of island 4.5 m.	Each	3,86,580.00
150	R3-BW-2-40	Providing and constructing one span service road to reach island location from one pier location to another pier location	Rmt	3,102.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
151	R3-BW-2-41	Providing, fabricating and setting out in requisite position Mild steel weighing 40 kg per meter cutting edge for RCC wells including cutting, bending to required shape as per detailed drawings and designs including bolting, riveting or welding sections, dowels for anchoring the cutting edge to well curb etc. complete as specified and directed.	MT	1,07,091.00
		Well curb		
	R3-BW-2-42	Providing and placing in position controlled cement concrete in M-25 grade in well curbs with minimum cement content as 400 kg/cum. water cement ratio not exceeding 0.40 and maximum size of coarse aggregate not exceeding 20 mm including necessary formwork to give form finish surface, compacting by vibrators, curing etc. complete as specified and directed. (Excluding reinforcement).		
152	R3-BW-2-42-a	a) Using concrete mixer		DELETED
153	R3-BW-2-42-b	b) With RMC and Concrete Pump	Cum	7,756.00
	R3-BW-2-43	Providing and placing in position controlled cement concrete in M-30 grade in well curbs with minimum cement content as 400 kg/cum. water cement ratio not exceeding 0.40 and maximum size of coarse aggregate not exceeding 20 mm including necessary formwork to give form finish surface, compacting by vibrators, curing etc. complete as specified and directed. (Excluding reinforcement) .		
154	R3-BW-2-43-a	a) Using concrete mixer		DELETED
155	R3-BW-2-43-b	b) With RMC and Concrete Pump	Cum	8,287.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
	R3-BW-2-44	Providing and placing in position controlled cement concrete in M-35 grade in well curbs with minimum cement content as 400 kg/cum. water cement ratio not exceeding 0.40 and maximum size of coarse aggregate not exceeding 20 mm including necessary formwork to give form finish surface, compacting by vibrators, curing etc. complete as specified and directed. (Excluding reinforcement) .		
156	R3-BW-2-44-a	a) Using concrete mixer		DELETED
157	R3-BW-2-44-b	b) With RMC and Concrete Pump	Cum	8,807.00
		Wellsteining		
158	R3-BW-2-45	Providing and placing in position controlled cement concrete of M-15 grade in PCC well steining as per detailed design and drawings with minimum cement content of 400 kg/cum, water cement ratio not exceeding 0.40 and-maximum size of aggregate not exceeding 20 mm including form work to give form finish surface, compacting by vibrators, necessary bracings and curing etc. complete as specified and directed.	Cum	5,950.00
159	R3-BW-2-46	Providing and placing in position controlled cement concrete of M-20 grade in PCC well steining as per detailed design and drawings with minimum cement content of 400 kg/cum, water cement ratio not exceeding 0.40 and-maximum size of aggregate not exceeding 20 mm including form work to give form finish surface, compacting by vibrators, necessary bracings and curing etc. complete as specified and directed.	Cum	6,682.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
	R3-BW-2-47	Providing and placing in position controlled cement concrete of M-20 grade in RCC well steining as per detailed design and drawings with minimum cement content of 400 kg/cum, water cement ratio not exceeding 0.40 and-maximum size of aggregate not exceeding 20 mm including form work to give form finish surface, compacting by vibrators, necessary bracings and curing etc. complete as specified and directed. (Excluding reinforcement)		
160	R3-BW-2-47-a	a) Using concrete mixer		DELETED
161	R3-BW-2-47-b	b) With RMC and Concrete Pump	Cum	6,739.00
	R3-BW-2-48	Providing and placing in position controlled cement concrete of M-25 grade in PCC well steining as per detailed design and drawings with minimum cement content of 400 kg/cum, water cement ratio not exceeding 0.40 and-maximum size of aggregate not exceeding 20 mm including form work to give form finish surface, compacting by vibrators, necessary bracings and curing etc. complete as specified and directed.		
162	R3-BW-2-48-a	a) Using concrete mixer		DELETED
163	R3-BW-2-48-b	b) With RMC and Concrete Pump	Cum	7,355.00
	R3-BW-2-49	Providing and placing in position controlled cement concrete of M-25 grade in RCC well steining as per detailed design and drawings with minimum cement content of 400 kg/cum, water cement ratio not exceeding 0.40 and-maximum size of aggregate not exceeding 20 mm including form work to give form finish surface, compacting by vibrators, necessary bracings and curing etc. complete as specified and directed. (Excluding reinforcement)		
164	R3-BW-2-49-a	a) Using concrete mixer		DELETED
165	R3-BW-2-49-b	b) With RMC and Concrete Pump	Cum	7,355.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
	R3-BW-2-50	Providing and placing in position controlled cement concrete of M-30 grade in PCC well steining as per detailed design and drawings with minimum cement content of 400 kg/cum, water cement ratio not exceeding 0.40 and-maximum size of aggregate not exceeding 20 mm including form work to give form finish surface, compacting by vibrators, necessary bracings and curing etc. complete as specified and directed.		
166	R3-BW-2-50-a	a) Using concrete mixer		DELETED
167	R3-BW-2-50-b	b) With RMC and Concrete Pump	Cum	7,596.00
	R3-BW-2-51	Providing and placing in position controlled cement concrete of M-30 grade in RCC well steining as per detailed design and drawings with minimum cement content of 400 kg/cum, water cement ratio not exceeding 0.40 and-maximum size of aggregate not exceeding 20 mm including form work to give form finish surface, compacting by vibrators, necessary bracings and curing etc. complete as specified and directed. (Excluding reinforcement)		
168	R3-BW-2-51-a	a) Using concrete mixer		DELETED
169	R3-BW-2-51-b	b) With RMC and Concrete Pump	Cum	7,596.00
	R3-BW-2-52	Providing and placing in position controlled cement concrete of M-35 grade in RCC well steining as per detailed design and drawings with minimum cement content of 400 kg/cum, water cement ratio not exceeding 0.40 and maximum size of aggregate not exceeding 20 mm including form work to give form finish surface, compacting by vibrators, necessary bracings and curing etc. complete as specified and directed (Excluding reinforcement) .		
170	R3-BW-2-52-a	a) Using concrete mixer		DELETED
171	R3-BW-2-52-b	b) With RMC and Concrete Pump	Cum	8,073.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
		Providing and placing in position controlled cement concrete of M-40 grade in RCC well steining as per detailed design and drawings with minimum cement content of 400 kg/cum, water cement ratio not exceeding 0.40 and maximum size of aggregate not exceeding 20 mm including form work to give form finish surface, compacting by vibrators, necessary bracings and curing etc. complete as specified and directed (Excluding reinforcement) .		
172	R3-BW-2-53	- With RMC and Concrete Pump	Cum	8,438.00
		Sinking of 6 m external diameter well (other than pneumatic method of sinking) through all types of strata namely sandy soil, clayey soil and rock as shown against each case, complete as per drawing and technical specifications. Depth of sinking is reckoned from bed level.		
	R3-BW-2-54	Sandy soil		
173	R3-BW-2-54-a	Depth below bed level upto 3.0 M	Rmt	6,421.00
174	R3-BW-2-54-b	Beyond 3m upto 10m depth	Rmt	8,991.00
		Beyond 10m upto 20m		
175	R3-BW-2-54-c	Add 5% for every additional meter depth of sinking over the rate of sinking for the previous meter	Rmt	11,874.00
		Beyond 20m upto 30 m		
176	R3-BW-2-54-d	Add 7.5% for every additional meter depth of sinking over the rate of sinking for the previous meter	Rmt	22,272.00
177	R3-BW-2-54-e	Add 20% of cost for Kentledge including supports, loading arrangement and Labour .	Rmt	26,726.00
		Beyond 30m upto 40 m		
178	R3-BW-2-54-f	Add 10% for every additional meter depth of sinking over the rate of sinking for the previous meter	Rmt	52,914.00
179	R3-BW-2-54-g	Add 20% of cost for Kentledge including supports, loading arrangement and Labour .	Rmt	63,496.00
	R3-BW-2-55	Clayey soil (6m dia. Well)		
180	R3-BW-2-55-a	Depth below bed level upto 3.0 M	Rmt	9,032.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
181	R3-BW-2-55-b	Beyond 3m upto 10m depth	Rmt	20,658.00
		Beyond 10 m upto 20 m		
182	R3-BW-2-55-c	Add 5% for every additional meter depth of sinking over the rate of sinking for the previous meter	Rmt	27,283.00
183	R3-BW-2-55-d	Add for dewatering @ 5% of cost, if required.	Rmt	28,648.00
		Beyond 20m upto 30 m		
184	R3-BW-2-55-e	Add 7.5% for every additional meter depth of sinking over the rate of sinking for the previous meter	Rmt	51,176.00
185	R3-BW-2-55-f	Add 5% of cost for additional meter depth including dewatering, if required	Rmt	64,481.00
186	R3-BW-2-55-g	Add 20% of cost for Kentledge including supports, loading arrangement and Labour).	Rmt	61,411.00
		Beyond 30m upto 40 m		
187	R3-BW-2-55-h	Add 10% for every additional meter depth of sinking over the rate of sinking for the previous meter	Rmt	1,21,586.00
188	R3-BW-2-55-i	Add 5% of cost for additional meter depth including dewatering, if required	Rmt	1,53,198.00
189	R3-BW-2-55-j	Add 20% of cost for Kentledge including supports, loading arrangement and Labour).	Rmt	1,45,903.00
		Soft rock (6m diawell)		
190	R3-BW-2-56	Depth of strata upto 3m	Rmt	33,181.00
		Hard rock (6m diawell)		
191	R3-BW-2-57	Depth of strata upto 3m	Rmt	33,344.00
		Sinking of 7 m external diameter well (other than pneumatic method of sinking) through all types of strata namely sandy soil, clayey soil and rock as shown against each case, complete as per drawing and technical specifications. Depth of sinking is reckoned from bed level.		
	R3-BW-2-58	Sandy soil		
192	R3-BW-2-58-a	Depth below bed level upto 3.0 M	Rmt	9,473.00
193	R3-BW-2-58-b	Beyond 3m upto 10m depth	Rmt	12,526.00
		Beyond 10m upto 20m		

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
194	R3-BW-2-58-c	Add 5% for every additional meter depth of sinking over the rate of sinking for the previous meter	Rmt	16,543.00
		Beyond 20m upto 30 m		
195	R3-BW-2-58-d	Add 7.5% for every additional meter depth of sinking over the rate of sinking for the previous meter	Rmt	31,029.00
196	R3-BW-2-58-e	Add 20% of cost for Kentledge including supports, loading arrangement and Labour) .	Rmt	37,235.00
		Beyond 30m upto 40 m		
197	R3-BW-2-58-f	Add 10% for every additional meter depth of sinking over the rate of sinking for the previous meter	Rmt	73,722.00
198	R3-BW-2-58-g	Add 20% of cost for Kentledge including supports, loading arrangement, and Labour etc.	Rmt	88,467.00
	R3-BW-2-59	Clayey soil (7m dia. Well)		
199	R3-BW-2-59-a	Depth below bed level upto 3.0 M	Rmt	12,526.00
200	R3-BW-2-59-b	Beyond 3m upto 10m depth	Rmt	20,933.00
		Beyond 10 m upto 20 m		
201	R3-BW-2-59-c	Add 5% for every additional meter depth of sinking over the rate of sinking for the previous meter	Rmt	27,647.00
202	R3-BW-2-59-d	Add 5% of cost for additional meter depth including dewatering, if required	Rmt	29,029.00
		Beyond 20m upto 30 m		
203	R3-BW-2-59-e	Add 7.5% for every additional meter depth of sinking over the rate of sinking for the previous meter	Rmt	51,857.00
204	R3-BW-2-59-f	Add 5% of cost for additional meter depth including dewatering, if required	Rmt	65,339.00
205	R3-BW-2-59-g	Add 20% of cost for Kentledge including supports, loading arrangement and Labour) .	Rmt	62,228.00
		Beyond 30m upto 40 m		
206	R3-BW-2-59-h	Add 10% for every additional meter depth of sinking over the rate of sinking for the previous meter	Rmt	1,23,205.00
207	R3-BW-2-59-i	Add 5% of cost for additional meter depth including dewatering, if required	Rmt	1,55,238.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
208	R3-BW-2-59-j	Add 20% of cost for Kentledge including supports, loading arrangement and Labour).	Rmt	1,47,846.00
		Soft rock (7m dia well)		
209	R3-BW-2-60	Depth of soft rock strata upto 3m	Rmt	27,352.00
		Hard rock (7m dia well)		
210	R3-BW-2-61	Depth upto 3 m	Rmt	39,915.00
		Sinking of 8 m external diameter well (other than pneumatic method of sinking) through all types of strata namely sandy soil, clayey soil and rock as shown against each case, complete as per drawing and technical specifications. Depth of sinking is reckoned from bed level.		
	R3-BW-2-62	Sandy soil		
211	R3-BW-2-62-a	Depth below bed level upto 3.0 M	Rmt	11,561.00
212	R3-BW-2-62-b	Beyond 3m upto 10m depth	Rmt	14,168.00
		Beyond 10m upto 20m		
213	R3-BW-2-62-c	Add 5% for every additional meter depth of sinking over the rate of sinking for the previous meter	Rmt	18,711.00
		Beyond 20m upto 30 m		
214	R3-BW-2-62-d	Add 7.5% for every additional meter depth of sinking over the rate of sinking for the previous meter	Rmt	35,098.00
215	R3-BW-2-62-e	Add 20% of cost for Kentledge including supports, loading arrangement and Labour .	Rmt	42,117.00
		Beyond 30m upto 40 m		
216	R3-BW-2-62-f	Add 10% for every additional meter depth of sinking over the rate of sinking for the previous meter	Rmt	12,338.00
217	R3-BW-2-62-g	Add 20% of cost for Kentledge including supports, loading arrangement, and Labour etc.	Rmt	14,805.00
		Clayey soil (8m dia. Well)		
218	R3-BW-2-63-a	Depth upto 3.0 M	Rmt	15,336.00
219	R3-BW-2-63-b	Beyond 3m upto 10m depth	Rmt	22,158.00
		Beyond 10 m upto 20 m		

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
220	R3-BW-2-63-c	Add 5% for every additional meter depth of sinking over the rate of sinking for the previous meter	Rmt	29,264.00
221	R3-BW-2-63-d	Add for dewatering @ 5% of cost, if required. Beyond 20m upto 30 m	Rmt	30,727.00
222	R3-BW-2-63-e	Add 7.5% for every additional meter depth of sinking over the rate of sinking for the previous meter	Rmt	54,892.00
223	R3-BW-2-63-f	Add 5% of cost for additional meter depth including dewatering, if required	Rmt	69,163.00
224	R3-BW-2-63-g	Add 20% of cost for Kentledge including supports, loading arrangement and Labour). Beyond 30m upto 40 m	Rmt	65,870.00
225	R3-BW-2-63-h	Add 10% for every additional meter depth of sinking over the rate of sinking for the previous meter	Rmt	1,30,414.00
226	R3-BW-2-63-i	Add 5% of cost for additional meter depth including dewatering, if required	Rmt	1,64,322.00
227	R3-BW-2-63-j	Add 20% of cost for Kentledge including supports, loading arrangement and Labour). Soft rock (8m diawell)	Rmt	1,56,497.00
228	R3-BW-2-64	Depth in soft rock strata upto 3m Hard rock (8m diawell)	Rmt	30,368.00
229	R3-BW-2-65	Depth in hard rock strata upto 3 m	Rmt	41,525.00
		Sinking of 9 m external diameter well (other than pneumatic method of sinking) through all types of strata namely sandy soil, clayey soil and rock as shown against each case, complete as per drawing and technical specifications. Depth of sinking is reckoned from bed level.		
	R3-BW-2-66	Sandy soil		
230	R3-BW-2-66-a	Depth below bed level upto 3.0 M	Rmt	11,761.00
231	R3-BW-2-66-b	Beyond 3m upto 10m depth Beyond 10m upto 20m	Rmt	15,532.00
232	R3-BW-2-66-c	Add 5% for every additional meter depth of sinking over the rate of sinking for the previous meter Beyond 20m upto 30 m	Rmt	20,513.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
233	R3-BW-2-66-d	Add 7.5% for every additional meter depth of sinking over the rate of sinking for the previous meter	Rmt	38,476.00
234	R3-BW-2-66-e	Add 20% of cost for Kentledge including supports, loading arrangement and Labour.	Rmt	46,171.00
		Beyond 30m upto 40 m		
235	R3-BW-2-66-f	Add 10% for every additional meter depth of sinking over the rate of sinking for the previous meter	Rmt	91,412.00
236	R3-BW-2-66-g	Add 20% of cost for Kentledge including supports, loading arrangement, and Labour etc.	Rmt	1,09,694.00
	R3-BW-2-67	Clayey soil (9m dia. Well)		
237	R3-BW-2-67-a	Depth below bed level upto 3.0 M	Rmt	16,260.00
238	R3-BW-2-67-b	Beyond 3m upto 10m depth	Rmt	23,846.00
		Beyond 10 m upto 20 m		
239	R3-BW-2-67-c	Add 5% for every additional meter depth of sinking over the rate of sinking for the previous meter	Rmt	31,493.00
240	R3-BW-2-67-d	Add for dewatering @ 5% of cost, if required.	Rmt	33,068.00
		Beyond 20m upto 30 m		
241	R3-BW-2-67-e	Add 7.5% for every additional meter depth of sinking over the rate of sinking for the previous meter	Rmt	59,074.00
242	R3-BW-2-67-f	Add 5% of cost for additional meter depth including dewatering, if required	Rmt	74,434.00
243	R3-BW-2-67-g	Add 20% of cost for Kentledge including supports, loading arrangement and Labour).	Rmt	70,889.00
		Beyond 30m upto 40 m		
244	R3-BW-2-67-h	Add 10% for every additional meter depth of sinking over the rate of sinking for the previous meter	Rmt	1,40,351.00
245	R3-BW-2-67-i	Add 5% of cost for additional meter depth including dewatering, if required	Rmt	1,76,842.00
246	R3-BW-2-67-j	Add 20% of cost for Kentledge including supports, loading arrangement and Labour).	Rmt	1,68,421.00
		Soft rock (9m dia well)		
247	R3-BW-2-68	Depth upto 3m	Rmt	37,317.00
		Hard rock (9m dia well)		

