

PUBLIC WORKS DEPARTMENT
BASIC SCHEDULE OF RATES 2016
w.e.f. 01st April 2016

COMPARISON OF RATES
FOR CHAPTER - 1 TO 16



ROAD WORKS (OTHER THAN NH & PMGSY)
DISTRICT - JAIPUR

SUPERINTENDING ENGINEER
P.W.D. RURAL CIRCLE, JAIPUR

**BASIC RATES
(A) Labour**

Sl. No.	Description of Labour	Unit	Rate (Rs.)
L-01	Bhisti	day	189.00
L-02	Bitumen Sprayer	day	209.00
L-03	Blacksmith	day	259.00
L-04	Blaster	day	209.00
L-05	Carpenter 1st Class	day	309.00
L-06	Chips spreader	day	189.00
L-07	Chiseller	day	209.00
L-08	Dresser (Skilled)	day	209.00
L-09	Driller	day	209.00
L-10	Electrician	day	309.00
L-11	Fitter	day	309.00
L-12	Mason (1st class)	day	359.00
L-13	Mason (2nd Class)	day	309.00
L-14	Mate	day	209.00
L-15	Mazdoor (Unskilled)	day	189.00
L-16	Mazdoor (Semi skilled)	day	199.00
L-17	Mazdoor (Skilled)	day	209.00
L-18	Painter (1st class)	day	334.00
L-19	Plumber	day	309.00
L-20	Surveyor	day	359.00
L-21	White Washer	day	189.00

BASIC RATES
(B) USAGE RATES OF PLANT & MACHINERY

Sr. No.	Description of		Output of Machine		Usage Rates in Rs.	
	Machine	Activity	Unit	Output	Unit	Rate
PM-001	Air Compressor 210 cfm	Supplying compressed air	cfm	210.00	per hour	210.00
PM-002	Batch mix HMP 40-60 TPH	BM, DBM, SDBC, PM	t/h	50.00	per hour	12,600.00
PM-003	Batch type HMP 30/40 TPH	BM, DBM, SDBC, PM	t/h	35.00	per hour	9,450.00
PM-004	Bitumen boiler oil fired	Heating of bitumen	litre / h	400.00	per hour	105.00
	200 litre			2000.00		
	1000 litre			2000.00		
PM-005	Bitumen emulsion pressure distributor	Applying bitumen tack coat	sqm/h	1750.00	per hour	275.00
PM-006	Concrete mixer 0.28/0.4 cum	Mixing of ingredients	cum/h	2.50	per hour	265.00
PM-007	Crane upto 8T	Lifting of materials			per hour	475.00
PM-008	Dozer D 50	Dozing cutting	cum/h	200.00	per hour	1,000.00
			cum/h	100.00		660.00
PM-009	Electric generator set, 125 KVA	Electricity generation	KVA	100.00	per hour	1,000.00
PM-010	Emulsion Sprayer with Tractor	Spraying of Emulsion			per hour	200.00
PM-011	Front end-loader 1 cum bucket capacity @ 45 cum/hour	Loading Aggregates	cum/h	45.00	per hour	630.00
		Loading Soil	cum/h	100.00		630.00
PM-012	Hydraulic broom with tractor	Surface cleaning	sqm/h	1250.00	per hour	210.00
PM-013	Hydraulic Excavator 0.9 cum	Excavation	cum/h	100.00	per hour	630.00
PM-014	Hydraulic self propelled chip spreader	Surface Dressing	sqm/h	1500.00	per hour	580.00
PM-015	Jack Hammer with tractor	Pavement breaking & rock drilling	cum/h	05. to 1	per hour	160.00
PM-016	Joint Cutting Machine with 2-3 blades	Cutting of Joints	h		per hour	42.00
PM-017	Mixall 6-10 t capacity	Mixing of bituminous materials	t/h	8.00	per hour	265.00
PM-018	Motor Grader	Scarifier & levelling	cum/h	200.00	per hour	1,680.00
				110.00		1,155.00
				50.00		
PM-019	Needle vibrator	Vibrating cement concrete mix	cum/h	3.50	per hour	55.00
PM-020	Paver finisher	Laying/spreading	t/h	75.00	per hour	735.00
PM-021	Plate compactor	Compaction	cum/h		per hour	65.00

(ii)

Sr. No.	Description of		Output of Machine		Usage Rates in Rs.	
	Machine	Activity	Unit	Output	Unit	Rate
PM-022	Plate vibrator	Compaction	cum/h		per hour	60.00
PM-023	Screed vibrator	Compaction	cum/h		per hour	80.00
PM-024	Smooth wheeled 80-100 kN tandem roller	Compaction of Sub-base/ Asphalt	cum/h	30.00	per hour	180.00
PM-025	Stone crusher (Integrated) of 200 TPH	Crushing of Spalls	t/h	200.00	per hour	8,610.00
PM-026	Three wheel 80-100 kN Static Roller	Compaction/ Rolling			per hour	180.00
		Earth:- Embankment or sub-grade	cum/h	80/70		180.00
		Sub-base G-I	cum/h	10.00		180.00
		Sub-base G-II/G-III	cum/h	8.00		180.00
		WMM	cum/h	16.00		180.00
		BUSG	cum/h	10.00		180.00
		BM 50/75 mm	cum/h	12.00		180.00
		Premix 20 mm	sqm/h	250.00		180.00
		Seal Coat	sqm/h	500.00		180.00
		Surface Dressing 1st Coat	sqm/h	400.00		180.00
Surface Dressing 2ndCoat	sqm/h	500.00	180.00			
PM-027	Tipper 5.5 cum/10 t	Carriage	cum/trip	5.50	per hour	475.00
PM-028	Tractor with Disc Harrows	Pulverisation of soil	cum/h	80.00	per hour	170.00
PM-029	Tractor with ripper @ 60 cum per hour	Ripping Pavements, uprooting trees	cum/h	60.00	per hour	170.00
PM-030	Tractor with trolley	Transportation of materials	t/trip	3 to 5	per hour	210.00
PM-031	Tractor mount with Rotavator/Grader	Scarifier/Mixing/Grading	cum/h	25.00	per hour	170.00
PM-032	Truck 10 t capacity	Carriage	cum/trip	5.50	per hour	265.00
PM-033	Vibratory roller 80-100 kN	Compaction of soil WMM	cum/h	100.00	per hour	630.00
		Compaction of BM	cum/h	60.00		630.00
PM-034	Water tanker 6 kl capacity (Truck Mounted)	Carriage of water	litre / h	12000.00	per hour	300.00
PM-035	Wet mix plant (Pug Mill)	Wet Mix	cum/h	25.00	per hour	3,150.00