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
248	R3-BW-2-69	Depth of hard rock strata upto 3 m	Rmt	47,604.00
		Sinking of 10 m external diameter well (other than pneumatic method of sinking) through all types of strata namely sandy soil, clayey soil and rock as shown against each case, complete as per drawing and technical specifications. Depth of sinking is reckoned from bed level.		
	R3-BW-2-70	Sandy soil		
249	R3-BW-2-70-a	Depth below bed level upto 3.0 M	Rmt	13,890.00
250	R3-BW-2-70-b	Beyond 3m upto 10m depth	Rmt	16,474.00
		Beyond 10m upto 20m		
251	R3-BW-2-70-c	Add 5% for every additional meter depth of sinking over the rate of sinking for the previous meter	Rmt	21,757.00
		Beyond 20m upto 30 m		
252	R3-BW-2-70-d	Add 7.5% for every additional meter depth of sinking over the rate of sinking for the previous meter	Rmt	40,812.00
253	R3-BW-2-70-e	Add 20% of cost for Kentledge including supports, loading arrangement and Labour .	Rmt	48,974.00
		Beyond 30m upto 40 m		
254	R3-BW-2-70-f	Add 10% for every additional meter depth of sinking over the rate of sinking for the previous meter	Rmt	96,963.00
255	R3-BW-2-70-g	Add 20% of cost for Kentledge including supports, loading arrangement, and Labour etc.	Rmt	1,16,356.00
	R3-BW-2-71	Clayey soil (10m dia. Well)		
256	R3-BW-2-71-a	Depth below bed level upto 3.0 M	Rmt	18,317.00
257	R3-BW-2-71-b	Beyond 3m upto 10m depth	Rmt	24,106.00
		Beyond 10 m upto 20 m		
258	R3-BW-2-71-c	Add 5% for every additional meter depth of sinking over the rate of sinking for the previous meter	Rmt	31,836.00
259	R3-BW-2-71-d	Add for dewatering @ 5% of cost, if required.	Rmt	33,428.00
		Beyond 20m upto 30 m		

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
260	R3-BW-2-71-e	Add 7.5% for every additional meter depth of sinking over the rate of sinking for the previous meter	Rmt	59,717.00
261	R3-BW-2-71-f	Add 5% of cost for additional meter depth including dewatering, if required	Rmt	75,243.00
262	R3-BW-2-71-g	Add 20% of cost for Kentledge including supports, loading arrangement and Labour).	Rmt	71,660.00
		Beyond 30m upto 40 m		
263	R3-BW-2-71-h	Add 10% for every additional meter depth of sinking over the rate of sinking for the previous meter	Rmt	1,41,878.00
264	R3-BW-2-71-i	Add 5% of cost for additional meter depth including dewatering, if required	Rmt	1,78,766.00
265	R3-BW-2-71-j	Add 20% of cost for Kentledge including supports, loading arrangement and Labour).	Rmt	1,70,254.00
		Soft rock (10m diawell)		
266	R3-BW-2-72	Depth of soft rock strata upto 3m	Rmt	37,967.00
		Hard rock (10m diawell)		
267	R3-BW-2-73	Depth of hard rock strata upto 3 m	Rmt	52,819.00
		Sinking of 11 m external diameter well (other than pneumatic method of sinking) through all types of strata namely sandy soil, clayey soil and rock as shown against each case, complete as per drawing and technical specifications. Depth of sinking is reckoned from bed level.		
	R3-BW-2-74	Sandy soil		
268	R3-BW-2-74-a	Depth from bed level upto 3.0 M	Rmt	27,493.00
269	R3-BW-2-74-b	Beyond 3m upto 10m depth	Rmt	28,139.00
		Beyond 10m upto 20m		
270	R3-BW-2-74-c	Add 5% for every additional meter depth of sinking over the rate of sinking for the previous meter	Rmt	37,163.00
		Beyond 20m upto 30 m		
271	R3-BW-2-74-d	Add 7.5% for every additional meter depth of sinking over the rate of sinking for the previous meter	Rmt	69,709.00
272	R3-BW-2-74-e	Add 20% of cost for Kentledge including supports, loading arrangement and Labour .	Rmt	83,651.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
		Beyond 30m upto 40 m		
273	R3-BW-2-74-f	Add 10% for every additional meter depth of sinking over the rate of sinking for the previous meter	Rmt	1,65,619.00
274	R3-BW-2-74-g	Add 20% of cost for Kentledge including supports, loading arrangement, and Labour etc.	Rmt	1,98,743.00
	R3-BW-2-75	Clayey soil (11 m dia. Well)		
275	R3-BW-2-75-a	Depth from bed level upto 3.0 M	Rmt	30,507.00
276	R3-BW-2-75-b	Beyond 3m upto 10m depth	Rmt	50,224.00
		Beyond 10 m upto 20 m		
277	R3-BW-2-75-c	Add 5% for every additional meter depth of sinking over the rate of sinking for the previous meter	Rmt	66,331.00
278	R3-BW-2-75-d	Add for dewatering @ 5% of cost, if required.	Rmt	69,647.00
		Beyond 20m upto 30 m		
279	R3-BW-2-75-e	Add 7.5% for every additional meter depth of sinking over the rate of sinking for the previous meter	Rmt	1,24,420.00
280	R3-BW-2-75-f	Add 5% of cost for additional meter depth including dewatering, if required	Rmt	1,56,769.00
281	R3-BW-2-75-g	Add 20% of cost for Kentledge including supports, loading arrangement and Labour).	Rmt	1,49,304.00
		Beyond 30m upto 40 m		
282	R3-BW-2-75-h	Add 10% for every additional meter depth of sinking over the rate of sinking for the previous meter	Rmt	2,95,606.00
283	R3-BW-2-75-i	Add 5% of cost for additional meter depth including dewatering, if required	Rmt	3,72,464.00
284	R3-BW-2-75-j	Add 20% of cost for Kentledge including supports, loading arrangement and Labour).	Rmt	3,54,728.00
		Soft rock (11m diawell)		
285	R3-BW-2-76	Depth of soft rock strata upto 3m	Rmt	84,531.00
		Hard rock (11m diawell)		
286	R3-BW-2-77	Depth of hard rock upto 3 m	Rmt	1,17,091.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
		Sinking of 12 m external diameter well (other than pneumatic method of sinking) through all types of strata namely sandy soil, clayey soil and rock as shown against each case, complete as per drawing and technical specifications. Depth of sinking is reckoned from bed level.		
	R3-BW-2-78	Sandy soil		
287	R3-BW-2-78-a	I) Depth below bed level upto 3.0 M	Rmt	65,802.00
288	R3-BW-2-78-b	Beyond 3m upto 10m depth	Rmt	75,285.00
		Beyond 10m upto 20m		
289	R3-BW-2-78-c	Add 5% for every additional meter depth of sinking over the rate of sinking for the previous meter	Rmt	99,426.00
		Beyond 20m upto 30 m		
290	R3-BW-2-78-d	Add 7.5% for every additional meter depth of sinking over the rate of sinking for the previous meter	Rmt	1,86,499.00
291	R3-BW-2-78-e	Add 20% of cost for Kentledge including supports, loading arrangement and Labour .	Rmt	2,23,799.00
		Beyond 30m upto 40 m		
292	R3-BW-2-78-f	Add 10% for every additional meter depth of sinking over the rate of sinking for the previous meter	Rmt	4,43,094.00
293	R3-BW-2-78-g	Add 20% of cost for Kentledge including supports, loading arrangement, and Labour etc.	Rmt	5,31,713.00
	R3-BW-2-79	Clayey soil (12 m dia. Well)		
294	R3-BW-2-79-a	Depth below bed level upto 3.0 M	Rmt	74,187.00
295	R3-BW-2-79-b	Beyond 3m upto 10m depth	Rmt	1,21,600.00
		Beyond 10 m upto 20 m		
296	R3-BW-2-79-c	Add 5% for every additional meter depth of sinking over the rate of sinking for the previous meter	Rmt	1,60,594.00
297	R3-BW-2-79-d	Add for dewatering @ 5% of cost, if required.	Rmt	1,68,624.00
		Beyond 20m upto 30 m		
298	R3-BW-2-79-e	Add 7.5% for every additional meter depth of sinking over the rate of sinking for the previous meter	Rmt	3,01,231.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
299	R3-BW-2-79-f	Add 5% of cost for additional meter depth including dewatering, if required	Rmt	3,95,366.00
300	R3-BW-2-79-g	Add 20% of cost for Kentledge including supports, loading arrangement and Labour).	Rmt	3,76,539.00
		Beyond 30m upto 40 m		
301	R3-BW-2-79-h	Add 10% for every additional meter depth of sinking over the rate of sinking for the previous meter	Rmt	7,15,680.00
302	R3-BW-2-79-i	Add 5% of cost for additional meter depth including dewatering, if required	Rmt	9,01,757.00
303	R3-BW-2-79-j	Add 20% of cost for Kentledge including supports, loading arrangement and Labour).	Rmt	8,58,816.00
		Soft rock (12m diawell)		
304	R3-BW-2-80	Depth of soft rock strata upto 3m	Rmt	1,94,989.00
		Hard rock (12m diawell)		
305	R3-BW-2-81	Depth of hard rock strata upto 3 m	Rmt	2,58,063.00
		Sinking of Twin D Type well (other than pneumatic method of sinking) through all types of strata namely sandy soil, clayey soil and rock as shown against each case, complete as per drawing and technical specifications. Depth of sinking is reckoned from bed level.		
	R3-BW-2-82	Sandy soil		
306	R3-BW-2-82-a	Depth from bed level upto 3.0 M	Rmt	14,813.00
307	R3-BW-2-82-b	Beyond 3m upto 10m depth	Rmt	16,061.00
		Beyond 10m upto 20m		
308	R3-BW-2-82-c	Add 5% for every additional meter depth of sinking over the rate of sinking for the previous meter	Rmt	21,212.00
		Beyond 20m upto 30 m		
309	R3-BW-2-82-d	Add 7.5% for every additional meter depth of sinking over the rate of sinking for the previous meter	Rmt	39,789.00
310	R3-BW-2-82-e	Add 20% of cost for Kentledge including supports, loading arrangement and Labour .	Rmt	47,747.00
		Beyond 30m upto 40 m		

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
311	R3-BW-2-82-f	Add 10% for every additional meter depth of sinking over the rate of sinking for the previous meter	Rmt	94,534.00
312	R3-BW-2-82-g	Add 20% of cost for Kentledge including supports, loading arrangement, and Labour etc.	Rmt	1,13,440.00
	R3-BW-2-83	Clayey soil (Twin D Type Well)		
313	R3-BW-2-83-a	Depth below bed level upto 3.0 M	Rmt	17,665.00
314	R3-BW-2-83-b	Beyond 3m upto 10m depth	Rmt	26,706.00
		Beyond 10 m upto 20 m		
315	R3-BW-2-83-c	Add 5% for every additional meter depth of sinking over the rate of sinking for the previous meter	Rmt	35,271.00
316	R3-BW-2-83-d	Add for dewatering @ 5% of cost, if required.	Rmt	37,034.00
		Beyond 20m upto 30 m		
317	R3-BW-2-83-e	Add 7.5% for every additional meter depth of sinking over the rate of sinking for the previous meter	Rmt	66,158.00
318	R3-BW-2-83-f	Add 5% of cost for additional meter depth including dewatering, if required	Rmt	83,359.00
319	R3-BW-2-83-g	Add 20% of cost for Kentledge including supports, loading arrangement and Labour).	Rmt	79,389.00
		Beyond 30m upto 40 m		
320	R3-BW-2-83-h	Add 10% for every additional meter depth of sinking over the rate of sinking for the previous meter	Rmt	1,57,182.00
321	R3-BW-2-83-i	Add 5% of cost for additional meter depth including dewatering, if required	Rmt	1,98,049.00
322	R3-BW-2-83-j	Add 20% of cost for Kentledge including supports, loading arrangement and Labour).	Rmt	1,88,618.00
		Soft rock (Twin D Type well)		
323	R3-BW-2-84	Depth of soft rock strata upto 3m	Rmt	42,837.00
		Hard rock (Twin D Type well)		
324	R3-BW-2-85	Depth of hard rock strata upto 3 m	Rmt	55,489.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
325	R3-BW-2-86	Pneumatic sinking of wells with equipment of approved design, drawing and specifications worked by competent and trained personnel and comprising of compression and decompression chambers, reducers, two air locks separately for men and plant & materials, arrangement for supply of fresh air to working chambers, check valves, exhaust valves, shafts made from steel plates of riveted construction not less than 6 mm thick to withstand an air pressure of 0.50 MPa, controlled blasting of hard rock where required, staircases and 1 m wide landing plate forms with railing, arrangement for compression and decompression, electric lighting of 50 V maximum, proper rooms for rest and medical examinations and compliance with safety precautions as per IS:4138, all as per clause 1207.6 of Specifications.	Cum	1,15,139.00
326	R3-BW-2-87	Sand filling in wells complete as per drawing and technical specifications	Cum	2,564.00
327	R3-BW-2-88	Providing steel liner 10 mm thick for curbs and 6mm thick for steining of wells including fabricating and setting out as per detailed drawing	MT	95,432.00
		Providing sump in hard rock in well foundations of required size and depth etc. complete as specified and directed.		
		Providing and placing in position controlled cement concrete of M-20 grade in bottom plug of well foundations in wells or through tremie arrangement including compacting by vibrators and curing where necessary etc. complete as specified and directed (10% extra cement to be added when concreting is done under water), as per prevailing MCGM specification for Bridgework Clause no. 1703		
		a) In dewatered condition		
		b) Under water		

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
		Providing and placing in position controlled cement concrete in bottom plug of well foundations in wells or through tremie arrangement including compacting by vibrators and curing where necessary etc. complete as specified and directed (10% extra cement to be added when concreting is done under water), as per prevailing MCGM specification for Bridgework Clause no. 1703		
		PCC Grade M20		
328	R3-BW-2-89-a	Using Concrete Mixer		DELETED
329	R3-BW-2-89-b	Using RMC and Crane/concrete pump	Cum	6,779.00
		PCC Grade M25		
330	R3-BW-2-90-a	Using Concrete Mixer		DELETED
331	R3-BW-2-90-b	Using RMC and Crane/concrete pump	Cum	7,335.00
		PCC Grade M30		
332	R3-BW-2-91-a	Using Concrete Mixer		DELETED
333	R3-BW-2-91-b	Using RMC and Crane/concrete pump	Cum	7,356.00
		PCC Grade M35		
334	R3-BW-2-92-a	Using Concrete Mixer		DELETED
335	R3-BW-2-92-b	Using RMC and Crane/concrete pump	Cum	7,736.00
		Providing and filling in well with clean coarse sand and shingle between the top and bottom plug of well including compaction by suitable means etc. complete as specified and directed, as per prevailing MCGM specification for Bridgework Clause no. 1703		
		Providing and placing in position controlled cement concrete in Intermediate plug of well foundations in wells or through tremie arrangement including compacting by vibrators and curing where necessary etc. complete as specified and directed, as per prevailing MCGM specification for Bridgework Clause no. 1703		
		Grade M20 PCC		
336	R3-BW-2-93-a	Using Concrete Mixer		DELETED
337	R3-BW-2-93-b	Using RMC and Crane/concrete pump	Cum	6,371.00
		Grade M25 PCC		

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
338	R3-BW-2-94-a	Using Concrete Mixer		DELETED
339	R3-BW-2-94-b	Using RMC and Crane/concrete pump	Cum	6,953.00
		Grade M30 PCC		
340	R3-BW-2-95-a	Using Concrete Mixer		DELETED
341	R3-BW-2-95-b	Using RMC and Crane/concrete pump	Cum	7,181.00
		Providing and placing in position controlled cement concrete in top plug of well foundations including compacting by vibrators and curing etc. complete as specified and directed.		
		Grade M15 PCC		
342	R3-BW-2-96	Using Concrete Mixer		DELETED
		Grade M20 PCC		
343	R3-BW-2-97	Using Concrete Mixer		DELETED
		Grade M25 PCC		
344	R3-BW-2-98-a	Using Concrete Mixer		DELETED
345	R3-BW-2-98-b	Using RMC and Crane/concrete pump	Cum	6,953.00
		Grade M30 PCC		
346	R3-BW-2-99-a	Using Concrete Mixer		DELETED
347	R3-BW-2-99-b	Using RMC and Crane/concrete pump	Cum	7,181.00
		Providing and placing in position controlled cement concrete in Well cap		
		RCC Grade M20		
348	R3-BW-2-100-a	Using concrete Mixer		DELETED
349	R3-BW-2-100-b	Using RMC and Concrete Pump	Cum	6,371.00
		RCC Grade M25		
350	R3-BW-2-101-a	Using concrete Mixer		DELETED
351	R3-BW-2-101-b	Using RMC and Concrete Pump	Cum	6,953.00
		Providing and placing in position controlled cement concrete M-30 grade for RCC well cap with minimum cement content as 400 kg/cum. water cement ratio not exceeding 0.40 and maximum size of aggregate not exceeding 20 mm including necessary formwork to give form finish surface, compacting by vibrators and curing etc. complete as specified and directed. (Excluding reinforcement)		

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
		RCC Grade M30		
352	R3-BW-2-102-a	Using Concrete Mixer		DELETED
353	R3-BW-2-102-b	Using RMC and Concrete Pump	Cum	7,181.00
		RCC Grade M35		
354	R3-BW-2-103-a	Using Concrete Mixer		DELETED
355	R3-BW-2-103-b	Using RMC and Concrete Pump	Cum	7,632.00
		RCC M40 Grade		
356	R3-BW-2-104	Using RMC, Transit Mixer and Concrete Pump	Cum	7,977.00
357	R3-BW-2-105-a	Providing and fixing steel anchor dowel bars in open foundations including drilling holes 75 mm dia. in hard rock, providing and placing in position 32 mm dia. dowel bars 1.8m in hard rock and 1.8m above hard rock, effectively grouting the holes with cement mortar of 1:1 proportion etc complete and specified as directed. (Grout shall be filled in the hole first and bars inserted and pressed in the drilled hole).	No.	7,698.00
358	R3-BW-2-105-b	Providing and fixing steel anchor dowel bars at the base of well foundations through bottom plug including drilling holes 75 mm dia in hard rock, providing and placing in position dowel bars of 32 mm dia 1.8 m in hard rock and 1.8 m above hard rock, effectively grouting the holes with cement mortar of 1: 1 proportion etc. complete as specified and directed. (grout shall be filled in the hole first and bars inserted and pressed in drilled hole.)	No.	13,537.00
359	R3-BW-2-106	Providing and laying concrete for foundation of piers, abutments, wingwalls, retaining walls, anchor blocks, thrust blocks, for encasing of pipes in trenches etc. using cement sand colgrout of 1 :1.5 proportion by weight and water cement ratio not exceeding 0.56 in required lines and levels including watertight formwork, curing etc. complete as specified and directed. (Excluding reinforcement)	No.	4,603.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
360	R3-BW-2-107-a	Supplying, fitting and placing un-coated HYSD bar reinforcement (including lapping) in foundation complete as per drawing and technical specifications	MT	71,289.00
361	R3-BW-2-107-b	Supplying, fitting and placing un-coated Mild steel reinforcement (including lapping) complete in foundation as per drawing and technical specification	MT	87,889.00
		(E) BASE SLAB		
362	R3-BW-2-108	Providing and placing in position controlled cement concrete of M-30 grade with minimum cement content of 400 kg/cum. and water cement ratio not exceeding 0.40 in base slab for subways to required lines and levels including surfaces to be roughen to receive the other finishes etc. complete as specified and directed.	Cum	7,181.00
363	R3-BW-2-109	Providing and placing in position controlled cement concrete of M-35 grade with minimum cement content of 400 kg/cum. and water cement ratio not exceeding 0.40 in base slab for subways to required lines and levels including surfaces to be roughen to receive the other finishes etc. complete as specified and directed.	Cum	7,632.00
364	R3-BW-2-110	Providing and placing in position controlled cement concrete of M-45 grade for foundation work with minimum cement 400 kg/cum and water cement ratio not exceeding 0.4 for RCC raft foundation slab with V notches sloped / flat / strip footings, pile caps, tie beams to required lines / levels including levelling, compacting by vibrators, curing including shuttering, centering as necessary and required etc. complete as specified and as directed but excluding reinforcement.(Using RMC, Transit Mixer and Concrete Pump)	Cum	8,230.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
365	R3-BW-2-111	Providing and placing in position controlled cement concrete of M-50 grade for foundation work with minimum cement 400 kg/cum and water cement ratio not exceeding 0.4 for RCC raft foundation slab with V notches sloped / flat / strip footings, pile caps, tie beams to required lines / levels including levelling, compacting by vibrators, curing including shuttering, centering as necessary and required etc. complete as specified and as directed but excluding reinforcement.(Using RMC, Transit Mixer and Concrete Pump)	Cum	8,697.00
		Providing and installing in position controlled concrete of grade M-40 with minimum cement content as 440 kg/cum. and W.C ratio not exceeding 0.40 for R.C.C work in cast-in-situ bored piles each of load capacity as per design and of special diameter using maximum 20mm size of aggregate including boring through all strata except rock, including placing of concrete by tremie arrangement through mild steel casing to the required depth through all strata except rock, compaction as necessary with drawl of mild steel casing including chipping / dressing of piles to required levels, cleaning the reinforcement etc. complete as specified and directed (Excluding reinforcement) (Using RMC, Transit Mixer and Concrete Pump), as per prevailing MCGM specification for Bridgework Clause no. 1703		
366	R3-BW-2-112-a	1) 400mm dia	Rmt	1,718.00
367	R3-BW-2-112-b	2) 450mm dia	Rmt	2,174.00
368	R3-BW-2-112-c	3) 500mm dia	Rmt	2,684.00
369	R3-BW-2-112-d	4) 550mm dia	Rmt	3,248.00
370	R3-BW-2-112-e	5) 600mm dia	Rmt	3,865.00
371	R3-BW-2-112-f	6) 650mm dia	Rmt	4,536.00
372	R3-BW-2-112-g	7) 700mm dia	Rmt	5,261.00
373	R3-BW-2-112-h	8) 750mm dia	Rmt	6,039.00
374	R3-BW-2-112-i	9) 800mm dia	Rmt	6,871.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
375	R3-BW-2-112-j	10) 900mm dia	Rmt	8,697.00
376	R3-BW-2-112-k	11) 1000mm dia	Rmt	10,737.00
377	R3-BW-2-112-l	12) 1100mm dia	Rmt	12,991.00
378	R3-BW-2-112-m	13) 1200mm dia	Rmt	15,461.00
379	R3-BW-2-113	Providing and laying in position M-15 plain cement concrete to fill up loose pockets of foundations bed for making required levels, annular filling around abutments, piers, columns for foundation.	Cum	5,410.00
		Providing and installing in position controlled concrete of grade M-35 with minimum cement content as 440 kg/cum. and W.C ratio not exceeding 0.40 for R.C.C work in cast-in-situ bored piles with hydraulic boring machine including mobilization to the site of work. Each pile shall have load capacity as per design and of specific diameter using maximum 20mm size of aggregate including boring through all strata including rock, including placing of concrete by tremie arrangement through mild steel casing to the required depth. Compaction as necessary with drawl of mild steel casing including chipping / dressing of piles to required levels, cleaning the reinforcement etc. complete as specified and directed (Excluding reinforcement) (Using RMC, Transit Mixer and Concrete Pump), as per prevailing MCGM specification for Bridgework Clause no. 1703		
380	R3-BW-2-114-a	1) 400mm dia	Rmt	4,010.00
381	R3-BW-2-114-b	2) 450mm dia	Rmt	4,267.00
382	R3-BW-2-114-c	3) 500mm dia	Rmt	4,533.00
383	R3-BW-2-114-d	4) 550mm dia	Rmt	4,835.00
384	R3-BW-2-114-e	5) 600mm dia	Rmt	5,163.00
385	R3-BW-2-114-f	6) 650mm dia	Rmt	5,519.00
386	R3-BW-2-114-g	7) 700mm dia	Rmt	6,931.00
387	R3-BW-2-114-h	8) 750mm dia	Rmt	7,347.00
388	R3-BW-2-114-i	9) 800mm dia	Rmt	7,777.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
389	R3-BW-2-114-j	10) 900mm dia	Rmt	10,882.00
390	R3-BW-2-114-k	11) 1000mm dia	Rmt	11,958.00
391	R3-BW-2-114-l	12) 1100mm dia	Rmt	13,143.00
392	R3-BW-2-114-m	13) 1200mm dia	Rmt	15,162.00
		Providing and installing in position controlled concrete of grade M-40 with minimum cement content as 440 kg/cum. and W.C ratio not exceeding 0.40 for R.C.C work in cast-in-situ bored piles with hydraulic boring machine including mobilization to the site of work. Each pile shall have load capacity as per design and of specific diameter using maximum 20mm size of aggregate including boring through all strata including rock, including placing of concrete by tremie arrangement through mild steel casing to the required depth. Compaction as necessary with drawl of mild steel casing including chipping / dressing of piles to required levels, cleaning the reinforcement etc. complete as specified and directed (Excluding reinforcement) (Using RMC, Transit Mixer and Concrete Pump), as per prevailing MCGM specification for Bridgework Clause no. 1703		
393	R3-BW-2-115-a	1) 400mm dia	Rmt	4,052.00
394	R3-BW-2-115-b	2) 450mm dia	Rmt	4,319.00
395	R3-BW-2-115-c	3) 500mm dia	Rmt	4,598.00
396	R3-BW-2-115-d	4) 550mm dia	Rmt	4,913.00
397	R3-BW-2-115-e	5) 600mm dia	Rmt	5,257.00
398	R3-BW-2-115-f	6) 650mm dia	Rmt	5,629.00
399	R3-BW-2-115-g	7) 700mm dia	Rmt	7,059.00
400	R3-BW-2-115-h	8) 750mm dia	Rmt	7,493.00
401	R3-BW-2-115-i	9) 800mm dia	Rmt	7,943.00
402	R3-BW-2-115-j	10) 900mm dia	Rmt	11,093.00
403	R3-BW-2-115-k	11) 1000mm dia	Rmt	12,218.00
404	R3-BW-2-115-l	12) 1100mm dia	Rmt	13,458.00
405	R3-BW-2-115-m	13) 1200mm dia	Rmt	15,536.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
III SUB-STRUCTURE				
406	R3-BW-3-1	Brick masonry work in 1:3 in sub-structure complete excluding pointing and plastering, as per drawing and technical specifications	Cum	7,729.00
407	R3-BW-3-2	Pointing with cement mortar (1:3) on brick work in substructure as per Technical specifications	Sqm	112.00
408	R3-BW-3-3	Providing and applying 20 mm thick plaster with cement mortar (1:3) on brick work in sub-structure including providing water proofing compound to the first coat of plaster as per manufacturers specification, racking out joints, hacking of concrete surface, finishing, curing, scaffolding, etc complete as directed By Engineer In Charge, as per Technical Specifications	Sqm	535.00
	R3-BW-3-4	Stone masonry work in cement mortar 1:3 for substructure complete as per drawing and Technical Specifications		
409	R3-BW-3-4-a	Random Rubble Masonry	Cum	5,622.00
410	R3-BW-3-4-b	Coursed rubble masonry (first sort)	Cum	6,077.00
411	R3-BW-3-4-c	Ashlar masonry (first sort)	Cum	8,466.00
		Plain/Reinforced cement concrete in sub-structure complete as per drawing and technical specifications		
412	R3-BW-3-5	PCC Grade M15		
		Height upto 5m	Cum	6,208.00
		Providing and laying plain cement concrete in abutment and piers, head walls for culverts , using max aggregate size of 40mm minimum cement content of 310Kg and max water cement ratio of 0.45 including shuttering and scaffolding complete as specified and directed. the rate including providing 100 dia PVC Pipe weep holes at 1.5m c/c vertical and horizontal above ground level wherever required (The abutment and piers shall be cast for only 1.0m height at a time)		
		PCC Grade M20		

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
413	R3-BW-3-6	Height upto 5m	Cum	6,739.00
		PCC Grade M25		
		Height upto 5m		
414	R3-BW-3-7-a	Using concrete Mixer		DELETED
415	R3-BW-3-7-b	With RMC and Concrete Pump	Cum	7,355.00
		Height 5m to 10m		
416	R3-BW-3-7-c	Using concrete Mixer		DELETED
417	R3-BW-3-7-d	With RMC and Concrete Pump	Cum	7,622.00
		Height above 10m		
418	R3-BW-3-7-e	Using concrete Mixer		DELETED
419	R3-BW-3-7-f	With RMC and Concrete Pump	Cum	7,756.00
		PCC Grade M30		
		Height upto 5m		
420	R3-BW-3-8-a	Using concrete Mixer		DELETED
421	R3-BW-3-8-b	With RMC and Concrete Pump	Cum	7,596.00
		Height 5m to 10m		
422	R3-BW-3-8-c	Using concrete Mixer		DELETED
423	R3-BW-3-8-d	With RMC and Concrete Pump	Cum	7,873.00
		Height above 10m		
424	R3-BW-3-8-e	Using concrete Mixer		DELETED
425	R3-BW-3-8-f	With RMC and Concrete Pump	Cum	8,218.00
426	R3-BW-3-9	Providing and placing in position not more than 1.5m height at one time controlled cement concrete M-30 grade using minimum cement content as 400Kg/cum and max water cement ratio of 0.40 for RCC work in abutments, retaining walls with form finished surface as perdrg. in required line and level including levelling, compacting by vibrators, curing including formwork including providing and forming 100 dia PVC pipe for weep holes at 1.5m c/c vertically and horizontally in a staggered fashion above ground level as necessary etc. complete as specified and directed.	Cum	7,436.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
427	R3-BW-3-10	Providing and placing in position not more than 1.5m height at one time controlled cement concrete M-35 grade using minimum cement content as 400Kg/cum and max water cement ratio of 0.40 for RCC work in abutments, retaining walls with form finished surface as per drawing in required line and level including levelling, compacting by vibrators, curing including formwork including providing and forming 100 dia PVC pipe for weep holes at 1.5m c/c vertically and horizontally in a staggered fashion above ground level as necessary etc. complete as specified and directed.	Cum	8,770.00
428	R3-BW-3-11	Providing weep holes in Brick masonry/Plain/Reinforced concrete abutment, wing wall/return wall with 100 mm dia PVC pipe, extending through the full width of the structure with slope of 1V :20H towards drawing face. Complete as per drawing and Technical specifications	Each	269.00
		Providing and Placing in position controlled cement concrete for sub-structure work with minimum cement content of 400 kg/cum and water cement ratio not exceeding 0.40 for columns pier shafts, abutments, walls of subways retaining walls to required lines as necessary etc. complete as directed.		
		RCC Grade M20		
		Height upto 5m		
429	R3-BW-3-12-a	Using concrete Mixer		DELETED
430	R3-BW-3-12-b	With RMC and Concrete Pump	Cum	6,739.00
		Height 5m to 10m		
431	R3-BW-3-12-c	Using concrete Mixer		DELETED
432	R3-BW-3-12-d	With RMC and Concrete Pump	Cum	6,984.00
		Height above 10m		
433	R3-BW-3-12-e	Using concrete Mixer		DELETED
434	R3-BW-3-12-f	With RMC and Concrete Pump	Cum	7,290.00
		RCC Grade M25		

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
		Height upto 5m		
435	R3-BW-3-13-a	Using concrete Mixer		DELETED
436	R3-BW-3-13-b	With RMC and Concrete Pump	Cum	7,355.00
		Height 5m to 10m		
437	R3-BW-3-13-c	Using concrete Mixer		DELETED
438	R3-BW-3-13-d	With RMC and Concrete Pump	Cum	7,596.00
		Height above 10m		
439	R3-BW-3-13-e	Using concrete Mixer		DELETED
440	R3-BW-3-13-f	With RMC and Concrete Pump	Cum	7,957.00
		RCC Grade M30		
		Height upto 5m		
441	R3-BW-3-14-a	Using concrete Mixer		DELETED
442	R3-BW-3-14-b	With RMC and Concrete Pump	Cum	7,596.00
		Height 5m to 10m		
443	R3-BW-3-14-c	Using concrete Mixer		DELETED
444	R3-BW-3-14-d	With RMC and Concrete Pump	Cum	7,811.00
		Height above 10m		
445	R3-BW-3-14-e	Using concrete Mixer		DELETED
446	R3-BW-3-14-f	With RMC and Concrete Pump	Cum	8,114.00
		RCC Grade M35		
		Height upto 5m		
447	R3-BW-3-15-a	Using concrete Mixer		DELETED
448	R3-BW-3-15-b	With RMC and Concrete Pump	Cum	8,073.00
		Height 5m to 10m		
449	R3-BW-3-15-c	Using concrete Mixer		DELETED
450	R3-BW-3-15-d	With RMC and Concrete Pump	Cum	8,250.00
		Height above 10m		
451	R3-BW-3-15-e	Using concrete Mixer		DELETED
452	R3-BW-3-15-f	With RMC and Concrete Pump	Cum	8,514.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
453	R3-BW-3-16	Providing and placing in position controlled cement concrete M-30 grade using minimum cement content as 400Kg/cum and max water cement ratio of 0.40 for RCC work in coping on retaining walls, bed blocks, abutment / pier / column caps, dirtwalls, pedestals for bearing on piers / abutments as per drawings and designs including projections, moulding, champhers etc. of required shape and size including levelling, compacting by vibrators, curing, finishing the exposed surfaces including formwork, shuttering and centering as necessary and required etc. complete as specified and directed but excluding reinforcement.	Cum	7,086.00
454	R3-BW-3-17	Providing and placing in position controlled cement concrete M-35 grade using minimum cement content as 400Kg/cum and max water cement ratio of 0.40 for RCC work in coping on retaining walls, bed blocks, abutment / pier / column caps, dirtwalls, pedestals for bearing on piers / abutments as per drawings and designs including projections, moulding, champhers etc. of required shape and size including levelling, compacting by vibrators, curing, finishing the exposed surfaces including formwork, shuttering and centering as necessary and required etc. complete as specified and directed but excluding reinforcement.	Cum	7,560.00
455	R3-BW-3-18	Supplying, fitting and placing HYSD bar reinforcement (including lapping) in sub-structure complete as per drawing and technical specifications	MT	71,615.00
456	R3-BW-3-19	Supplying, fitting and placing Mild steel reinforcement (including lapping) in sub-structure complete as per drawing and technical specification	MT	86,232.00
		Back filling behind abutment, wing wall and return wall complete as per drawing and Technical specification		