(iii)

BASIC RATES
(C) USAGE RATES OF MATERIAL

Material at work site or Plant with average lead of 20 Km

Sl. No.	Description	Unit	Rate (Rs)
M-001	AC pipe 100 mm dia	Rmt	37.00
M-002	Aggregate - For 37.5 mm Maximum size - 22.4 mm to 5.6 mm	cum	700.00
M-003	Aggregate - For 37.5 mm Maximum size - 45 mm to 22.5 mm	cum	650.00
M-004	Aggregate - For 37.5 mm Maximum size - Below 5.6 mm	cum	600.00
M-005	Aggregate - For 53 mm Maximum size - 22.5 mm to 5.6 mm	cum	660.00
M-006	Aggregate - For 53 mm Maximum size - 63 mm to 45 mm	cum	610.00
M-007	Aggregate - For 53 mm Maximum size - Below 5.6 mm	cum	560.00
M-008	Aggregate - Grading I (40 mm nominal Size) 10 mm - 5 mm	cum	650.00
M-009	Aggregate - Grading I (40 mm nominal Size) 25 mm – 10 mm	cum	700.00
M-010	Aggregate - Grading I (40 mm nominal Size) 37.25 mm - 25 mm	cum	650.00
M-011	Aggregate - Grading I (40 mm nominal Size) 5 mm and below	cum	600.00
M-012	Aggregate - Grading II (19 mm nominal Size) 10 mm - 5 mm	cum	700.00
M-013	Aggregate - Grading II (19 mm nominal Size) 25 mm – 10 mm	cum	750.00
M-014	Aggregate - Grading II (19 mm nominal Size) 5 mm and below	cum	600.00
M-015	Aggregate 10 mm	cum	720.00
M-016	Aggregate 20 mm	cum	800.00
M-017	Aggregate 40 mm	cum	690.00
M-018	Aggregate- Crushable type such as moorum or Gravel for Grading I	cum	220.00
M-019	Aggregate- Crushable type such as moorum or Gravel for Grading II	cum	210.00
M-020	Aggregate- Crushable type such as moorum or Gravel for Grading III	cum	200.00
M-021	Aggregate-Grading I 90 mm to 45 mm	cum	380.00
M-022	Aggregate-Grading II 63 mm to 45 mm	cum	600.00
M-023	Aggregate-Grading III 53 mm to 22.4 mm	cum	630.00
M-024	Aggregates 22.4 mm to 2.36 mm for wet mix macadam	cum	650.00
M-025	Aggregates 45 mm to 22.4 mm for wet mix macadam	cum	700.00

Sl. No.	Description	Unit	Rate (Rs)
M-026	Aluminium sheeting (1.5 mm thick)	sqm	8,250.00

(iv)

M-027	Aluminium Studs 100 mm x 100 mm fitted with lense reflectors	Nos.	80.00
M-028	Bamboo (1st Class) 85 mm - 100 mm dia, 2.0 m long	Nos.	100.00
M-029	Bamboo (1st Class) 85 mm - 100 mm dia, 2.5 m long	Nos.	100.00
M-030	Bamboo (1st Class) 85 mm - 100 mm dia, 3.0 m long	Nos.	120.00
M-031	Bamboo (1st Class) 85 mm - 100 mm dia, 4.5 m - 5.5 m long	Nos.	140.00
M-032	Bamboo (2nd Class) 75mm dia, 1.8 m - 2.5 m long	Nos.	90.00
M-033	Bamboo (2nd Class) 75mm dia, 2.1 m - 3.0 m long	Nos.	100.00
M-034	Barbed wire	kg	70.00
M-035	Binding Material	cum	225.00
M-036	Binding wire	kg	65.00
M-037	Bitumen (Crumb Rubber Modified)	tonne	32,770.00
M-040	Bitumen (VG-30)	t	28,100.00
M-041	Bitumen (VG-10)	t	27,160.00
M-042	Bitumen Emulsion (RS-1)	t	22,600.00
M-043	Bitumen Emulsion (SS-1)	t	22,150.00
M-044	Bituminous sealant	litre	105.00
M-045	Blasted rubble	cum	410.00
M-046	Blasting material	kg	33.00
M-047	Bond stone (400 mm x 150 mm x 150 mm)	Nos.	33.00
M-048	Brick 1st Class	Nos.	4.50
M-049	Cement	t	4,000.00
M-050	Cement Primer	litre	28.00
M-051	Chlorprene Elastomer or Closed Cell Foam Sealing Element	m	65.00
M-052	Compensation for earth taken from private land	cum	7.00
M-053	Compressible Fibre Board	sqm	950.00

Sl. No.	Description	Unit	Rate (Rs)
M-054	Copper plate	kg	850.00
M-055	Corbelling Stones (300 mm x 150 mm x 150 mm)	Nos.	80.00
M-056	Corrosion Resistant Structural Steel Grating	kg	65.00

(v)

M-057	Credit for excavated rock found suitable for use	cum	90.00
M-058	Crow bars 40 mm dia (hire charges)	hour	6.50
M-059	Crushed Sand or Grit Passing 2.36 mm and retained on 180 micro	cum	500.00
M-060	Crushed Slag	cum	450.00
M-061	Crushed Stone Aggregate 26.5 mm to 75 micron	cum	750.00
M-062	Crushed Stone chipping 13.2 mm nominal size	cum	860.00
M-063	Crushed Stone Chipping 6.7 mm size 100% passing 11.2 mm and retained on 2.36 mm	cum	650.00
M-064	Crushed Stone Chipping 6.7 mm size 100% passing 9.5 mm and retained on 2.36 mm	cum	650.00
M-065	Crushed Stone chipping 9.5 mm nominal size	cum	750.00
M-066	Crushed Stone Coarse Aggregate Passing 53 mm and retained on 2.8 mm	cum	650.00
M-067	Curing compound	litre	140.00
M-068	Debonding strips	Rmt	230.00
M-069	Edge Stone (450 mm x 350 mm x 100 mm)	Nos.	65.00
M-070	Edge Stone (450 mm x 350 mm x 200 mm)	Nos.	135.00
M-071	Elastomeric bearing assembly	Nos.	14,810.00
M-072	Electric Detonator	each	27.00
M-073	Epoxy Paint	litre	550.00
M-074	Epoxy Primer	litre	600.00
M-075	Farmyard manure	cum	500.00
M-076	Fevicol adhesive	kg	140.00
M-077	Filter media	cum	290.00
M-078	Fine aggregate/Crushed sand 2.36 mm to 75 micron	cum	520.00

Sl. No.	Description	Unit	Rate (Rs)
M-079	Galvanised angle	kg	65.00
M-080	Galvanised angle Section 100 mm x 100 mm of 12 mm thickness	kg	65.00
M-081	Gelatine 80 per cent	kg	140.00
M-082	GI Pipe 100 mm dia	Rmt	480.00
M-083	GI Pipe 50 mm dia	Rmt	310.00

(vi)

M-084	GI wires	kg	70.00
M-085	Graded stone aggregate	cum	635.00
M-086	Granular material (Natural occuring, soil gravel mixture / quarry waste, kankar, laterite, dhandla	cum	240.00
M-087	Hand Broken Metal 40 mm size	cum	440.00
M-088	Indigo	kg	200.00
M-089	Interlocking Blocks with 60 mm thickness	sqm	465.00
M-090	Interlocking Blocks with 80 mm thickness	sqm	610.00
M-091	Interlocking Blocks with 100 mm thickness		765.00
M-092	Joint filler board	sqm	1,050.00
M-093	Jute netting, open weave 25 mm square opening	sqm	375.00
M-094	Jute rope 12 mm dia	Rmt	12.00
M-095	Key Aggregates passing 22.4 mm and retained on 2.8 mm	cum	630.00
M-096	Lime	t	3,700.00
M-097	Lime putty	t	5,600.00
M-098	Local Wood Piles (1st Class) 150-200 mm dia ,6m long	Nos.	270.00
M-099	Local Wood Piles (1st Class) 100 mm x 75 mm	cum	2,260.00
M-100	Loose stone	cum	420.00
M-101	MS clamps	Nos.	6.50
M-102	MS Flat / Structural Steel	t	45,000.00
M-103	MS Sheet Tube (47 mm x 47 mm x 12 SWG Sheet)	kg	48.00

Sl. No.	Description	Unit	Rate (Rs)
M-104	MS Sheet 1.5 mm thick	sqm	740.00
M-105	MS Sheet 2 mm thick	sqm	980.00
M-106	Nuts, Bolts and Rivets	t	42,750.00
M-107	Paint (Synthetic Enamel)	litre	290.00
M-108	Plasticizer	litre	150.00
M-109	Polythene sheet (125 micron)	sqm	100.00
M-110	Polythene Sheething	Nos.	100.00

(vii)

M-111	Quarried Stone 150-200 mm size	cum	300.00
M-112	RCC Pipe NP3 (1200 mm dia)	Rmt	5,225.00
M-113	RCC Pipe NP3 (1000 mm dia)	Rmt	3,655.00
M-114	RCC Pipe NP3 (750 mm dia)	Rmt	2,610.00
M-115	RCC Pipe NP3 (600 mm dia)	Rmt	1,460.00
M-116	RCC Pipe NP3 (300 mm dia)	Rmt	560.00
M-117	RCC Pipe NP4 (1200 mm dia)	Rmt	6,165.00
M-118	RCC Pipe NP4 (1000 mm dia)	Rmt	4,285.00
M-119	RCC Pipe NP4 (750 mm dia)	Rmt	2,880.00
M-120	RCC Pipe NP4 (600 mm dia)	Rmt	2,300.00
M-121	RCC Pipe NP4 (300 mm dia)	Rmt	855.00
M-122	Red-oxide Primer	litre	180.00
M-123	Road marking paint	litre	250.00
M-124	Sand (Coarse)	cum	1,000.00
M-125	Sand (Fine)	cum	1,000.00
M-126	Seeds	kg	4,170.00
M-127	Steel Pipe 50 mm dia	Rmt	220.00
M-128	Steel Reinforcement (HYSD Bars)	t	42,750.00
M-129	Steel Reinforcement (MS Round Bars)	t	41,800.00

Sl. No.	Description	Unit	Rate (Rs)
M-130	Steel Reinforcement (TMT Bars)	t	43,700.00
M-131	Stone Boulder of size 150 mm and below	cum	400.00
M-132	Stone Chips 12 mm size	cum	760.00
M-133	Stone Chips 13.2 mm to 5.6 mm	cum	700.00
M-134	Stone Crushed Aggregate 11.2 mm to 0.09 mm	cum	600.00
M-135	Stone for Coarse Rubble Masonry 1st Sort	cum	950.00
M-136	Stone for Coarse Rubble Masonry 2nd Sort	cum	850.00
M-137	Stone for Random Rubble Masonry	cum	650.00
M-138	Stone for Stone Set Pavement (300 mm x 200 mm x 150 mm)	Nos.	11.00