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
457	R3-BW-3-20-a	Granular material	Cum	1,939.00
458	R3-BW-3-20-b	Sandy material	Cum	1,990.00
459	R3-BW-3-21	Providing and laying of Filter media with granular materials/stone crushed aggregates satisfying the requirements laid down in clause 2504 of MoRTH specifications to a thickness of not less than 600 mm with smaller size towards the soil and bigger size towards the wall and provided over the entire surface behind abutment, wing wall and return wall to the full height compacted to a firm condition complete as per drawing and technical specification.	Cum	2,455.00
		BEARINGS		
		Note: The bearings shall be duly got tested and certified by an approved agency to the satisfaction of the Engineer. Testing may be carried out during the manufacturing and/or before their installation as may be directed by the Engineer. All charges or expences incurred in this respect shall be borne by the contractor. the bearing shall be fixed perfectly in horizontal position.		
460	R3-BW-3-22	Supplying, fitting and fixing in position true to line and level sliding plate bearing with PTFE surface sliding on stainless steel complete including all accessories as per drawing and Technical Specifications and BS: 5400, section 9.1 & 9.2 (for PTFE) and clause 2004 of MoRTH Specifications.		DELETED
461	R3-BW-3-23	Supplying, fitting and fixing in position true to line and level POT-PTFE bearing conforming to per IRC: 83 part-III and other parts conforming to BS: 5400, section 9.1 & 9.2 and clause 2006 of MoRTH Specifications complete as per drawing and approved technical specifications.	MT capacit y	413.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
462	R3-BW-3-24	Supplying, fitting and fixing in position true to line and level sliding plate bearing with stainless steel plate sliding on stainless steel plate with mild steel matrix complete including all accessories as per drawing and Technical Specifications.		DELETED
463	R3-BW-3-25	Supplying, fitting and fixing in position true to line and level elastomeric bearing conforming to IRC: 83 (Part-II) section IX and clause 2005 of MoRTH specifications complete including all accessories as per drawing and Technical Specifications.	Cucm	1.30
464	R3-BW-3-25-A	Supplying, fitting and fixing in position true to line and level elastomeric bearing conforming to IRC: 83 (Part-II) section IX and clause 2005 of MoRTH specifications complete including all accessories as per drawing and Technical Specifications.(With Positive anchorage (as per Design & Drawing CCPL/MCGM/LBN/BRG/01) With Positive Anchorage.	Cucm	1.31
465	R3-BW-3-26	Providing and placing in position not more than 1.5m height at one time controlled cement concrete M-40 grade using minimum cement content as 400Kg/cum and max water cement ratio of 0.40 for RCC work in abutments, retaining walls with form finished surface as per drawing in required line and level including levelling, compacting by vibrators, curing including formwork including providing and forming 100 dia PVC Pipe weep holes at 1.5m c/c vertically and horizontally in a staggered fashion above ground level as necessary etc. complete as specified and directed.(Using RMC, Transit Mixer and Concrete Pump)	Cum	8,514.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
466	R3-BW-3-27	Providing and placing in position controlled cement concrete M-40 grade using minimum cement content as 400Kg/cum and max water cement ratio of 0.40 for RCC work in coping on retaining walls, bed blocks, abutment / pier / column caps, dirtwalls, pedestals for bearing on piers / abutments as per drawings and designs including projections, moulding, champhers etc. of required shape and size including levelling, compacting by vibrators, curing, finishing the exposed surfaces including formwork, shuttering and centering as necessary and required etc. complete as specified and directed but excluding reinforcement.	Cum	8,131.00
467	R3-BW-3-28	Supplying, fitting and fixing in position true to line and level cast steel rocker bearing conforming to IRC: 83(Pt.-1) section IX and clause 2003 of MoRTH specifications complete including all accessories as per drawing and Technical Specifications.		DELETED
468	R3-BW-3-29	Supplying, fitting and fixing in position true to line and level forged steel roller bearing conforming to IRC: 83(Pt.-1) section IX and clause 2003 of MoRTH specifications complete including all accessories as per drawing and Technical Specifications.		DELETED

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
IV		SUPER-STRUCTURE		
(I) RCC				
		Furnishing and Placing Reinforced/Prestressed cement concrete in super-structure as per drawing and Technical Specification		
		Providing and placing in position controlled cement concrete, max water cement ratio of 0.40 for RCC work of main beams, girders, cross girders, diaphragm solid slab to required lines and levels including levelling, compacting by vibrators, curing including formwork with formfinish surface as necessary and required centering etc.complete as specified and directed but excluding reinforcement.		
		RCC Grade M20		
		Using Concrete Mixer		
		For solid slab super-structure		
469	R3-BW-4-1-a	Height upto 5m	Cum	7,419.00
470	R3-BW-4-1-b	Height 5m to 10m	Cum	7,728.00
471	R3-BW-4-1-c	Height above 10m	Cum	8,037.00
		For T-beam & slab		
472	R3-BW-4-2-a	Height upto 5m	Cum	7,728.00
473	R3-BW-4-2-b	Height 5m to 10m	Cum	8,037.00
474	R3-BW-4-2-c	Height above 10m	Cum	8,346.00
		Using RMC and Concrete Pump		
		For solid slab super-structure		
475	R3-BW-4-3-a	Height upto 5m	Cum	9,234.00
476	R3-BW-4-3-b	Height 5m to 10m	Cum	9,619.00
477	R3-BW-4-3-c	Height above 10m	Cum	10,004.00
		For T-beam & slab		
478	R3-BW-4-4-a	Height upto 5m	Cum	9,619.00
479	R3-BW-4-4-b	Height 5m to 10m	Cum	10,004.00
480	R3-BW-4-4-c	Height above 10m	Cum	10,389.00
		RCC Grade M25		
		Using Concrete Mixer		

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
		For solid slab super-structure		
481	R3-BW-4-5-a	Height upto 5m	Cum	7,867.00
482	R3-BW-4-5-b	Height 5m to 10m	Cum	8,195.00
483	R3-BW-4-5-c	Height above 10m	Cum	8,523.00
		For T-beam & slab		
484	R3-BW-4-6-a	Height upto 5m	Cum	8,195.00
485	R3-BW-4-6-b	Height 5m to 10m	Cum	8,523.00
486	R3-BW-4-6-c	Height above 10m	Cum	8,851.00
		Using RMC and Concrete Pump		
		For solid slab super-structure		
487	R3-BW-4-7-a	Height upto 5m	Cum	7,503.00
488	R3-BW-4-7-b	Height 5m to 10m	Cum	7,816.00
489	R3-BW-4-7-c	Height above 10m	Cum	8,128.00
		For T-beam & slab		
490	R3-BW-4-8-a	Height upto 5m	Cum	7,816.00
491	R3-BW-4-8-b	Height 5m to 10m	Cum	8,128.00
492	R3-BW-4-8-c	Height above 10m	Cum	8,441.00
		Providing and placing in position controlled cement concrete of M-30 grade using minimum cement content as 400Kg/cum and max water cement ratio of 0.40 for RCC work of main beams, girders, cross girders, diaphragm solid slab to required lines and levels including levelling, compacting by vibrators, curing including formwork with formfinish surface as necessary and required centering etc.complete as specified and directed but excluding reinforcement. (using concrete mixer).		
		RCC Grade M 30		
		Using Concrete Mixer		
		For solid slab super-structure		
493	R3-BW-4-9-a	Height upto 5m	Cum	7,767.00
494	R3-BW-4-9-b	Height 5m to 10m	Cum	8,090.00
495	R3-BW-4-9-c	Height above 10m	Cum	8,414.00
		For T-beam & slab		
496	R3-BW-4-10-a	Height upto 5m	Cum	8,090.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
497	R3-BW-4-10-b	Height 5m to 10m	Cum	8,414.00
498	R3-BW-4-10-c	Height above 10m	Cum	8,737.00
		Providing and placing in position controlled cement concrete of M-35 grade using minimum cement content as 400Kg/cum and max water cement ratio of 0.40 for RCC work of main beams, girders, cross girders, diaphragm solid slab to required lines and levels including levelling, compacting by vibrators, curing including formwork with formfinish surface as necessary and required centering etc.complete as specified and directed but excluding reinforcement. (using concrete mixer).		
		RCC/PSC Grade M35		
		Using concrete mixer.		
		For solid slab super-structure		
499	R3-BW-4-11-a	Height upto 5m	Cum	8,287.00
500	R3-BW-4-11-b	Height 5m to 10m	Cum	8,632.00
501	R3-BW-4-11-c	Height above 10m	Cum	8,977.00
		For T-beam & slab		
502	R3-BW-4-12-a	Height upto 5m	Cum	8,632.00
503	R3-BW-4-12-b	Height 5m to 10m	Cum	8,977.00
504	R3-BW-4-12-c	Height above 10m	Cum	9,323.00
		For box girder and balanced cantilever		
505	R3-BW-4-13-a	Height upto 5m	Cum	9,530.00
506	R3-BW-4-13-b	Height 5m to 10m	Cum	10,221.00
507	R3-BW-4-13-c	Height above 10m	Cum	10,911.00
		Providing and placing in position controlled cement concrete of M-40 grade using minimum cement content as 400Kg/cum and max water cement ratio of 0.40 for RCC work of main beams, girders, cross girders, diaphragm solid slab to required lines and levels including levelling, compacting by vibrators, curing including formwork with formfinish surface as necessary and required centering etc.omplete as specified and directed but excluding reinforcement. (using concrete mixer).		

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
		PSC Grade M-40		
		Using concrete mixer.		
		For solid slab super-structure		
508	R3-BW-4-14-a	Height upto 5m	Cum	8,684.00
509	R3-BW-4-14-b	Height 5m to 10m	Cum	9,046.00
510	R3-BW-4-14-c	Height above 10m	Cum	9,408.00
		For T-beam & slab		
511	R3-BW-4-15-a	Height upto 5m	Cum	9,046.00
512	R3-BW-4-15-b	Height 5m to 10m	Cum	9,408.00
513	R3-BW-4-15-c	Height above 10m	Cum	9,770.00
		Providing and placing in position controlled cement concrete of M-30 grade using minimum cement content as 400Kg/cum and max water cement ratio of 0.40 for RCC work of main beams, girders, cross girders, diaphragm solid slab to required lines and levels including levelling, compacting by vibrators, curing including formwork with formfinish surface as necessary and required centering etc.complete as specified and directed but excluding reinforcement.		
		Using RMC and Concrete Pump.		
		For solid slab super-structure		
514	R3-BW-4-16-a	Height upto 5m	Cum	8,684.00
515	R3-BW-4-16-b	Height 5m to 10m	Cum	9,046.00
516	R3-BW-4-16-c	Height above 10m	Cum	9,408.00
		For T-beam & slab		
517	R3-BW-4-17-a	Height upto 5m	Cum	9,046.00
518	R3-BW-4-17-b	Height 5m to 10m	Cum	9,408.00
519	R3-BW-4-17-c	Height above 10m	Cum	9,770.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
		Providing and placing in position controlled cement concrete of M-35 grade using minimum cement content as 400Kg/cum and max water cement ratio of 0.40 for RCC work of main beams, girders, cross girders, diaphragm solid slab to required lines and levels including levelling, compacting by vibrators, curing including formwork with formfinish surface as necessary and required centering etc.complete as specified and directed but excluding reinforcement.		
		RCC/PSC Grade M35		
		Using RMC and Concrete Pump		
		For solid slab super-structure		
520	R3-BW-4-18-a	Height upto 5m	Cum	8,149.00
521	R3-BW-4-18-b	Height 5m to 10m	Cum	8,494.00
522	R3-BW-4-18-c	Height above 10m	Cum	8,839.00
		For T-beam & slab		
523	R3-BW-4-19-a	Height upto 5m	Cum	8,494.00
524	R3-BW-4-19-b	Height 5m to 10m	Cum	8,839.00
525	R3-BW-4-19-c	Height above 10m	Cum	9,185.00
		For box girder and balanced cantilever		
526	R3-BW-4-20-a	Height upto 5m	Cum	9,530.00
527	R3-BW-4-20-b	Height 5m to 10m	Cum	10,221.00
528	R3-BW-4-20-c	Height above 10m	Cum	10,911.00
		Providing and placing in position controlled cement concrete of M-40 grade using minimum cement content as 400Kg/cum and max water cement ratio of 0.40 for RCC work of main beams, girders, cross girders, diaphragm solid slab to required lines and levels including levelling, compacting by vibrators, curing including formwork with formfinish surface as necessary and required centering etc.complete as specified and directed but excluding reinforcement.		
		Grade M-40		
		Using RMC and Concrete Pump		

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
		For solid slab super-structure		
529	R3-BW-4-21-a	Height upto 5m	Cum	8,540.00
530	R3-BW-4-21-b	Height 5m to 10m	Cum	8,901.00
531	R3-BW-4-21-c	Height above 10m	Cum	9,263.00
		For T-beam & slab		
532	R3-BW-4-22-a	Height upto 5m	Cum	8,901.00
533	R3-BW-4-22-b	Height 5m to 10m	Cum	9,263.00
534	R3-BW-4-22-c	Height above 10m	Cum	9,625.00
		For box girder and balanced cantilever		
535	R3-BW-4-23-a	Height upto 5m	Cum	9,987.00
536	R3-BW-4-23-b	Height 5m to 10m	Cum	10,711.00
537	R3-BW-4-23-c	Height above 10m	Cum	11,434.00
538	R3-BW-4-25	Providing and placing in position controlled cement concrete of M-30 grade using minimum cement content as 400Kg/cum and max water cement ratio of 0.40 in cast-in-situ RCC Kerbs in line and level and shape as per drawings, finishing the exposed faces including levelling, compacting by vibrators, curing including formwork, shuttering as necessary and required centering etc. complete as specified and directed	Cum	7,901.00
539	R3-BW-4-26	Providing and placing in position controlled cement concrete of M-30 grade using minimum cement content as 400Kg/cum and max water cement ratio of 0.40 in RCC Approach Slab over / Beyond abutments as per drawings and designs, including levelling, compacting by vibrators, curing including formwork etc. complete as specified and directed but excluding reinforcement.	Cum	6,914.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
540	R3-BW-4-27	Providing and placing in position controlled cement concrete of M-30 grade using minimum cement content as 400Kg/cum and max water cement ratio of 0.40 in RCC Approach Slab over / Beyond abutments, including levelling, compacting by vibrators, curing, including formwork etc. complete as specified and directed including reinforcement as per drawings, designs and Technical specification.	Cum	9,508.00
541	R3-BW-4-28	Providing and placing in position controlled cement concrete of M-35 grade using minimum cement content as 400Kg/cum and max water cement ratio of 0.40 in RCC Approach Slab over / Beyond abutments as per drawings and designs, including levelling, compacting by vibrators, curing including formwork etc. complete as specified and directed but excluding reinforcement.	Cum	6,305.00
		Providing and placing in position controlled cement concrete of M-30 grade using minimum cement content as 400Kg/cum and max water cement ratio of 0.40 for cast-in-situ portions after launching girders of RCC Deck Slab, cross diaphragms to required lines and levels including levelling, compacting by vibrators, curing including formwork, temporary supports as necessary and required etc. complete as specified and directed but excluding reinforcement.		
		RCC M 30 Grade		
		Using RMC and Concrete Pump.		
		For solid slab super-structure		
542	R3-BW-4-29-a	Height upto 5m	Cum	7,767.00
543	R3-BW-4-29-b	Height 5m to 10m	Cum	8,090.00
544	R3-BW-4-29-c	Height above 10m	Cum	8,414.00
		For T-beam & slab		
545	R3-BW-4-30-a	Height upto 5m	Cum	8,090.00
546	R3-BW-4-30-b	Height 5m to 10m	Cum	8,414.00
547	R3-BW-4-30-c	Height above 10m	Cum	8,737.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
		Providing and placing in position controlled cement concrete of M-35 grade using minimum cement content as 400Kg/cum and max water cement ratio of 0.40 for cast-in-situ portions after launching girders of RCC Deck Slab, cross diaphragms to required lines and levels including levelling, compacting by vibrators, curing including formwork, temporary supports as necessary and required etc.complete as specified and directed but excluding reinforcement.(Using RMC and Concrete Pump).		
		RCC M 35 Grade		
		Using RMC and Concrete Pump		
		For solid slab super-structure		
548	R3-BW-4-31-a	Height upto 5m	Cum	8,149.00
549	R3-BW-4-31-b	Height 5m to 10m	Cum	8,494.00
550	R3-BW-4-31-c	Height above 10m	Cum	8,839.00
		For T-beam & slab		
551	R3-BW-4-32-a	Height upto 5m	Cum	8,494.00
552	R3-BW-4-32-b	Height 5m to 10m	Cum	8,839.00
553	R3-BW-4-32-c	Height above 10m	Cum	9,185.00
		For box girder and balanced cantilever		
554	R3-BW-4-33-a	Height upto 5m	Cum	9,530.00
555	R3-BW-4-33-b	Height 5m to 10m	Cum	10,221.00
556	R3-BW-4-33-c	Height above 10m	Cum	10,911.00
		Providing and placing in position controlled cement concrete of M-40 grade using minimum cement content as 400Kg/cum and max water cement ratio of 0.40 for cast-in-situ portions after launching girders of RCC Deck Slab, cross diaphragms to required lines and levels including levelling, compacting by vibrators, curing including formwork, temporary supports as necessary and required etc.complete as specified and directed but excluding reinforcement.		
		RCC M 40 Grade		