(viii)

M-139	Stone Screening - Type A 13.2 mm for Grading-1	cum	450.00
M-140	Stone Screening - Type A 13.2 mm for Grading-2	cum	400.00
M-141	Stone Screening - Type B 11.2 mm for Grading-2	cum	400.00
M-142	Stone Screening - Type B 11.2 mm for Grading-3	cum	400.00
M-143	Stone spall	cum	400.00
M-144	Traffic cones	Nos.	425.00
M-145	Water	kl	110.00
M-146	Wooden sleepers (250 mm x 250 mm x 125 mm) (hire charges)	Nos.	27.00
M-147	Well graded granular sub-base material of Grading-I as per table 400.1 of Specifications	cum	350.00
M-148	Well graded granular sub-base material of Grading-II as per table 400.1 of Specifications	cum	330.00
M-149	Well graded granular sub-base material of Grading-III as per table 400.1 of Specifications	cum	305.00
M-150	Well graded gravel/soil aggregate base material of Grading-A as per table 400.2 of Specifications	cum	400.00
M-151	Well graded gravel/soil aggregate base material of Grading-B as per table 400.2 of Specifications	cum	365.00
M-152	Well graded gravel/soil aggregate base material of Grading-C as per table 400.2 of Specifications	cum	340.00
M-153	Well graded gravel/soil aggregate surface course material as per table 400.3 of Specifications	cum	340.00
M-154	Well graded gravel/soil aggregate base material of nominal maximum size 80 mm as per Table 2.3 of IRC SP 77-2008	cum	490.00

Sl. No.	Description	Unit	Rate (Rs)
M-155	Well graded gravel/soil aggregate base material of nominal maximum size 40 mm as per Table 2.3 of IRC SP 77-2008	cum	465.00
M-156	Well graded gravel/soil aggregate base material of nominal maximum size 20 mm as per Table 2.3 of IRC SP 77-2008	cum	445.00
M-157	Well graded gravel/soil aggregate base material of nominal maximum size 10 mm as per Table 2.3 of IRC SP 77-2008	cum	420.00
M-158	Well graded gravel/soil aggregate base material of nominal maximum size 5 mm as per Table 2.3 of IRC SP 77-2008	cum	400.00
M-159	Aggregate-Grading II 63 mm to 45 mm Hand Broken	cum	460.00

(ix)

Rate of Bituminous Material (I.O.C. Rates as on 09-03-2016)

S.No.	Material	Refinery	Refinery Rate	Excise/ Custo m duty	Edu. Cess	Hr Edu. Cess	Total	Central Seles Tax	Total Value	Lead	Fright	Trans- portation Charges	Total Cost	Unit	Cost Adopted
				14%	2%	1%		2%							
<u>Bulk Bitumen</u>															
1	Bitumen (VG-10)	Mathura	22246	3114.00	62.00	31.00	25453.00	509.00	25962.00	600	2 per MT per Km	1200	27162.00	Per MT	27160.00
2	Bitumen (VG-30)	Mathura	23046	3226.00	65.00	32.00	26369.00	527.00	26896.00	600	2 per MT per Km	1200	28096.00	Per MT	28100.00
2	Bitumen (VG-40)	Mathura	23546	3296.00	66.00	33.00	26941.00	539.00	27480.00	600	2 per MT per Km	1600	29080.00	Per MT	29080.00
3	Bitumen CRMB-60	Mathura	27046	3786.00	76.00	38.00	30946.00	619.00	31565.00	600	2 per MT per Km	1200	32765.00	Per MT	32770.00
4	Bitumen Emulsion (SS)	Haldia	17606	2465.00	49.00	25.00	20145.00	403.00	20548.00	800	2 per MT per Km	1600	22148.00	Per MT	22150.00
5	Bitumen Emulsion (RS)	Haldia	17996	2519.00	50.00	25.00	20590.00	412.00	21002.00	800	2 per MT per Km	1600	22602.00	Per MT	22600.00
<u>Packed Bitumen</u>															
1	Bitumen (VG-10)	Mathura	26146	3660.44	73.21	36.60	29916.25	598.33	30515.00	600	2 per MT per Km	1200	31715.00	Per MT	31720.00
2	Bitumen (VG-30)	Mathura	26946	3772.44	75.45	37.72	30831.61	616.63	31448.00	600	2 per MT per Km	1200	32648.00	Per MT	32650.00
4	Bitumen CRMB-60	Haldia	28236	3953.04	79.06	39.53	32307.63	646.15	32954.00	800	2 per MT per Km	1600	34554.00	Per MT	34550.00
1	Bitumen Emulsion (SS)	Bahadurga	24206	3388.84	67.78	33.89	27696.51	553.93	28250.00	600	2 per MT per Km	1200	29450.00	Per MT	29450.00
2	Bitumen Emulsion (RS)	Bahadurga	23086	3232.04	64.64	32.32	26415.00	528.30	26943.00	600	2 per MT per Km	1200	28143.00	Per MT	28140.00



Bitumen Prices

Ex-Refinery prices exclusive of taxes (Rs./Metric tonne)

Applicable from: March 09, 2016

BITUMEN (BULK)

	GRADES		
	VG-10	VG-30	VG-40
PORT REF(Mumbai)	21046	21846	22346
KOCHI	21046	21846	22346
KOYALI	21046	21846	22146
MATHURA	22246	23046	23546
PANIPAT	22546	23346	23846
HALDIA	20346	21146	21446
CHENNAI	21146	21946	22446
BARAUNI	21376	22176	

BITUMEN (PACKED)

PORT REF(Mumbai)	24946	25746	26246
KOCHI	24946	25746	26246
KOYALI	24946	25746	26246
MATHURA	26146	26946	27446
PANIPAT	26446	27246	27746
HALDIA	24246	25046	25546
CHENNAI	25046	25846	26346



EMULSIONS/MT Prices

Applicable from: March 09, 2016

LOCATIONS	GRADES (SETTING TYPE)			REMARKS
	RAPID	MEDIUM	SLOW	
EMULSION (BULK)				
HALDIA	17996	18196	17606	
CHENNAI	18596		19736	
EMULSION (PACKED)				
CHENNAI	23086		24206	

(1) Above Prices are in Rs./MT

(2) Above prices are excluding Duties, State Specific Cost and Local Taxes.



CRMB/MT Prices

Applicable from: March 09, 2016

BITUMEN (BULK)

GRADES

	CRMB-55	CRMB-60
KOYALI	24856	25376
PANIPAT	26276	26736
HALDIA	23766	24186
MATHURA	26676	27046
CHENNAI	24676	25076

BITUMEN (PACKED)

HALDIA	27836	28236
--------	-------	-------

Note:

(1) Above Prices are in Rs./MT

(2) Above prices are excluding Duties, State Specific Cost and Local Taxes.

PWD RURAL CIRCLE, JAIPUR SUMMARY OF RATES FOR ROAD BSR APRIL 2016			
Item No.	Description	Unit	Rates
Chapter 1 - LOADING, UNLOADING, CARRIAGE CRUSHING OF MATERIALS AND SETTING OUT			
1.1	Loading and Unloading of Lime, Aggregate, Stone Boulder, Brick Aggregate, Kankar, Building Rubbish, Crushed Slag, Stone for Masonry Work by Manual Means		
	(i) Loading of Lime, Aggregate, Stone Boulder, Brick Aggregate, Kankar, Building Rubbish, Crushed Slag, Stone for Masonry Work by manual means including a lead upto 30 m	Cum	40.00
	(ii) Loading of Earth, Sand, Moorum, Manure, Flyash by manual means including a lead upto 30 m	Cum	20.00
	(iii) Unloading of Lime, Aggregate, Stone Boulder, Brick Aggregate, Kankar, Building Rubbish, Crushed Slag, Stone for Masonry Work by manual means including a lead upto 30 m	Cum	20.00
	(iv) Unloading of Earth, Sand, Moorum, Manure, Flyash by manual means including a lead upto 30 m	Cum	10.75
1.2	Loading and Unloading Lime, Aggregate, Stone Boulder, Brick Aggregate, Kankar, Building Rubbish, Crushed Slag, Stone for Masonry Work by Mechanical Means		
	(i) Loading of Lime, Aggregate, Stone Boulder, Brick Aggregate, Kankar, Building Rubbish, Crushed Slag, Stone for Masonry Work by mechanical means including a lead upto 30 m	Cum	29.50
	(ii) Loading of Earth, Sand, Moorum, Manure, Flyash by mechanical means including a lead upto 30 m.	Cum	12.00
	(iii) Unloading of Earth, Sand, Lime, Moorum, Aggregate, Stone Boulder, Brick Aggregate, Kankar, Building Rubbish, Manure, Crushed Slag, Flyash, Stone for Masonry Work by mechanical means.	Cum	3.75
1.3	Loading, Unloading and Stacking of Bricks by Manual Means		
	(i) Loading of Bricks by manual means including a lead upto 30 m	1000 Nos.	65.00
	(ii) Unloading and Stacking of Bricks by manual means including a lead upto 30 m	1000 Nos.	65.00
1.4	Loading and Unloading of Cement by Manual Means		
	(i) Loading of Cement by manual means including a lead upto 30 m	Tonne	54.00
	(ii) Unloading of Cement by manual means including a lead upto 30 m	Tonne	54.00

Item No.	Description	Unit	Rates
1.5	Loading and Unloading of Structural Steel and Steel Bars by manual means		
	(i) Loading of Structural Steel, Steel Bars by manual means including a lead upto 30 m	Tonne	60.00
	(ii) Unloading of Structural Steel, Steel Bars by manual means including a lead upto 30 m	Tonne	60.00
1.6	Loading and Unloading of Bitumen Drums by Manual Means		
	(i) Loading of Bitumen Drums by manual means including a lead upto 30 m	Tonne	61.00
	(ii) Unloading of Bitumen Drums by Manual Means including a lead upto 30 m	Tonne	54.00
1.7	Loading and Unloading of Timber by Manual Means		
	(i) Loading of Timber by manual means including a lead upto 30 m	Tonne	90.00
	(ii) Unloading of Timber by manual means including a lead upto 30 m	Tonne	90.00
1.8	Loading and Unloading of C.C. Blocks, Kerb, etc.		
	(i) Loading with care C.C. Blocks, km Stone, 200 m Stone, Boundary Pillar, Kerb, Channel, Bond Stone, etc. by manual means including a lead upto 30 m	Cum	143.00
	(ii) Unloading with care C.C. Blocks, km Stone, 200 m Stone, Boundary Pillar, Kerb, Channel, Bond Stone, etc. by manual means including a lead upto 30 m	Cum	143.00
1.9	Loading and Unloading of Hume Pipes		
	(i) Loading of RCC Hume pipes by mechanical means including a lead upto 30 m		
	A. 1000 / 1200 mm dia Hume pipe	Per Pipe	43.00
	B. 750 mm dia Hume pipe	Per Pipe	25.00
	C. 600/450 mm dia Hume pipe	Per Pipe	18.00
	(ii) Unloading of RCC Hume pipe by manual means including a lead upto 30 m		
	A. 1000/1200 mm dia RCC Hume pipes	Per Pipe	158.00
	B. 750 mm dia Hume pipe	Per Pipe	129.00
	C. 600/450 mm dia Hume pipe	Per Pipe	96.00
	(iii) Unloading of RCC Hume pipes by mechanical means including a lead upto 30 m		
	A. 1000/1200 mm dia Hume pipe	Per Pipe	31.00
	B. 750 mm dia Hume pipe	Per Pipe	19.00
	C. 600/450 mm dia Hume pipe	Per Pipe	13.00