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
		Using RMC and Concrete Pump		
		For solid slab super-structure		
557	R3-BW-4-34-a	Height upto 5m	Cum	8,540.00
558	R3-BW-4-34-b	Height 5m to 10m	Cum	8,901.00
559	R3-BW-4-34-c	Height above 10m	Cum	9,263.00
		For T-beam & slab		
560	R3-BW-4-35-a	Height upto 5m	Cum	8,901.00
561	R3-BW-4-35-b	Height 5m to 10m	Cum	9,263.00
562	R3-BW-4-35-c	Height above 10m	Cum	9,625.00
		For box girder and balanced cantilever		
563	R3-BW-4-36-a	Height upto 5m	Cum	9,987.00
564	R3-BW-4-36-b	Height 5m to 10m	Cum	10,711.00
565	R3-BW-4-36-c	Height above 10m	Cum	11,434.00
		(II) PRECAST & PRESTRESSED CONCRETE		
		Providing and placing in position controlled cement concrete of M-35 grade using minimum cement content as 400Kg/cum and max water cement ratio of 0.40 for RCC Precast Girders and Diaphragms with form finish surface in any shape and size as per detailed drawings and designs including formwork, temporary supports as necessary and required, compacting by vibrators, levelling, curing and finishing etc. complete as specified and directed but excluding reinforcement and placing in position. (using concrete mixer).		
		RCC/PSC Grade M35		
		Using concrete mixer.		
		For solid slab super-structure		
566	R3-BW-4-37-a	Height upto 5m	Cum	8,149.00
567	R3-BW-4-37-b	Height 5m to 10m	Cum	8,494.00
568	R3-BW-4-37-c	Height above 10m	Cum	8,839.00
		For T-beam & slab		
569	R3-BW-4-38-a	Height upto 5m	Cum	8,494.00
570	R3-BW-4-38-b	Height 5m to 10m	Cum	8,839.00
571	R3-BW-4-38-c	Height above 10m	Cum	9,185.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
		For box girder and balanced cantilever		
572	R3-BW-4-39-a	Height upto 5m	Cum	9,530.00
573	R3-BW-4-39-b	Height 5m to 10m	Cum	10,221.00
574	R3-BW-4-39-c	Height above 10m	Cum	10,911.00
		Providing and placing in position controlled cement concrete of M-40 grade using minimum cement content as 400Kg/cum and max water cement ratio of 0.40 for RCC Precast Girders and Diaphragms with form finish surface in any shape and size as per detailed drawings and designs including formwork, temporary supports as necessary and required, compacting by vibrators, levelling, curing and finishing etc. complete as specified and directed but excluding reinforcement and placing in position. (using concrete mixer) .		
		PSC Grade M-40		
		Using concrete mixer.		
		For solid slab super-structure		
575	R3-BW-4-40-a	Height upto 5m	Cum	8,684.00
576	R3-BW-4-40-b	Height 5m to 10m	Cum	9,046.00
577	R3-BW-4-40-c	Height above 10m	Cum	9,408.00
		For T-beam & slab		
578	R3-BW-4-41-a	Height upto 5m	Cum	9,046.00
579	R3-BW-4-41-b	Height 5m to 10m	Cum	9,408.00
580	R3-BW-4-41-c	Height above 10m	Cum	9,770.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
		Providing and placing in position controlled cement concrete of M-40 grade using minimum cement content as 400Kg/cum and max water cement ratio of 0.40 for Prestressed Concrete Girders as per detailed drawings and designs having form finish surfaces including formwork on casting bed and temporary supports as necessary and required, compacting by vibrators, levelling, curing and finishing etc.complete as specified and directed including launching the girders in position using plant and equipment and providing erecting and removing the temporary staging as necessary and required etc. complete as specified and directed excluding reinforcement and placing in position. (using concrete mixer) .		
		PSC Grade M-40		
		Using concrete mixer.		
		For T-beam & slab		
581	R3-BW-4-42-a	Height upto 5m	Cum	9,987.00
582	R3-BW-4-42-b	Height 5m to 10m	Cum	10,711.00
583	R3-BW-4-42-c	Height above 10m	Cum	11,434.00
		Providing and placing in position controlled cement concrete of M-45 grade using minimum cement content as 400Kg/cum and max water cement ratio of 0.40 for Prestressed Concrete Girders as per detailed drawings and designs having form finish surfaces including formwork on casting bed and temporary supports as necessary and required, compacting by vibrators, levelling, curing and finishing etc.complete as specified and directed including launching the girders in position using plant and equipment and providing erecting and removing the temporary staging as necessary and required etc. complete as specified and directed excluding reinforcement and placing in position. (using concrete mixer) .		
		PSC Grade M-45		

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
		For I-beam & slab including launching of precast girders by launching truss upto 40 m span		
584	R3-BW-4-43-a	Height upto 5m	Cum	9,201.00
585	R3-BW-4-43-b	Height 5m to 10m	Cum	9,575.00
586	R3-BW-4-43-c	Height above 10m	Cum	9,949.00
		For cast-in-situ box girder,segmental construction and balanced cantilever		
587	R3-BW-4-44-a	Height upto 5m	Cum	10,323.00
588	R3-BW-4-44-b	Height 5m to 10m	Cum	11,072.00
589	R3-BW-4-44-c	Height above 10m	Cum	11,820.00
		Providing and placing in position controlled cement concrete of M-40 grade using minimum cement content as 400Kg/cum and max water cement ratio of 0.40 for Prestressed Concrete Girders as per detailed drawings and designs having form finish surfaces including formwork on casting bed and temporary supports as necessary and required, compacting by vibrators, levelling, curing and finishing etc.complete as specified and directed including launching the girders in position using plant and equipment and providing erecting and removing the temporary staging as necessary and required etc. complete as specified and directed excluding reinforcement and placing in position.(Using RMC/Batch Mix Plant, Transit Mixer and Concrete Pump).		
		PSC M-40 Grade		
		Using RMC/Batch Mix Plant, Tansit Mixer and Concrete Pump		
		For solid slab super-structure		
590	R3-BW-4-45-a	Height upto 5m	Cum	8,540.00
591	R3-BW-4-45-b	Height 5m to 10m	Cum	8,901.00
592	R3-BW-4-45-c	Height above 10m	Cum	9,263.00
		For T-beam & slab		
593	R3-BW-4-46-a	Height upto 5m	Cum	8,901.00
594	R3-BW-4-46-b	Height 5m to 10m	Cum	9,263.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
595	R3-BW-4-46-c	Height above 10m	Cum	9,625.00
		For box girder and balanced cantilever		
596	R3-BW-4-47-a	Height upto 5m	Cum	9,987.00
597	R3-BW-4-47-b	Height 5m to 10m	Cum	10,711.00
598	R3-BW-4-47-c	Height above 10m	Cum	11,434.00
		Providing and placing in position controlled cement concrete of M-45 grade using minimum cement content as 400Kg/cum and max water cement ratio of 0.40 for Prestressed Concrete Girders as per detailed drawings and designs having form finish surfaces including formwork on casting bed and temporary supports as necessary and required, compacting by vibrators, levelling, curing and finishing etc.complete as specified and directed including launching the girders in position using plant and equipment and providing erecting and removing the temporary staging as necessary and required etc. complete as specified and directed excluding reinforcement and placing in position.(Using RMC/Batch Mix Plant, Transit Mixer and Concrete Pump).		
		PSC Grade M-45		
		For solid slab/voided slab super-structure		
599	R3-BW-4-48-a	Height upto 5m	Cum	8,827.00
600	R3-BW-4-48-b	Height 5m to 10m	Cum	9,201.00
601	R3-BW-4-48-c	Height above 10m	Cum	9,575.00
		For I-beam & slab including launching of precast girders by launching truss upto 40 m span		
602	R3-BW-4-49-a	Height upto 5m	Cum	9,201.00
603	R3-BW-4-49-b	Height 5m to 10m	Cum	9,575.00
604	R3-BW-4-49-c	Height above 10m	Cum	9,949.00
		For cast-in-situ box girder, segmental construction and balanced cantilever		
605	R3-BW-4-50-a	Height upto 5m	Cum	10,323.00
606	R3-BW-4-50-b	Height 5m to 10m	Cum	11,072.00
607	R3-BW-4-50-c	Height above 10m	Cum	11,820.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
		(IV) ANTI-CRASH BARRIER REINFORCEMENT, PRESTRESSING -		
		Reinforced Cement Concrete Crash Barrier		
608	R3-BW-4-51	Providing and placing in position controlled cement concrete of M-30 grade using minimum cement content as 400Kg/cum and max water cement ratio of 0.40 in cast-in-situ Anti Crash Barrier with form finished surface as per detailed drawings to required line and levels including compacting by vibrators, levelling, formwork, curing and finishing etc., providing temporary supports as required including provisions for fixing sockets for lighting posts at a distance of 20 mtrs. centre to centre as directed and providing and fixing 100mm PVC pipes inside throughout the length for passing electric cables complete as specified and directed as per drawings and design (Excluding reinforcement) .	Rmt	2,660.00
		Type - A, "W" : Metal Beam Crash Barrier		
609	R3-BW-4-52	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.	Rmt	4,871.00
		Type - B, "THRIE" : Metal Beam Crash Barrier		

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
610	R3-BW-4-53	Providing and erecting a "Thrie" metal beam crash barrier comprising of 3 mm thick corrugated sheet metal beam rail, 85 cm above road/ground level, fixed on ISMC series channel vertical post, 150 x 75 x 5 mm spaced 2 m centre to centre, 2 m high with 1.15 m below ground 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 space of channel section 150 x 75 x 5 mm, 546 mm long complete.	Rmt	5,330.00
611	R3-BW-4-54	Supplying, fitting and placing HYSD bar reinforcement in super-structure complete as per drawing and technical specifications		DELETED
612	R3-BW-4-55	High tensile steel wires/strands including all accessories for stressing, stressing operations and grouting complete as per drawing and Technical Specifications	MT	2,91,666.00
613	R3-BW-4-56	Providing and placing in position controlled cement concrete of M-40 grade using minimum cement content as 400Kg/cum and max water cement ratio of 0.40 in RCC Approach Slab over / Beyond abutments as per drawings and designs, including levelling, compacting by vibrators, curing including formwork etc. complete as specified and directed but excluding reinforcement.	Cum	6,293.00
614	R3-BW-4-57	Reinforced cement concrete approach slab including reinforcement and formwork complete as per drawing and Technical specification	Cum	10,273.00
615	R3-BW-4-58	PCC M15 Grade leveling course below approach slab complete as per drawing and Technical specification	Cum	5,263.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
		Providing and placing in position controlled cement concrete of M-45 grade using minimum cement content as 400Kg/cum and max water cement ratio of 0.40 for RCC Precast Girders and Diaphragms with form finish surface in any shape and size as per detailed drawings and designs including formwork, temporary supports as necessary and required, compacting by vibrators, levelling, curing and finishing etc. complete as specified and directed but excluding reinforcement and placing in position. (using concrete mixer) .		
		RCC Grade M-45		
		For solid slab/voided slab super-structure		
616	R3-BW-4-59-a	Height upto 5m	Cum	8,678.00
617	R3-BW-4-59-b	Height 5m to 10m	Cum	9,052.00
618	R3-BW-4-59-c	Height above 10m	Cum	9,426.00
		For I-beam & slab including launching of precast girders by launching truss upto 40 m span		
619	R3-BW-4-60-a	Height upto 5m	Cum	9,052.00
620	R3-BW-4-60-b	Height 5m to 10m	Cum	9,426.00
621	R3-BW-4-60-c	Height above 10m	Cum	9,800.00
		For cast-in-situ box girder, segmental construction and balanced cantilever		
622	R3-BW-4-61-a	Height upto 5m	Cum	10,174.00
623	R3-BW-4-61-b	Height 5m to 10m	Cum	10,922.00
624	R3-BW-4-61-c	Height above 10m	Cum	11,670.00
		Providing and placing in position controlled cement concrete of M-50 grade using minimum cement content as 400Kg/cum and max water cement ratio of 0.40 for RCC Precast Girders and Diaphragms with form finish surface in any shape and size as per detailed drawings and designs including formwork, temporary supports as necessary and required, compacting by vibrators, levelling, curing and finishing etc. complete		

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
		as specified and directed but excluding reinforcement and placing in position. (using concrete mixer).		
		RCC Grade M-50		
		For cast-in-situ box girder, segmental construction and balanced cantilever		
625	R3-BW-4-62-a	Height upto 5m	Cum	10,704.00
626	R3-BW-4-62-b	Height 5m to 10m	Cum	11,497.00
627	R3-BW-4-62-c	Height above 10m	Cum	12,290.00
		Providing and placing in position controlled cement concrete of M-50 grade using minimum cement content as 400Kg/cum and max water cement ratio of 0.40 for Prestressed Concrete Girders as per detailed drawings and designs having form finish surfaces including formwork on casting bed and temporary supports as necessary and required, compacting by vibrators, levelling, curing and finishing etc.complete as specified and directed including launching the girders in position using plant and equipment and providing erecting and removing the temporary staging as necessary and required etc. complete as specified and directed excluding reinforcement and placing in position. (using RMC and Concrete Pump).		
		PSC Grade M-50		
		For cast-in-situ box girder, segmental construction and balanced cantilever		
628	R3-BW-4-63-a	Height upto 5m	Cum	10,704.00
629	R3-BW-4-63-b	Height 5m to 10m	Cum	11,497.00
630	R3-BW-4-63-c	Height above 10m	Cum	12,290.00
		Providing and placing in position controlled cement concrete of M-45 grade using minimum cement content as 400Kg/cum andmax water cement ratio of 0.40 for cast-in-situ portions after launching girders of RCCDeck Slab, cross diaphragms to required		

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
		and levels including levelling, compacting by vibrators, curing including formwork, temporary supports as necessary and required etc.complete as specified and directed but excluding reinforcement. (using RMC and Concrete Pump).		
		PSC Grade M-45		
		For solid slab/voided slab super-structure		
631	R3-BW-4-64-a	Height upto 5m	Cum	8,678.00
632	R3-BW-4-64-b	Height 5m to 10m	Cum	9,052.00
633	R3-BW-4-64-c	Height above 10m	Cum	9,426.00
		For I-beam & slab including launching of precast girders by launching truss upto 40 m span		
634	R3-BW-4-65-a	Height upto 5m	Cum	9,052.00
635	R3-BW-4-65-b	Height 5m to 10m	Cum	9,426.00
636	R3-BW-4-65-c	Height above 10m	Cum	9,800.00
		For cast-in-situ box girder,segmental construction and balanced cantilever		
637	R3-BW-4-66-a	Height upto 5m	Cum	10,174.00
638	R3-BW-4-66-b	Height 5m to 10m	Cum	10,922.00
639	R3-BW-4-66-c	Height above 10m	Cum	11,670.00
		Providing and placing in position controlled cement concrete of M-50grade using minimum cement content as 400Kg/cum and max water cement ratio of 0.40 for cast-in-situ portions after launching girders of RCC Deck Slab, cross diaphragms to required lines and levels including levelling, compacting by vibrators, curing including formwork, temporary supports as necessary and required etc.complete as specified and directed but excluding reinforcement. (Using RMC and Concrete Pump).		
		PSC Grade M-50		
		For cast-in-situ box girder, segmental construction and balanced cantilever		
640	R3-BW-4-67-a	Height upto 5m	Cum	10,784.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
641	R3-BW-4-67-b	Height 5m to 10m	Cum	11,577.00
642	R3-BW-4-67-c	Height above 10m	Cum	12,370.00
		Providing and placing in position controlled cement concrete of M-55 grade using minimum cement content as 400Kg/cum and max water cement ratio of 0.40 for cast-in-situ portions after launching girders of RCC Deck Slab, cross diaphragms to required lines and levels including levelling, compacting by vibrators, curing including formwork, temporary supports as necessary and required etc.complete as specified and directed but excluding reinforcement.(Using RMC and Concrete Pump).		
		For cast-in-situ box girder, segmental construction and balanced cantilever		
643	R3-BW-4-68-a	Height upto 5m	Cum	9,975.00
644	R3-BW-4-68-b	Height 5m to 10m	Cum	10,714.00
645	R3-BW-4-68-c	Height above 10m	Cum	11,453.00
646	R3-BW-4-69	Providing and laying Cement concrete wearing coat M-30 grade including reinforcement complete as per drawing and Technical Specifications	Cum	10,749.00
647	R3-BW-4-70	Precast - pretensioned Girders of M-40 grade (Providing, precasting, transportation and placing in position precast pretensioned concrete girders as per drawing and technical specifications)	Cum	45,875.00
648	R3-BW-4-71	Providing and fixing Helical pipes in voided concrete slabs	Rmt	945.00
649	R3-BW-4-72	Painting on concrete surface (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 Sq.m.)	Rmt	72.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
V MISCELLANEOUS ITEMS				
(I) EXPANSION JOINT & DRAINAGE SPOUT				
650	R3-BW-5-1-a	Providing and fixing in position expansion joints with plain premoulded bituminuous filler 25 mm thick including fixing 10 gauge moulded galvanized iron sheet 38 cm wide etc. complete as specified and directed.	Rmt	1,614.00
651	R3-BW-5-1-b	Providing and fixing expansion joint in carriageway with 1.4 mm thick copper plate, 25 mm thick polysulphide sealant and polysterine as shown in the drawing including fixing the copper plate to the deck slab with 5 mm counter sunk bronze screws 75 mm long at 300 mm c/c in two staggered layers etc. complete and as directed.	Rmt	4,404.00
		Filler joint		
652	R3-BW-5-1-c	Providing & fixing 2 mm thick corrugated copper plate in expansion joint complete as per drawing & Technical Specification.	Rmt	4,146.00
653	R3-BW-5-1-d	Providing & fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & Technical Specification.	Rmt	254.00
654	R3-BW-5-1-e	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	Rmt	320.00
655	R3-BW-5-1-f	Providing and filling joint sealing compound as per drawings and technical specifications with coarse sand and 6% bitumen by weight	Rmt	43.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
656	R3-BW-5-1-g	Elastomeric Slab Steel Expansion Joint (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.)	Rmt	19,323.00
657	R3-BW-5-1-h	Providing and fixing in position expansion joints in footpath consisting of Shalitexboard , thermocol packing and polysulphide sealant as per detailed drawings etc. complete as specified and directed.	Rmt	1,265.00
658	R3-BW-5-1-i	Strip Seal Expansion Joint (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.)	Rmt	18,347.00
659	R3-BW-5-1-j	Providing and fixing in position Drainage Spouts including trough of 260 x 260. size fabricated using mild steel plates, flats, MS grating, etc. and 100mm dia GI pipe 1 m long as per detailed drawings etc. complete as specified and directed.	Each	2,224.00
660	R3-BW-5-1-k	Burried Joint (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.)	Rmt	1,280.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
661	R3-BW-5-1-l	Asphaltic Plug joint (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.)	Rmt	1,323.00
662	R3-BW-5-1-m	Compression Seal Joint (Providing and laying of compression seal joint consisting of steel armoured nosing at two edges of the joint gap suitably anchored to the deck concrete and a preformed 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.)	Rmt	5,120.00
663	R3-BW-5-1-n	Modular Strip / Box Seal Joint (Providing and laying of a modular strip Box steel 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.)	Rmt	13,370.00
664	R3-BW-5-1-o	Modular Strip / Box Seal Joint (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.)	Rmt	13,394.00
		(II) MASTIC ASPHALT		