Item No.	Description	Unit	Rates
1.10	Haulage excluding Loading & Unloading		
	Haulage of materials by tipper excluding cost of loading, unloading and stacking.		
	Case-I : Surfaced Road	T.km	3.30
	Case-II: Unsurfaced Gravel Road	T.km	4.40
	Case-III: Katcha Track and Track in River Bed/Nallah Bed and Choe Bed	T.km	8.50
1.11	Supply of Quarried stone and hand breaking		
	(i) Supply of quarried stone and hand breaking into coarse aggregate to Grading 1 (63 mm to 45 mm) as per Table 400-9 of MoRTH Specifications.	Cum	610.00
	(ii) Supply of quarried stone and hand breaking into coarse aggregate to Grading 2 (53 mm to 22.4 mm) as per Table 400-9 of MoRTH Specifications.	Cum	670.00
1.12	Crushing of Stone Aggregates 100 per cent passing through 53 mm sieve as per Table 400-13 of MoRTH Specifications.		
	Crushing of stone boulders of 150 mm size in an integrated stone crushing unit of 200 t/h capacity comprising of primary and secondary crushing units, belt conveyor and vibrating screens to obtain stone aggregates 100 per cent passing through 53 mm sieve as per Table 400-13 of MoRTH Specifications including the cost of stone.	Cum	460.00
1.13	Crushing of Stone Aggregates 100 per cent passing through 26.5 mm sieve as per Table 500-21 of MoRTH Specifications.		
	Crushing of stone boulders of 150 mm size in an integrated stone crushing unit of 200 t/h capacity comprising of primary and secondary crushing units, belt conveyor and vibrating screens to obtain stone aggregates 100 per cent passing through 26.5 mm sieve as per Table 500-21 of MoRTH Specifications including the	Cum	465.00
1.14	Crushing of Stone Aggregates Nominal Size 13 mm as per Table 500-21 of MoRTH Specifications.		
	Crushing of stone boulders of 150 mm size in an integrated stone crushing unit of 200 t/h capacity comprising of primary and secondary crushing units, belt conveyor and vibrating screens to obtain stone aggregates of 13 mm nominal size as per Table 500-21 of MoRTH Specifications including the cost of stone.	Cum	590.00
1.15	Crushing of Stone Aggregates 10 mm Nominal Size as per Table 500-21 of MoRTH Specifications.		
	Crushing of stone boulders of 150 mm size in an integrated stone crushing unit of 200 t/h capacity comprising of primary and secondary crushing units, belt conveyor and vibrating screens to obtain stone aggregates of 10 mm nominal size as per Table 500-21 of MoRTH Specifications including the cost of stone.	Cum	610.00

Item No.	Description	Unit	Rates
1.16	Setting Out		
	Construction of reference bench mark (1 No.), working bench mark (4 Nos.) and near all drainage structures and bridges (as per direction of Engineer-in-charge), reference pillar/ burgees @ 50m interval on both side of formation width including marking of centre line, setting out curves, recording of levels, white washing and lettering etc. complete as per MoRTH specifications cl. 109.	Per Km	53590.00

Item No.	Description	Unit	Rates
Chapter 2 - SITE CLEARANCE			
2.1	Clearing Grass and Removal of Rubbish		
	Clearing grass and removal of rubbish up to a distance of 30 m outside the periphery of the area as per MoRTH Specification Clause 201.		
	By Manual Means	Hectare	7930.00
2.2	Clearing and Grubbing Road Land		
	Clearing and grubbing road land including uprooting wild vegetation, grass, bushes, shrubs, saplings and trees of girth upto 300 mm, removal of stumps of such trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned, upto a lead of 1000 m including removal and disposal of top organic soil not exceeding 150 mm in thickness as per MoRTH Specification Clause 201.		
	(I) By Manual Means		
	(A) In area of non-thorny jungle	Hectare	30070.00
	(B) In area of thorny jungle	Hectare	40320.00
	(II) By Mechanical Means		
	(A) In area of non-thorny jungle	Hectare	12402.00
	(B) In area of thorny jungle	Hectare	15220.00
2.3	Cutting of Trees including Cutting of Trunks, Branches and Removal of Stumps		
	Cutting of trees, including cutting of trunks, branches and removal of stumps & roots, refilling, compaction of backfilling and stacking of serviceable material by manual means with all lifts as per MoRTH Specification Clause 201.		
	A. Lead upto 100 m		
	(i) Girth above 300 mm to 600 mm	Each	132.00
	(ii) Girth above 600 mm to 900 mm	Each	230.00
	(iii) Girth above 900 mm to 1800 mm	Each	465.00
	(iv) Girth above 1800 mm to 2700 mm	Each	895.00
	(v) Girth above 2700 mm to 4500 mm	Each	1865.00
	(vi) Girth above 4500 mm	Each	5530.00
	B. Lead upto 1000 m		
	(i) Girth above 300 mm to 600 mm	Each	138.00