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
665	R3-BW-5-2-a	Mastic Asphalt (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 .)	Sqm	617.00
666	R3-BW-5-2-b	P/L, mastic asphalt 25mm thick with 10/20 grade bitumen including producing the same at computerised batch mix plant, transporting the same to site by means of mastic cookers, laying the same with mastic paver and including all necessary tools, labours& barricading, spreading of aggregates as antiskid measures by means over newly laid mastic asphalt as per prevailing MCGM specification clause no. 365 of 'Roadwork' as directed by Engineer in charge (Note: The material specifications / gradation & content shall be as specified in the relevant I.S. Codes.)	Sqm	Refer Road USOR
667	R3-BW-5-2-c	Providing and laying bitumen mastic layer 20 mm thick over bridge deck excluding tack coat etc. complete as specified and directed. (with bitumen 10/20 penetration not less than 10.5% and lime stone dust not, less than 40%)	Sqm	986.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
668	R3-BW-5-2-d	P/L, mastic asphalt 40mm thick with 10/20 grade bitumen including producing the same at computerised batch mix plant, transporting the same to site by means of mastic cookers, laying the same with mastic paver and including all necessary tools, labours& barricading, spreading of aggregates as antiskid measures by means over newly laid mastic asphalt as per MCGM specification clause no. 365 of 'Roadwork' as directed by Engineer in charge (Note: The material specifications / gradation & content shall be as specified in the relevant I.S. Codes.)	Sqm	Refer Road USOR
		(III) EPOXY PAINTING		
669	R3-BW-5-3-a	Providing and applying epoxy primer as a base coat to receive epoxy paint.	Sqm	219.00
670	R3-BW-5-3-b	Providing and applying epoxy base paint to RCC piers, columns, beams, girders, diaphragms, slabs, parapets etc. including cleaning and preparing the surface, applying putty consisting of epoxy base paint and steolite powder, applying one coat of epoxy primer and one coat of epoxy paint to render the concrete surfaces smooth by covering small irregularities including scaffolding etc. complete as specified and directed, (1coat epoxy + primer)	Sqm	331.00
671	R3-BW-5-3-c	Providing and applying epoxy base paint to RCC piers, columns, beams, girders, diaphragms, slabs, parapets etc. including cleaning the surfaces thoroughly so as to remove deposited salts, oil, grease, tar, moisture etc. from the surface, preparing the surface, applying putty consisting of epoxy base paint and steolite powder, to render the concrete surfaces smooth by covering small irregularities and applying one coat of epoxy paint including scaffolding etc. complete as specified and directed.(2 coats epoxy + primer)	Sqm	512.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
672	R3-BW-5-3-d	Providing and applying epoxy seal coat to new or repaired surfaces of RCC structural members, prepared by mixing araldite GY 250 and hardener in 100:50 proportion by weight with stiff nylon bristle brush as per manufacturer's specifications etc. complete as specified and directed.	Sqm	158.00
673	R3-BW-5-3-e	Providing and applying two coats of Hi-Build coal tar epoxy formulation corroseal TE-321 with an interval of minimum 4 hours - 8 hours between application of successive coats including preparing and cleaning the surface thoroughly so as to remove deposited salts, grease, oil, dust, tar etc. using coarse brush etc. complete as specified and directed.	Sqm	275.00
674	R3-BW-5-3-f	Providing and applying protective paint consisting of two coats of coal tar epoxy paint over one coat of primer of approved quality and make to the external surfaces of concrete structures to be buried under the soil etc. complete as specified and directed.	Sqm	284.00
		(IV) OTHER ITEMS -PVC PIPES, M.S. SLEEVES, DISMANTLING		
675	R3-BW-5-4-a	Providing and fixing in position PVC pipe 150 mm dia. in any position including all fittings and accessories, making joints / connections water tight with solvent cement, scaffolding if necessary and making good the damages if any etc. complete as specified and directed.	Rmt	955.00
676	R3-BW-5-4-b	Providing and fixing in position PVC pipe 100 mm dia. in any position including all fittings and accessories, making joints / connections water tight with solvent cement, scaffolding if necessary and making good the damages if any etc. complete as specified and directed.	Rmt	623.00
677	R3-BW-5-4-c	Providing and fixing in position Mild steel sleeves of M.S pipe 200 mm dia and 1.2 mtr length with base plate 300 x 300 x 3 mm thick for electric poles etc. complete as specified and directed.	Nos.	3,289.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
678	R3-BW-5-4-d	Dismantling existing R.C.C slabs, Beams, Parapets, Kerbs etc. with outmost care without damaging the existing reinforcement including cleaning the reinforcement and disposing off the dismantled material safely without causing any disturbance to the traffic and public in general etc. complete as specified and directed.	Cum	2,642.00
		(V) MISCELLANEOUS REPAIR ITEMS - REMOVING WEARING COAT, STAGING, EPOXY MORTAR		
679	R3-BW-5-5-a	Removing the old heavy duty mastic asphalt wearing coat/asphaltic wearing coat laid over the expansion joints by chiselling, picking or by any other means as necessary and required so as to expose the joint completely including disposing off the debris etc. complete as specified and directed.	Sqm	121.00
680	R3-BW-5-5-b	Providing and erecting scaffolding/ staging upto a height of 10m including all cross bracings to make it strong and sturdy etc. complete as specified as directed.	Sqm	259.00
681	R3-BW-5-5-c	Providing and applying epoxy mortar for repairs to cracked portions of RCC columns, piers, beams, girders, diaphragms, slabs, parapets etc. including chipping the loose cracked concrete, cleaning the surface and removing the rust thoroughly and completely by means of wire brushes, sand blasting and washing with water etc. rebuilding the section by first applying one coat of epoxy primer coat of araldite / GY 257 and hardener HY840 in 100:50 proportion by weight, applying epoxy mortar prepared by mixing araldite, hardener and quartzite sand in 100:50:900 proportion by weight in required shape and architectural finishes, if any, finishing the surface smooth including applying a seal coat of araldite and hardener in 100:50 proportion by weight with stiff nylon bristle brush etc. complete as specified as directed.	Kg	459.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
		(VI) LOAD TEST		
		Conducting load test on the bridge as per the procedure and specifications laid down by IRC and as directed including formulating and submitting the required reports in triplicate after completion of the load test etc. complete as specified and directed. (upto 140 M.T load)		
682	R3-BW-5-6-a	a) First Test	No.	3,30,508.00
683	R3-BW-5-6-b	b) Subsequent Test	No.	37,916.00
		Carrying out load test upto 1.50 times the design load on any vertical pile selected by Engineer-in-charge as per the procedure and specifications laid down by IS:2911 and maintaining complete record of observations regarding load settlement etc. complete.		
		Upto 600mm dia		
684	R3-BW-5-6-c	a) On first Pile	No.	1,37,301.00
685	R3-BW-5-6-d	b) Subsequent Pile	No.	54,031.00
		Above 600mm to 750mm dia		
686	R3-BW-5-6-e	a) On first Pile	No.	2,05,950.00
687	R3-BW-5-6-f	b) Subsequent Pile	No.	81,047.00
		Above 800mm to 1000mm dia		
688	R3-BW-5-6-g	a) On first Pile	No.	3,43,252.00
689	R3-BW-5-6-h	b) Subsequent Pile	No.	1,35,078.00
		Above 1100mm to 1200mm dia		
690	R3-BW-5-6-i	a) On first Pile	No.	5,49,203.00
691	R3-BW-5-6-j	b) Subsequent Pile	No.	2,16,125.00
		Carrying out Dynamic load test at 2.50 times the design load on any dia.of pile including all preparations for conducting test by precasting required C.C hammer head and all machineries, labour etc. including submitting report with graphs and interpretations complete (excluding cost of pile).		
692	R3-BW-5-6-k	a) On first Pile	No.	62,271.00
693	R3-BW-5-6-l	b) Subsequent Pile	No.	34,595.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
		Carrying out Dynamic load test at 1.50 times the design load on any dia.of pile including all preparations for conducting test by precasting required C.C hammer head and all machineries, labour etc. including submitting report with graphs and interpretations complete (excluding cost of pile).		
694	R3-BW-5-6-m	a) On first Pile	No.	55,000.00
695	R3-BW-5-6-n	b) Subsequent Pile	No.	34,595.00
696	R3-BW-5-6-o	Carrying out Cyclic load test at 2.50 times the design load or as specified on vertical test pile of 1000mm dia. as per the procedure laid down in IS:2911 including maintaining and submitting complete records of load settlement as specified and directed.	No.	11,07,040.00
697	R3-BW-5-6-p	Carrying out Cyclic load test at 1.50 times the design load or as specified on vertical test pile of 1000mm dia. as per the procedure laid down in IS:2911 including maintaining and submitting complete records of load settlement as specified and directed.	No.	10,37,850.00
		(VII) STRUCTURAL STEEL TRUSS, GALVANISING, GUNITING		
698	R3-BW-5-6-q	Providing hot dip Galvanising to structural steel welded sections at 610gm / sqm as per specifications including transportation to and fro site of work including loading, unloading at site, factory etc. complete as specified and directed.	MT	30,076.00
699	R3-BW-5-6-r	Providing and fabricating structural steel work in rolled sections like angles, tees, channels, joists, etc. as per detail designs and drawings including cutting, fabricating, hoisting, erecting and fixing in position making rivetted / bolted / welded connections with connections with connecting plates, braces, holdfasts and painting with two coats of enamel paint of approved shade and make over one coat of primer (red oxide) etc. complete as specified and directed.	MT	Refer R3-CS-SS-01

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
700	R3-BW-5-6-t	Guniting to surfaces of RCC structural members such as walls, columns, beams, slabs etc. with cement mortar 1:3 of average thickness of 40mm under pressure of 2.1 to 2.8 kg/cm ² including chipping the loose concrete, cleaning rust by means of wire brush, providing and fixing BRC fabric (welded mesh) of 75 x 75 mm size 10 gauge, necessary formwork, floating and curing etc. complete as specified and directed.	Sqm	Refer R3-CS-CW-37
		(VIII) OTHER ITEMS (Cleaning, Polymer painting, Integrity test, pier protection, CPCC, Dressing Joints, Compression seal, Thermoplastic paint, stainless steel railing, roof structure and roofing, cement paint, polymer mortar)		
701	R3-BW-5-7-a	Cleaning the concrete surfaces of bridge with detergent and other cleaning materials as necessary including removing all dust, grease, stains etc. to render the surface clean including removing all traces of cleaning materials with jet of clean water etc. complete as specified and directed.	Sqm	53.00
702	R3-BW-5-7-b	Providing grease in grease box of bearing including removing the old grease from the box, cleaning the box etc.as specified and directed.	Kg	341.00
703	R3-BW-5-7-c	Providing and applying elastic, polymeric membrane forming system with anti carbonation and breathing properties of approved make of water based acrylic polimers with selected mineral fillers having properties of ultra violet resistant, carbonation resistant breathable, water proofing coating and applying one coat of primer and two top coats of approved shade and colour including cleaning and preparing the surface as required including scaffolding and all labour etc. complete as directed.	Sqm	485.00
704	R3-BW-5-7-d	Carrying out integrity test on piles of various diameters as per standard procedure and submitting reports.	No.	395.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
705	R3-BW-5-7-e	Providing and casting in C.C. M-25 for pier protection as per detailed drawing complete as specified and directed.	Rmt	4,787.00
706	R3-BW-5-7-f	Providing and applying CPCC anticorrosive treatment as per the Indian patent No. 481/DEL93. Dated 13/05/93 and Indian patent No. 258/DEL/92, Dated 25/03/92 to Mild and HYSB bar reinforcement cut and bent to the required length, shape and size including chemical, labours, transportation of steel bars for treatment and bringing back the same for fixing in position with all accessories and material required for giving the treatment etc. complete as specified and directed.	MT	11,530.00
707	R3-BW-5-7-g	Dressing of joints between the existing mastic panels with hot rubberized sealing compound conforming to I.S. 1834-1984 after proper cleaning with compressed air applying required primer and providing layer of lime powder over hot sealing compound etc. completed as specified and directed. (Sealing of 25 mm wide joints between the mastic panels with average depth of 12 mm.)	Rmt	49.00
708	R3-BW-5-7-h	Providing and laying of compression seal expansion joint consisting of steel armoured nosing at two edges of the joint gap suitably anchored to the deck concrete and a preformed 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.	Rmt	10,260.00
		Providing and applying hot applied thermoplastic road marking material with glass beads extremely high skid resistance 2.5 mm thick without primer coat (Tack coat) on Asphaltroad surface. All labour, materials, with special aggregates as specified in B.S. part - I & II 1989 and carrying out the marking on any road in center line and other marking		

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
		continuous or intermittent 10cm. or 15cm width also pedestrians crossing strips as well as spraying further quantity of glass beads of type II uniformly into a mono layer on to the hot paint line in quick succession of the paint spraying operation @ 250gms per sqm. area as directed and as per BS / MOST specifications in white / yellow colour.		
709	R3-BW-5-7-i	a) White colour	Sqm	1,011.00
710	R3-BW-5-7-j	b) Yellow colour	Sqm	1,011.00
711	R3-BW-5-7-k	Providing, fitting and fixing mild steel railing complete as per drawing and Technical Specification	Rmt	3,662.00
712	R3-BW-5-7-l	Providing and fixing stainless steel railing with stainless steel post of 5mm thick S.S. post shaped as shown in the drawing and fixing 25mm dia S.S. pipe in the precut holes in the post and 75mm dia S.S. pipe handrail fixed at top with 3mm plate welded to s.s. post including handrail fixed at top with 3mm plate welded to s.s. post including proper cutting welding anchoring fixing of post to the treads of staircase, required machinery labour etc. complete as specified and directed.	Rmt	4,296.00
713	R3-BW-5-7-m	Providing and fabricating in position support structure for roofing in S.S. pipes of 75/100 mm and other diameters as per approved structural design fixed to base slab with necessary base plates, cleats, fixtures, fasteners, hardware etc. complete as specified and directed.	Rmt	2,266.00
714	R3-BW-5-7-n	Removing the existing rolled steel joist beams, stanchions etc. completely and staking the material at ward office or at site as directed by Engineer.	MT	7,779.00
715	R3-BW-5-7-o	Removing existing advertising boards completely and stacking as directed by Engineer.	Sqm	116.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
716	R3-BW-5-7-p	Providing and fixing colour coated galvanised colour bond base having tensile strength (Min. 550 Mpa) C.R. steel base metal with hot dip alloy coating of AL-ZN-SI as per ASTM - A - 792 M- 02 / AS 1397 ALU Zinc alloy crimp sheets with flashing for girth 0 to 600 mm with standard length of 2440 mm and flashing for girth 601 to 1200 mm as directed by Engineer-in-charge.	Sqm	1,290.00
717	R3-BW-5-7-q	Providing and fixing flashing for advertisement for girth 600 mm to 1200 mm with standard length as per detailed drawing and manufacturing specification and as directed by Engineer-in-charge.	Rmt	977.00
		Providing and applying approved quality water proof cement paint to structure with one coat of primer and two coats of cement paint including watering, brooming, curing complete as specified and directed.		
		Providing and laying polymer modified mortar in the proportion of 1:5:15 (1 Polymer, 5 Cement, 15 Quartz sand) for replacement of spalled concrete, plaster, repairing cracks in the structure etc. complete as specified and directed.		
718	R3-BW-5-7-r	a) 10 mm thick average	Sqm	1,468.00
719	R3-BW-5-7-s	b) 25 mm thick average	Sqm	2,347.00
720	R3-BW-5-7-t	Providing & placing in position controlled concrete M-35 grade with minimum cement content as 400 kg/cum and water cement ratio not exceeding 0.40 for R.C.C Precast Box Drain in suitable handling units with form finished surface in any shape & size as per detailed drawings and designs including formwork, temporary supports if required, compacting by vibrators, leveling, curing and finishing etc. complete as specified and including precasting, transportation & erection in place as directed but excluding reinforcement (using RMC/Batch Mix Plant, Tansit Mixer)	Cum	15,704.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
721	R3-BW-5-7-u	Providing & Laying inverted filter behind Abutment & RE wall with suitable thickness.	Cum	934.00
722	R3-BW-5-7-v	Providing, placing and erecting in place Precast Reinforced Earth wall panels in M35 complete with precast facia and GI/HDPE reinforcement . Panel shall be given approved cement paint from outside & 2 coats of coal for epoxy from inside. Panel shall be cast and stored away from the site as per manufacturers design and as per MORTH specifications.	Sqm	5,903.00
723	R3-BW-5-7-w	P & F Arc type Anticrash Barrier as per drawing	Rmt	10,695.00
724	R3-BW-5-7-x	Drilling holes in existing foundation for anchoring 6mm to 32mm dia rods pf RCC jacket with non shrink free flow grout. Cost to include drilling for 1m depth, grout etc. except reinforcement.	No.	2,223.00
725	R3-BW-5-7-y	Providing and placing 600 thk Diaphragm wall in M30 concrete with reinforcement to enable excavation of new footing etc. cost to include mobilisation equipment, drilling excluding reinforcement.	Sqm	12,820.00
726	R3-BW-5-7-z	Providing and placing in position Soil Anchors upto 6m length 15t capacity by drilling through diaphragm wall etc. Cost to include drilling grouting with cementitious material etc. complete excluding reinforcement.	No.	11,317.00
727	R3-BW-5-8	Providing Fusion Bonded Epoxy Coating (FBEC) to reinforcing steel bars as per IS 13620: 1993 specifications for a coating thickness of 175 microns (with permissible variation of 50 microns) including testing at plant etc. complete as per specifications.	MT	13,682.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
VI		RIVER TRAINING AND PROTECTION WORKS		
Providing and laying boulders apron on river bed for protection against scour with stone boulders weighing not less than 40 kg each complete as per drawing and Technical specification.				
728	R3-BW-6-1	Boulder laid dry without wire crates.	Cum	2,492.00
729	R3-BW-6-2	Boulder apron laid in wire crates (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% extra for laps and joints laid with stone boulders weighing not less than 40 kg each.)	Cum	2,924.00
730	R3-BW-6-3	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 250 kg/cum as per IRC: 21-2000.)	Cum	8,169.00
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				
731	R3-BW-6-4	Stone/Boulder	Cum	2,492.00
732	R3-BW-6-5	Cement Concrete blocks of size 0.3x0.3 x0.3 m cast in cement concrete of Grade M15	Cum	8,169.00
733	R3-BW-6-6	Providing and laying Filter material underneath pitching in slopes complete as per drawing and Technical specification	Cum	2,665.00
734	R3-BW-6-7	Geotextile Filter (Laying of a geotextile filter between pitching and embankment slopes on which pitching is laid to prevent escape of the embankment material through the voids of the stone pitching/cement concrete blocks as well as to allow free movement of water without creating any uplift head on the pitching.)	Sqm	3,634.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
		Toe protection (A toe wall for toe protection can either be in dry rubble masonry in case of dry rubble pitching or pitching with stones in wire crates or it can be in PCC M15 nominal mix if cement concrete block have been used for pitching. Rates for toe wall can be adopted from respective clauses depending upon approved design. The rate for excavation for foundation, dry rubble masonry and PCC M15 have been analysed and given in respective chapters.)		
		Providing and laying Flooring complete as per drawing and Technical specifications laid over cement concrete bedding.		
735	R3-BW-6-8-a	Rubble stone laid in cement mortar 1:3	Cum	8,194.00
736	R3-BW-6-8-b	Cement Concrete blocks Grade M15	Cum	10,768.00
737	R3-BW-6-8-c	Dry rubble Flooring	Cum	3,298.00
		Curtain wall complete as per drawing and Technical specification		
738	R3-BW-6-9	Flexible Apron:Construction of flexible apron 1 m thick comprising of loose stone boulders weighing not less than 40 kg beyond curtain wall.	Cum	2,622.00
739	R3-BW-6-9-a	Stone masonry in cement mortar (1:3)	Cum	4,848.00
740	R3-BW-6-9-b	Cement concrete Grade M15	Cum	8,024.00
741	R3-BW-6-10	Gabian Structure for Retaining Earth (Providing and construction of a gabain 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 conforming to IS:280 and galvanizing coating conforming 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	2,980.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
742	R3-BW-6-11	Gabian Structure for Erosion Control, River Training Works and Protection works (Providing and constructing gabain 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	4,097.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
VII REPAIRS AND REHABILITATION				
743	R3-BW-7-1	Removal of existing cement concrete wearing coat including its disposal complete as per Technical specification without causing any detrimental effect to any part of the bridge structure and removal of dismantled material with all lifts and lead upto 1000m(Thickness 75 mm)		DELETED
744	R3-BW-7-2	Removal of existing asphaltic wearing coat comprising of 50 mm thick asphaltic concrete laid over 12 mm thick mastic asphalt including disposal with all lift and lead upto 1000m		DELETED
745	R3-BW-7-3	Guniting concrete surface with cement mortar applied with compressor after cleaning surface and spraying with epoxy complete as per Technical specification		DELETED
746	R3-BW-7-4	Providing and inserting nipples with approved fixing compound after drilling holes for grouting as per Technical specifications including subsequent cutting/removal and sealing of the hole as necessary of nipples after completion of grouting with Cement/Epoxy	Each	215.00
747	R3-BW-7-5-a	Sealing of cracks/porous concrete by injection process through nipples/Grouting complete as per Technical specification.-Cement Grout	Kg	261.00
748	R3-BW-7-5-b	Sealing of cracks/porous concrete by injection process through nipples/Grouting complete as per Technical specification.-Cement mortar (1:1) Grouting	Kg	257.00
749	R3-BW-7-6	Patching of damaged concrete surface with polymer concrete and curing compounds, initiator and promoter, available in present formulations, to be applied as per instructions of manufacturer and as approved by the Engineer.	Sqm	11,851.00
750	R3-BW-7-7	Sealing of crack / porous concrete with Epoxy Grout by injection through nipples complete .	Kg	2,810.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
751	R3-BW-7-8	Applying epoxy mortar over leached, honey combed and spalled concrete surface and exposed steel reinforcement complete as per Technical specification	Sqm	347.00
752	R3-BW-7-9	Removal of defective concrete, cleaning the surface thoroughly, applying the shotcrete mixture mechanically with compressed air under pressure, comprising of cement, sand, coarse aggregates, water and quick setting compound in the proportion, sand and coarse aggregates conforming to IS: 383 and table 1 of IS: 9012 respectively, water cement ratio ranging from 0.35 to 0.50, density of gunite not less than 2000 kg/cum, strength not less than 25 Mpa and workmanship.	Sqm	549.00
753	R3-BW-7-10	Applying pre-packed cement based polymer mortar of strength 45 Mpa at 28 days for replacement of spalled concrete	Sqm	1,306.00
754	R3-BW-7-11	Epoxy bonding of new concrete to old concrete	Sqm	503.00
755	R3-BW-7-12	Providing external prestressing with high tensile steel wires/strands including drilling for passage of prestressing steel, all accessories for stressing and stressing operation and grouting complete as per drawing and Technical specification	MT	5,55,141.00
756	R3-BW-7-13	Providing external prestressing with high tensile steel wires/strands including drilling for passage of prestressing steel, all accessories for stressing and stressing operation and grouting complete as per drawing and Technical specification	MT	3,96,537.00
757	R3-BW-7-14	Providing external prestressing with high tensile steel wires/ strands including drilling for passage of prestressing steel, all accessories for stressing and stressing operation and grouting complete as per drawing and Technical specification	MT	3,48,619.00
758	R3-BW-7-15	Replacement of bearings complete as per Technical specification		DELETED
759	R3-BW-7-16	Rectification of bearings as per Technical specifications		DELETED

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
760	R3-BW-7-17	Replacement of Expansion Joints complete as per drawings	Rmt	2,546.00
761	R3-BW-7-18	Replacement of damaged concrete railing.	Rmt	441.00
762	R3-BW-7-19	Replacement of crash barrier.	Rmt	840.00
763	R3-BW-7-20	Replacement of damaged mild steel railing	Rmt	361.00
764	R3-BW-7-21	Repair of crash barrier (Repair of concrete crash barrier with cement concrete of M-30 grade by cutting and trimming the damaged portion to a regular shape, cleaning the area to be repaired thoroughly, applying cement concrete after erection of proper form work.)	Rmt	268.00
765	R3-BW-7-22	Repair of RCC Railing (Carrying out repair of RCC M30 railing to bring it to the original shape.)	Rmt	172.00
766	R3-BW-7-23	Repair of steel Railing (Repair of steel railing to bring it to the original shape)	Rmt	313.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
VIII OTHER ITEMS				
767	R3-BW-8-1	Providing and fixing Bi-absorbent noise barrier panel with size of 3 mtr width x 3.5m height to be considered with EN1793 & EN 1794 European standards as per standard drawing. 1. Technical Specifications: Noise barrier shall compose of certified and tested panels according to the requirements of the European Standards or equivalent as directed by Engineer in charge and as per standard drawing etc Complete	Sqm	16,209.00
768	R3-BW-8-2	Providing and fixing Mono absorbent noise barrier panel with size of 3 mtr width x 3.5m height to be considered with EN1793 & EN 1794 European standards.1. Technical Specifications: Noise barrier shall compose of certified and tested panels according to the requirements of the European Standards as given below. 2. Material specifications ...as directed by Engineer in charge and as per standard drawing etc Complete.	Sqm	11,473.00
769	R3-BW-8-3	Providing and erecting a "W" metal beam crash barrier comprising of 3 mm thick corrugated sheet metal beam rail, 90 cm above road/ground level, fixed on ISMC series channel vertical post, 150x75x5mm spaced 2 m center to center, 0.90 m high above road level/ ground level, welded to base plate of size 250x250x16mm fitted to concrete structure below with 4 nos. of anchor bolts of 20mm dia. and 260mm long for each vertical post all steel parts and fitments to be galvanized by hot dip process, all fittings to conform to IS:1367 and IS:1364, as directed by Engineer in charge and as per standard drawing etc. Complete.	Rmt	3,223.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
770	R3-BW-8-4	Providing and applying Epoxy light reflective coating to tunnels, subways and underpasses etc. including mechanical grinding, cleaning by water jetting machine, thoroughly so as to remove deposited salts, oil, grease, tar, moisture etc. from the surface, the surface roughness shall be vetted/verified/certified by under the supervision of manufacturer's distributor or their authorized dealer and due certification shall be obtained before start of painting preparing the surface, applying 2mm thick putty to render the concrete surface smooth by covering small irregularities and applying 2 coats of 2 pack water based epoxy light reflective coating, with light reactants of 78% (magnolia shade) & 60% (+/- 3%) gloss as per relevant ISO standards/ codes, etc complete as directed.	Sqm	1,359.00
771	R3-BW-8-5	Providing & applying film galvanizing system having both active (galvanic protection & passive (barrier) protection having 96%Zinc in dry film thickness with 99.5% purity, with temperature resistance from -40 degree C to + 150 degree C, theoretical spread rate of 3.62 m ² /Kg for 60 micron DFT flash point of 47 degree C, unlimited shelf life, touch dry within 10 minutes and applying by surface preparation of Galvanized Iron/ Mild steel/ Carbon steel consisting of creating surface roughness of S.A. 2.5 or equivalent by way of sandblasting, bristle blasting, abrasive grinding wheel, sanders and chippers or other equivalent methods, including scaffolding as specified and directed by Engineer in charge etc. complete.		DELETED