Item No.	Description		Unit	Rates
	(ii)	Girth above 600 mm to 900 mm	Each	252.00
	(iii)	Girth above 900 mm to 1800 mm	Each	505.00
	(iv)	Girth above 1800 mm to 2700 mm	Each	954.00
	(v)	Girth above 2700 mm to 4500 mm	Each	1920.00
	(vi)	Girth above 4500 mm	Each	5665.00
2.4	Uprooting and Removing Stumps & Roots			
	Uprooting and Removing Stumps & roots, compaction of backfilling and stacking of servicable material by manual means as per MoRTH Specification Clause 201.			
	A.	Lead upto 100 m		
	(i)	Girth above 300 mm to 600 mm	Each	74.00
	(ii)	Girth above 600 mm to 900 mm	Each	120.00
	(iii)	Girth above 900 mm to 1800 mm	Each	280.00
	(iv)	Girth above 1800 mm to 2700 mm	Each	545.00
	(v)	Girth above 2700 mm to 4500 mm	Each	1120.00
	(vi)	Girth above 4500 mm	Each	3190.00
	B.	Lead upto 1000 m		
	(i)	Girth above 300 mm to 600 mm	Each	74.00
	(ii)	Girth above 600 mm to 900 mm	Each	132.00
	(iii)	Girth above 900 mm to 1800 mm	Each	280.00
	(iv)	Girth above 1800 mm to 2700 mm	Each	560.00
	(v)	Girth above 2700 mm to 4500 mm	Each	1132.00
	(vi)	Girth above 4500 mm	Each	3265.00
2.5	Dismantling of Structures			
	Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts and lead of 1000 m as per MoRTH Specification Clause 202.			
	(I)	By Manual Means		
	(A)	Lime Concrete	Cum	206.00
	(B)	Cement Concrete	Cum	279.00

Item No.	Description		Unit	Rates
	(C)	Reinforced Cement Concrete	Cum	644.00
	(II)	By Mechanical Means		
	(A)	Cement Concrete	Cum	297.00
	(B)	Reinforced Cement Concrete	Cum	464.00
2.6	Dismantling Brick/Tile Work			
	Dismantling of existing structures like culverts, bridges, retaining walls and other structures comprising of brick masonry, including disposal of unserviceable material and stacking the serviceable material with all lift and lead of 1000 m as per MoRTH Specification Clause 202.			
	(A)	Lime mortar	Cum	132.00
	(B)	Cement mortar	Cum	178.00
	(C)	Mud Mortar	Cum	109.00
	(D)	Dry Brick Pitching or Brick Soling	Cum	108.00
2.7	Dismantling Stone Masonry as per MoRTH Specification Clause 202.			
	Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of stone masonry, including disposal of unserviceable material and stacking the serviceable material with all lift and lead of 1000 m as per MoRTH Specification Clause 202.			
	(A)	Rubble Stone Masonry in Lime Mortar	Cum	148.00
	(B)	Rubble Stone Masonry in Cement Mortar	Cum	178.00
	(C)	Rubble Stone Masonry in Mud Mortar	Cum	132.00
	(D)	Dry Rubble Masonry	Cum	120.00
	(E)	Dismantling Stone Pitching / Dry Stone Spalls	Cum	108.00
	(F)	Dismantling boulders laid in wire crates including opening of crates and stacking dismantled materials	Cum	138.00
2.8	Dismantling Wood Work Wrought and Planed Fixed in Frames of Trusses upto a height of 5 m above Plinth Level as per MoRTH Specification Clause 202.		Cum	361.00
2.9	Dismantling Steel Work in all Types of Sections upto a height of 5 m above Plinth Level excluding Cutting of rivet as per MoRTH Specification Clause 202.			
	(A)	Including dismembering	Tonne	860.00
	(B)	Excluding dismembering	Tonne	590.00
	(C)	Extra over Items (A) and (B) for cutting rivets	Tonne	5.25

Item No.	Description	Unit	Rates
2.10	Scraping of bricks dismantled from brick work including stacking as per MoRTH Specification Clause 202.	1000 Nos.	690.00
2.11	Scraping of Stone from Dismantled Stone Masonry as per MoRTH Specification Clause 202.		
	In Cement or Lime Mortar	Cum	275.00
2.12	Scraping Plaster in Lime or Cement Mortar from Brick / Stone Masonry as per MoRTH Specification Clause 202.	Sqm	7.75
2.13	Removing all types of Hume pipes and stacking within a lead of 1000 m including Earthwork and Dismantling of Masonry Works as per MoRTH Specification Clause 202.		
	(A) Upto 600 mm dia Hume pipe	Rmt.	96.00
	(B) Above 600 mm to 900 mm dia Hume pipe	Rmt.	132.00
	(C) Above 900 mm dia Hume pipe	Rmt.	230.00
2.14	Dismantling of Flexible Pavements		
	Dismantling of flexible pavements and disposal of dismantled materials upto a lead of 100 m, stacking serviceable and unserviceable materials separately as per MoRTH Specification Clause 202		
	(I) By Manual Means		
	(A) Bituminous Courses	Cum	405.00
	(B) Granular Courses	Cum	285.00
	(II) By Mechanical Means		
	(A) Bituminous Courses	Cum	157.00
2.15	Dismantling of Cement Concrete Pavements as per MoRTH Specification Clause 202.		
	Dismantling of cement concrete pavements by mechanical means using pneumatic tools breaking to pieces not exceeding 0.02 cum in volume and stock piling at designated locations and disposal of dismantled materials upto a lead of 1000 m, stacking serviceable and unserviceable materials separately	Cum	605.00
2.16	Dismantling Guard Rails		
	Dismantling guard rails by manual means and disposal of dismantled material with all lifts and upto a lead of 1000 m, stacking serviceable materials and unserviceable materials separately as per MoRTH Specification Clause 202.	Rmt.	40.00