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
772	R3-BW-8-6	Providing & Applying 2 pack, Water based Epoxy Primer Safe Cure & Seal EPX at 60-65 microns, with Taber abrasion resistance of 18.1 and 33.1 mg for 1 kg/500 cycles/CS10 wheels and Taber 1 kg/1000 cycles/CS10 Wheels respectively, with 215-220psi(1.4 to 1.5 MPa)350 to 450 psi(2.4 to 3.1 MPa), Tensile bond strength (7 days) Fresh concrete etched or blasted concrete,1000 psi (21.4 MPa) Shear Bond Strength(7 days),by brush/roller/Airless spray and providing and applying90-95 microns Duragard 310 CRU Chemical Resistant Urethane, including scaffolding etc., complete as specified and directed (60-65 microns Safe Cure & Seal EPX and 90-95 microns Duraguard 310 CRU Chemical Resistant Urethane),with surface preparation of grinding, water jetting and Putty application, followed by the primer and paint system as above. complete as directed by the Engineer in charge.	Sqm	527.00
773	R3-BW-8-7	Providing and fixing of view cutter, consisting of highdensity polyethylene sheet with Galvanized Coating, including all structural works, materials, lifting, erecting, barricading and necessary arrangement etc. complete as directed by the Engineer in charge.	Sqm	9,091.00
774	R3-BW-8-8	P/L Any thickness (25 -50 mm compacted thickness) Premix Bituminous Concrete Grading 2 using crushed aggregates premixed with 5.6% content by weight of Highly Modified Asphalt / Bitumen (HiMA), manufactured using minimum 7.5% SBS (Styrene-Butadiene-Styrene) Polymer, surface coat to thickness of any thickness using new material to the required grade, level & camber rolling with vibratory roller & power roller, pneumatic roller & using sensor paver etc. complete as specified as directed with addition of lime filler etc. complete as per the specification and direction of the Engineer-in-Charge.	Cum	24,188.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
775	R3-BW-8-9	P/L 30mm Premix Bituminous Concrete Grading 2 using crushed aggregates premixed with 5.6% content by weight of Highly Modified Asphalt / Bitumen (HiMA), manufactured using minimum 7.5% SBS (Styrene-Butadiene-Styrene) Polymer, surface coat to thickness of about 30mm (compacted thickness) using new material to the required grade, level & camber rolling with vibratory roller & power roller, pneumatic roller & using sensor paver etc. complete as specified as directed with addition of lime filler etc. complete. HiMA binder should have elastic recovery not less than 90% and softening point of not less than 90 deg celsius complete as per the specification and direction of the Engineer-in-Charge.	Sqm	726.00
776	R3-BW-8-10	P/L 40mm Premix Bituminous Concrete Grading 2 using crushed aggregates premixed with 5.6% content by weight of Highly Modified Asphalt / Bitumen (HiMA), manufactured using minimum 7.5% SBS (Styrene-Butadiene-Styrene) Polymer, surface coat to thickness of about 40mm (compacted thickness) using new material to the required grade, level & camber rolling with vibratory roller & power roller, pneumatic roller & using sensor paver etc complete as per the specification and direction of the Engineer-in-Charge.	Sqm	957.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
777	R3-BW-8-11	Providing and laying MICROSURFACING course TYPE-II comprising of dry crushed stone fine aggregate as per required grading with specific size as per Table-3 of IRC:SP:81-2008 @ 9.50 kg/sq.mtr. (indicative thickness 4-6mm) using Polymer Modified Cationic Bitumen Emulsion @ 13.00% by weight of aggregates as per Table 8 of IRC:SP:81-2008, Breakcontroladditive @ 2.00% by weight of aggregates, purified water (potable water) @ 5-15% by weight of aggregate & mineral filler (Portland Cement) @ 2.0% by weight of aggregate, using specialized microsurfacing paver finisher and other materials, machinery etc.complete.	Sqm	217.00
778	R3-BW-8-12	Providing and laying MICROSURFACING course TYPE-III comprising of dry crushed stone fine aggregate as per required grading with specific size as per Table-3 of IRC:SP:81-2008 @ 12.50 kg/sq.mtr. (indicative thickness 6-8mm) using Polymer Modified Cationic Bitumen Emulsion @ 12.5% by weight of aggregates as per Table 8 of IRC:SP:81-2008, Break control additive @ 1.5% by weight of aggregates, purified water (potable water) @ 5-15% by weight of aggregate & mineral filler (Portland Cement) @ 2.0% by weight of aggregate, using specialized microsurfacing paver finisher and other materials, machinery etc. complete	Sqm	264.00
779	R3-BW-8-13	Providing and laying MICROSURFACING course TYPE-III comprising of dry crushed stone fine aggregate as per required grading with specific size as per Table-3 of IRC:SP:81-2008 @ 14.00 kg/sq.mtr. (indicative thickness 6-8mm) using Polymer Modified Cationic Bitumen Emulsion @ 12.25% by weight of aggregates as per Table 8 of IRC:SP:81-2008, Break control additive @ 1.25% by weight of aggregates, purified water (potable water) @ 5-15% by weight of aggregate & mineral filler (Portland Cement) @ 2.0% by weight of aggregate, using specialized microsurfacing paver finisher and other materials, machinery etc. complete.	Sqm	285.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
780	R3-BW-8-14	Providing and laying MICROSURFACING course TYPE-III comprising of dry crushed stone fine aggregate as per required grading with specific size as per Table-3 of IRC:SP:81-2008 @ 15.50 kg/sq.mtr. (indicative thickness 6-8mm) using Polymer Modified Cationic Bitumen Emulsion @ 12.00% by weight of aggregates as per Table 8 of IRC:SP:81-2008, Break control additive @ 1.00% by weight of aggregates, purified water (potable water) @ 5-15% by weight of aggregate & mineral filler (Portland Cement) @ 2.0% by weight of aggregate, using specialized microsurfacing paver finisher and other materials, machinery etc. complete.	Sqm	307.00
781	R3-BW-8-15	Providing tuck pointing to stone masonry work for Bridges in White Cement and Lime mortar 1:1:3 (White Cement :Lime : Quartz Sand)	Sqm	429.00
782	R3-BW-8-16	Cleaning the Ashlar stone surface for stone masonry bridges and removing dirt, dust, bird dropping, grease, oil, algae, fungus, monkey beats, vegetable growth etc. using approved cleaning chemicals and jet spray etc.	Sqm	459.00
783	R3-BW-8-17	Providing ,Laying&Fixing Uniaxial Geogrid 120kN/m Tensile strength , having minimum mass of 200 GSM on prepared surface for secondary reinforcement function, including material, manpower, machinery, tools & tackles complete as per the direction of Engineer-In-Charge.	Sqm	284.00
784	R3-BW-8-18	Removal of weeds / plants including removal of entire root inside bridge portion. Remains of the root of weeds/plants shall be treated with root removal special antirooting solution. Mix 30-40% anti- rooting solution in water homogenously and Apply 2 coats at an interval of 5-6 hours by bush or spray. Work shall be done as per the manufacturer's instruction. complete as directed by the Engineer in charge.	Sqm	318.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
785	R3-BW-8-19	Providing and mixing for all concrete in every part migrating, non-nitritebased corrosion inhibiting admixture shall be added at a dose of 3 kgs per cum of concrete. The admixture should protect both cathodic and anodic sites and have been accredited by Indian Roads Congress, recommended for use by Ministry of Road Transport & the engineer must ensure that the specified dosage of admixture is added in the concrete mix.	Kg	382.00
786	R3-BW-8-20	Providing and applying primer + two coats of 100% acrylic breathable, water based, anti-carbonation coating. Cracks, if any, shall be filled with Polymer modified mortar. The rate shall include complete treatment mentioned above complete as directed by the Engineer in charge.	Sqm	422.00
787	R3-BW-8-21	Providing and fixing zinc alloy based galvanic disk type sacrificial anodes (50 mm dia, 18 mm thick) to the reinforcement, that should have a 6 years track record at MCGM, 4 years track record in corrosive region of Gulf and pass 500 hours salt spray test as per ASTM B 117. The anode shall be connected to the reinforcement steel by connectors provided with the anode. Application shall be done as per the manufacturer's instruction, complete as directed by the Engineer in charge	No	1,210.00
788	R3-BW-8-22	Providing and applying one coat of two component, anti-corrosive, solvent free, substituted long chain nylon reticulant based epoxy coating / primer . Cleaning the existing steel surface by mechanical means such as sand blasting, wire brushing and other mechanical means so as to remove all the existing loose rust etc. Apply the coats by brush or spray at 4-6 hours interval between each coat complete as directed by the Engineer in charge.	Sq.m	752.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
789	R3-BW-8-23	Providing and applying two coats of Two component, anti- corrosive, Anti-carbonation, solventfree, inter-penetrating polymer network based phenolic epoxy coating/primer . Cleaning the existing concrete substrate to achieve maximum adhesion between the coating and substrate. Free the surface from loose material, grease and oil by water jet/ mechanical means complete as directed by the Engineer in charge.	Sq.m	499.00
790	R3-BW-8-24	Removal of faulty existing bearings from the existing location of the bridge, stacking the same in the stacking yard and disposing the same.	No	3,973.00
791	R3-BW-8-25	Lifting of single or Multiple girders for the purpose of removal / realignment, re-fixing of existing bearings / fixing of new bearings including all hire charges and running expenses, transportation charges of all plants, jacks, power pack machines and required equipments, required technicians, labour, erection of temporary supports of steel trestles of suitable capacity supports of teak wood blocks/ sleepers of required size and Mild steel plates etc.	No	5,72,536.00
792	R3-BW-8-26	Supplying, fitting and fixing in position true to line and level SPHERICAL bearing consisting of bottom plate , saddle plate , top plate , guide plate as per IRC and MORTH Specifications drawing and approved technical specifications complete	MT capacity (TO)	343.00
793	R3-BW-8-27	Rectification of bearings which includes rust removal, painting, replacing anchor bolts, replacing elastomer, cleaning, placing etc as per directions of engineer in charge , all works shall be as per IRC and MORTH specification.	No.	10,172.00
794	R3-BW-8-28	Removal of existing Expansion Joints.	Rmt	3,525.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
795	R3-BW-8-29	Preparation of surface for fibre wrapping including grinding/ moulding concrete surface , cleaning with wire brush, removing oil, ,rounding sharp edges to min 25 mm radius etc.,applying compatible primer on prepared surface, Filling the holes and levelling the surface with thixotropic putty etc. complete (Mode of measurement: Application of fibre rapping surface area .)	Sq.m	294.00
796	R3-BW-8-30	Strengthening structural elements with non metallic composite fibre wrapping system comprising of fibre sheet and compatible saturant, by dry/wet lay-up system including, wrapping the fibre sheet to structural element at desired orientation using tamping roller to avoid any air voids etc. repeating the same procedure for multiple layers(if any) with the interval of 8 h and applying second coat of saturant after min. 12 h to rectify air voids, if any, pasting the river sand on it to make surface rough totakeanyfurtherfinishes.	Sq.m	4,066.00
797	R3-BW-8-31	Providing and Applying CFRP laminate 100 mm wide and 1.4 mm thick with compatible structural adhesive including, Surface preparation, Grinding the concrete surface, cleaning it with wire brush removing oil etc. and applying compatible primer on prepared surface, Filling the holes and unevensurface with thixotropic putty, applying compatible structural adhesive, pasting the laminate on desired area by using tamping roller to avoid any air voids etc. complete, thereafter, applying second coat of saturant after min. 12hrs, rectify air voids if any paste the river sand on it to make surface rough to take any further finishes.	Rmt	3,858.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
798	R3-BW-8-32	Scanning of Reinforcement of RCC elements Conducting adequate number of scans to detect the steel reinforcement in existing RCC elements by using ground/Wall penetrating radar system to avoid the cutting of Main bars during drilling for inserting bolts etc. Complete.	Sq.m	203.00
799	R3-BW-8-33	Replacing broken and missing box girder man hole covers in the soffit of the girder of Size 0.6m x 0.6m	No	1,886.00
800	R3-BW-8-34	Providing and Applying NonPre-stress Anchor Plate 150 mm x 120 mm x 10 mm thick for ends of CFRP LAMINATE at both end of strip laminate	No	2,606.00
801	R3-BW-8-35	Providing Micro Concrete using polymer modified cement premix packed in bags of standard manufacturer, quartz sand, aggregates to achieve strength of M 60 grade including curing.	Cum	66,464.00
802	R3-BW-8-36	Drilling & Fixing of Carbon Anchor using Epoxy 50mm X 55mm system and spreading the anchor fibres in star pattern including application of saturant etc. Complete.	No	672.00
803	R3-BW-8-37	Load Testing of any span length after completion of work as per direction of Engineer in Charge.		Deleted
804	R3-BW-8-38	Making V-groove on concrete surface at 350 mm c/c or less as per requirement along the length of the minor cracks, drilling of holes, fixing of PVC nipples, sealing of cracks with epoxy putty of approved make, epoxy injection with Low viscous epoxy resin and hardener of approved quality etc complete.	No	1,685.00
805	R3-BW-8-39	Carrying out Initial Static Pile Load Test upto 2.50 times the design load on 1200mm vertical pile selected by Engineer-in-charge as per the procedure and specifications laid down by IS:2911- Part 4 and maintaining complete record of observations regarding load settlement etc. complete	No	14,14,500.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
806	R3-BW-8-40	Providing, preparing and laying of geogrid crated apron 1m x 5m, 600 mm thick including excavation and backfilling with baffles at 1 metre interval, made with geogrids having characteristics as per Clause 703 (MoRTH), joining sides with connectors/ring staples, top corners to be tie tensioned, placing of suitable cross interval ties in layers of 300 mm connecting opposite side with lateral braces and tied with polymer braids to avoid bulging, constructed as per Section 700 (MoRTH); filled with stone with minimum size of 200 mm and specific gravity not less than 2.65, packed with stone spalls, keyed to the foundation recess in case of sloping ground and laid over a layer of geotextile to prevent migration of fines, all as per Section 700 (MoRTH) and laid as per Clause 2503.3 (MoRTH) and approved design. (Note:- Relevant revised MoRTH clauses ammendedupto date)	Cum	1,586.00
	R3-BW-8-41	Reinforced Earth Retaining Wall : Reinforced earth retaining walls have four main components as under: a)Excavation for foundation, foundation concrete and cement concrete grooved seating in the foundation for facing elements (facia material). b)Facia material and its placement. c)Assembling, joining with facing elements and laying of the reinforcing elements. d)Earthfill with granular material which is to be retained by the wall.		
807	R3-BW-8-41-A	Facing elements of RCC Assembling, joining and laying of reinforcing elements.With reinforcing element of steel / Aluminium strips / polymeric strips.	Sqm	3,146.00
808	R3-BW-8-41-B	1.Galvanised carbon steel strips	Rmt	730.00
809	R3-BW-8-41-C	Copper Strips	Rmt	730.00
810	R3-BW-8-41-D	Aluminium Strips	Rmt	730.00
811	R3-BW-8-41-E	Stainless steel Strips	Rmt	730.00
812	R3-BW-8-41-F	5.Glass reinforced polymer/fibre reinforced polymer/polymeric strips	Rmt	702.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
813	R3-BW-8-41-G	6.With reinforcing elements of synthetic geogrids	Rmt	3,213.00
814	R3-BW-8-42	Providing, fabricating (Fabrication Charge with all consumables, lifting and handling machineries, electricity charges and destressing of plates including temporary assembly etc), detailing (Preparation of shop/fabrication drawing details for each section from approved good for construction drawing) and fixing at desired location using Stainless Steel Hot Rolled Annealed Pickled Plates 450 N/mm ² IRS CR similar to RDSO specifications IRS CR and X2Cr12 suitably modified for the Structural application, ASTM A1010/A1010M - 01E1 and Indian Standard (IS) 6911-2017 (amendment 2) having Chemical properties of C 0.03% Max for make SAIL,JSL or equivalent , Mn 1.5% Max, Si 1% Max, S 0.01% max, P 0.04% Max, Ni 1.5% max, Mo 0.1-0.75 % , Cr 10.5% –12.5% & Mechanical properties 0.2% proof Stress 450 MPA min, Ultimate Tensile Strength 550 MPA min % Elongation 18 Min, Charpy Impact Value (At RT) 27 Joules Min, Hardness 97(RB) Max, inclusive of all necessary testing & certification etc. complete, transporting to site (including loading/unloading from fabrication plant to site) and erecting structural stainless steel members for all heights & at all levels (charges for crane for erection, fuel & lubricants) including provision of necessary erection bolts, fixing bolts, nuts, washers, cleats, stiffeners, gussets, base plate, Stud, and all necessary fixtures and operations like preheating as per specifications, straightening, bending, cutting, drilling, grinding, machining if specified, welding, grinding and removing the welding burr etc, complete as directed by Engineer In Charge.	M.T.	4,02,662.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
815	R3-BW-8-43	Supplying, Providing & fixing in position Stainless steel rebars of grade G 410-L Ferritic conforming to IS 16651 : 2017 for RCC works of any dia. Up to 32 mm whenever directed including handling, fixing, straightening, wastage, cutting, bending, placing in position, binding etc. complete in all respect as directed and procured from MCGM approved supplier.	M.T.	1,31,608.00
816	R3-BW-8-44	Providing, fabricating, detailing and fixing at desired location using Stainless Steel Hot Rolled Annealed Pickled Plates 350N/mm ² IRSM44/97(M) similar to RDSO specifications IRS-M44/97 and CK-201- X2 Cr Ni 12 suitably modified for the Structural application,ASTMA1010/A1010M-01E1 and Indian Standard (IS) 6911-2017(amendment 2)having chemical properties of C 0.03%Max, Mn0.8–1.5%, Si 1% max,S 0.03% max,P 0.03% max,Ni 1.5% max, Mo 0.1% min,Cr 10.8%–12.5%, Ti 0.75% max & mechanical properties 0.2% proof Stress 350MPA min, Ultimate Tensile Strength 485 MPA min% Elongation 20min,Hardness97(RB) max, inclusive of all necessary testing & certification etc. complete, transporting to site and erecting structural stainless steel members for all heights & at all levels including provision of necessary erection bolts,fixing bolts, nuts, washers, cleats, stiffeners, gussets, base plate, and all necessary fixtures and operations like preheating as per specifications, straightening, bending, cutting, drilling, grinding, machining if specified, welding, grinding and removing the welding burret,complete as directed by Engineer In Charge.	MT	3,89,758.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
817	R3-BW-8-45	Providing and erecting a two row "W" metal beam crash barrier on pedestal on existing bridges comprising 3mm thk corrugated sheet metal beam rail. 120 cm above road fixed on ISMB 175 series vertical post spaced 2mtr centertocenter 1.0 m high above the pedestal, welded to base plate of size 250X250X16mm fitted to concrete structure(pedestal) below with 4 no of anchor bolt of 20mm dia. and 340mm long for each vertical post all steel part and fitments to be galvanised by hot dipped process all fittings to be confirmed to IS1367 and IS1364 as directed by engineer in charge as per the standard drawing etc. completed excluding reinforcement micro concrete of pedestal breaking/chipping of existing parapet/slab/beam,bonding coat.	MTR	7,174.00
818	R3-BW-8-46	Providing and erecting "W" and "trie" metal beam crash barrier with double base plate for existing bridges comprising 3mm thk corrugated sheet metal beam rail. 120 cm above road fixed on ISMB 175 series vertical post spaced 2mtr center to center 1.2mtr high above road, welded to base plate of size 250X250 X 16mm fitted to concrete structure with bottom base plate of size 250 X 250 X 16 mm below with 4 no of anchor bolt of 20mm dia and 340mm long for each vertical post all steel part and fitments to be galvanised hot dipped process all fittings to be confirmed to IS1367 and IS1364 as directed by engineer in charge as per the standard drawing etc completed (excluding Breaking/chipping of existing parapet slab/beam).	MTR	8,987.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
819	R3-BW-8-47	Providing, fabricating, detailing and fixing at desired location using stainless Steel Hot Rolled Annealed Pickled Plates Duplex stainless steel grade 2205 of standard IS 6911, UNS S322005, (X02Cr22Ni6Mo3n) having chemical properties of C 0.03%Max, Mn 2 max, Si 1% max,, S 0.02% max, P 0.03 max, ni 4.5-6.5 max, mo 3-3.5, Cr 22.0-23,N 1400-2000 PPM & mechanical properties 0.2% proof stress 450 MPA min, Ultimate Tensile Strength 655 MPA, min % Elongation 25, Hardness 32 HRB max, finish N1/ME, of make SAIL, JSL or equivalent, inclusive of all necessary testing & certification etc. complete, transportation to site and erecting structural stainless steel members for all heights & at all levels including provision of necessary erection bolts, fixing bolts, nuts, washers, cleats, stiffeners, gussets, base plate, and all necessary fixtures and operations like preheating as per specifications, straightening, bending, cutting, drilling, grinding, machining if specified, welding, grinding and removing the welding burr etc, complete as directed by Engineer In Charge	MT	5,54,624.00
820	R3-BW-8-48	Providing and Fixing PVC gutter half round girth 250 mm with PVC joint bracket and rubber on both the sides with necessary fitting & fixing the pipe on wall/soffit using clamp fixed 1.0 m C/C including necessary scaffolding etc, complete and as directed by engineer-in-charge. Assuming Total Quantity of Job-770 Rmt	MTR	3,115.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
821	R3-BW-8-49	<p>STEEL PLATE GIRDER FABRICATION & ERECTION: Providing, detailing, fabricating and fixing at desired location using hot rolled sections and M S Plates of high grade steel as per specifications and approved fabrication drawings (which are to be prepared by Contractor and got approved from Engineer), transporting to site and erecting/launching structural steel members/girders for all heights & at all levels including provision of necessary erection/launching accessories and machinery for erection/launching, bolts, fixing bolts, nuts, washers, cleats, stiffeners, gussets, baseplate and all necessary fixtures and operations like preheating as per specifications, straightening, bending, cutting, drilling, grinding, machining if specified, welding, grinding and removing the welding burr and preparing surface for painting with Sand blasting, metalizing and painting of loose fabricated components and girders with sprayed aluminium followed by protective coating of painting outside running line complete with contractor's own paint, other material, labour, scaffolding, consumable.</p> <p>Note: The protective coating of paint shall be as follows:(i) First coat of Each primer to IS:5666. (ii) One coat of Zinc Chromate primer to IS: 104 and two coats of aluminium paint to IS:2339. Total Thickness will be not less than 200 micron. Guarantee period will be 5 years including touching up with spray painting after erection etc complete as directed by Engineer-In-Charge. - E-250 Grade Steel</p>	MT	1,84,604.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
822	R3-BW-8-50	<p>RATE ANALYSIS FOR STEEL PLATE GIRDER FABRICATION & ERECTION- Providing, detailing, fabricating and fixing at desired location using hot rolled sections and M S Plates of high grade steel as per specifications and approved fabrication drawings (which are to be prepared by Contractor and got approved from Engineer), transporting to site and erecting/launching structural steel members/girders for all heights & at all levels including provision of necessary erection/launching accessories and machinery for erection/launching, bolts, fixing bolts, nuts, washers, cleats, stiffeners, gussets, baseplate and all necessary fixtures and operations like preheating as per specifications, straightening, bending, cutting, drilling, grinding, machining if specified, welding, grinding and removing the welding burr and preparing surface for painting with Sand blasting, metalizing and painting of loose fabricated components and girders with sprayed aluminium followed by protective coating of painting outside running line complete with contractor's own paint, other material, labour, scaffolding, consumable.</p> <p>Note: The protective coating of paint shall be as follows:(i) First coat of Each primer to IS:5666. (ii) One coat of Zinc Chromate primer to IS: 104 and two coats of aluminium paint to IS:2339. Total Thickness will be not less than 200 micron. Guarantee period will be 5 years including touching up with spray painting after erection etc complete as directed by Engineer In Charge.</p> <p>E-350 Grade Steel</p>	MT	1,98,920.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
823	R3-BW-8-51	<p>RATE ANALYSIS FOR STEEL PLATE GIRDER FABRICATION & ERECTION- Providing, detailing, fabricating and fixing at desired location using hot rolled sections and M S Plates of high grade steel as per specifications and approved fabrication drawings (which are to be prepared by Contractor and got approved from Engineer), transporting to site and erecting/launching structural steel members/girders for all heights & at all levels including provision of necessary erection/launching accessories and machinery for erection/launching, bolts, fixing bolts, nuts, washers, cleats, stiffeners, gussets, baseplate and all necessary fixtures and operations like preheating as per specifications, straightening, bending, cutting, drilling, grinding, machining if specified, welding, grinding and removing the welding burr and preparing surface for painting with Sand blasting, metalizing and painting of loose fabricated components and girders with sprayed aluminium followed by protective coating of painting outside running line complete with contractor's own paint, other material, labour, scaffolding, consumable.</p> <p>Note: The protective coating of paint shall be as follows:(i) First coat of Each primer to IS:5666. (ii) One coat of Zinc Chromate primer to IS: 104 and two coats of aluminium paint to IS:2339. Total Thickness will be not less than 200 micron. Guarantee period will be 5 years including touching up with spray painting after erection etc complete as directed by Engineer In Charge- E-450 Grade Steel</p>	MT	2,09,105.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	RATES (without GST)
824	R3-BW-8-52	Carrying out Sonic Integrity test on piles as per IS Code 14893:2001 Conducting cross-hole test in Bored Cast In-situ piles through 50 mm diameter Mild Steel pipes, preinstalled during the construction (Minimum Number of pipes to be embedded per pile as directed by the Engineer), including cleaning the Mild Steel pipes, supply of testing equipment, carrying out the test by a qualified and experienced personnel, interpretation of results, submission of test reports complete in all respects as directed by the Engineer, for pile having any diameter.	Rmt.	939.00
825	R3-BW-8-53	Finger Type Expansion Joint for movement of 70-80 mm (HSN Code: 7308-90-90) as per IRC SP:69-2011 (Providing and laying of a Strip seal expansion joint system with Sinus Plate catering to horizontal movement 70-80 mm, complete as per approved drawings and standard specifications to be installed by the manufacturer/supplier or their authorized representative ensuring compliance to the manufacturer's instructions for installation.)	Rmt.	21,057.00