Item No.	Description	Unit	Rates
2.17	Dismantling Kerb Stones		
	Dismantling kerb stones by manual means and disposal of dismantled material with all lifts and upto a lead of 1000 m as per MoRTH Specification Clause 202.	Rmt.	7.75
2.18	Dismantling Kerb Stone Channels		
	Dismantling kerb stone channels by manual means and disposal of dismantled material with all lifts and upto a lead of 1000 m as per MoRTH Specification Clause 202.	Rmt.	11.75
2.19	Dismantling Kilometre Stones		
	Dismantling of kilometre stones including cutting of earth, foundation and disposal of dismantled material with all lifts and lead upto 1000 m and backfilling of pit as per MoRTH Specification Clause 202.		
	(A) 5th km Stone	Rmt.	184.00
	(B) Ordinary km Stones	Rmt.	108.00
	(C) 200 m Stones	Rmt.	23.00
2.20	Dismantling of Fencing		
	Dismantling of barbed wire fencing / wire mesh fencing including posts, foundation concrete, backfilling of pit by manual means including disposal of dismantled material with all lifts and upto a lead of 1000 m, stacking serviceable material and unserviceable material separately as per MoRTH Specification Clause 202.	Rmt.	28.50
2.21	Dismantling of CI Water Pipe Line		
	Dismantling of CI water pipe line 600 mm dia including disposal with all lifts and lead upto 1000 m and stacking of serviceable material and unserviceable material separately under supervision of concerned department as per MoRTH Specification Clause 202.	Rmt.	86.00
2.22	Removal of Cement Concrete Pipe of Sewer Gutter		
	Removal of cement concrete pipe of sewer gutter 1500 mm dia under the supervision of concerned department including disposal with all lifts and upto a lead of 1000 m and stacking of serviceable and unserviceable material separately but excluding earth excavation and dismantling of masonry works as per MoRTH Specification Clause 202.	Rmt.	97.00

Item No.	Description	Unit	Rates
2.23	Removal of Telephone/Electric Poles and Lines		
	Removal of telephone/electric poles with wires including excavation and dismantling of foundation concrete and lines under the supervision of concerned department, disposal with all lifts and upto a lead of 1000 m and stacking the serviceable and unserviceable material separately as per MoRTH Specification Clause 202.	Each	97.00

Item No.	Description	Unit	Rates
Chapter 3-EARTHWORK, EROSION CONTROL AND DRAINAGE			
3.1	Preparation of Foundation for Embankment		
	Scarifying Existing Granular Surface to a Depth of 50 mm by Manual Means		
	Scarifying existing granular surface to a depth of 50 mm and disposal of scarified material with a lift upto 3 m and leads upto 1000 m as per MoRTH Specification Clause 305.4.3	Sqm	10.75
3.2	Preparation of Foundation for Embankment		
	Scarifying Existing Bituminous Surface to a Depth of 150 mm by Mechanical Means		
	Scarifying the existing bituminous road surface to a depth of 150 mm and disposal of scarified material with a lift upto 3 m and lead upto 1000 m as per MoRTH Specification Clause 305.4.3	Sqm	7.00
3.3	Construction of Embankment with Material Obtained from Roadway Cutting		
	Construction of embankment with approved materials deposited at site obtained from roadway cutting and excavation from drain and foundation or other structures graded and compacted to meet requirement of Tables 300-1 and 300-2 as per MoRTH Specification Clause 305.3	Cum	40.00
	Note :- Deduct if excavated earth as per item No. 3.5 (ii) is used and pushed for filling in embankment.	Cum	5.00
3.4	Construction of Embankment with Material Obtained from Borrow Pits		
	(i) Construction of embankment with approved material obtained from borrow pits with a lift upto 1.5 m, transporting to site, spreading, grading to required slope and compacting to meet requirement of Tables 300-1 and 300-2 with a lead upto 1000 m as per MoRTH Specification Clause 305.3	Cum	123.00
	(ii) Construction of embankment with approved material obtained from borrow pits with a lift upto 1.5 m, transporting to site, spreading, grading to required slope and compacting to meet requirement of Tables 300-1 and 300-2 with a lead upto 50 m as per MoRTH Specification Clause 305.3	Cum	57.00
3.5	(i) Excavation in Cutting in Soil by manual means with lead upto 50 m		
	Excavation for roadway in soil using manual means for carrying of cut earth to embankment site with a lift upto 1.5 m and lead upto 50 m as per MoRTH Specification Clause 301.3	Cum	65.00

Item No.	Description	Unit	Rates
	(ii) Excavation in Soil with Dozer with lead upto 100 m		
	Excavation for roadway in soil by mechanical means including cutting and pushing the earth to site of embankment upto a distance of 100 m, including trimming bottom and side slopes in accordance with requirements of lines, grades and cross-sections.	Cum	23.00
	(iii) Excavation in Soil using Hydraulic Excavator and Tipplers with disposal upto 1000 m		
	Excavation for roadwork in soil with hydraulic excavator of 0.9 cum bucket capacity including cutting and loading in tipplers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross-sections, and transporting to the embankment location with a lift upto 1.5 m and lead upto 1000 m as per MoRTH Specification Clause 301.3	Cum	31.00
3.6	Excavation in Marshy Soil		
	Excavation for roadway in marshy soil with hydraulic excavator 0.9 cum bucket capacity including cutting and loading in tipplers and disposal with a lift upto 1.5 m and lead upto 1000 m, trimming of bottom and side slopes in accordance with requirements of lines, grades and cross-sections as per MoRTH Specification Clause 301.3.6.	Cum	32.00
3.7	Removal of Unsuitable Soil with Disposal upto 1000 m		
	Removal of unsuitable soil including excavation, loading and disposal upto 1000 m lead but excluding compaction ground supporting embankment subgrade replacement by suitable soil, which shall be paid separately as per Clause 305.3.4 as per MoRTH Specification Clause 301.3.11	Cum	31.00
3.8	(i) Excavation in ordinary Rock by manual means		
	Excavation in ordinary rock using manual means including loading in a truck and carrying of excavated material to embankment site with a lift upto 1.5 m and lead upto 50 m as per MoRTH Specification Clause 301.3.5.	Cum	108.00
	(ii) Excavation in Ordinary Rock with Dozer with lead upto 100 m		
	Excavation for roadway in ordinary rock by deploying a dozer D-50 including cutting and pushing the cut earth to site of embankment upto a distance of 100 m (average lead 50 m), trimming bottom and side slopes in accordance with the requirements of lines, grades and cross-sections with lift upto 1.5 m.	Cum	29.00

Item No.	Description	Unit	Rates
	(iii) Excavation in Ordinary Rock using Hydraulic Excavator and Tippers with disposal upto 1000 m		
	Excavation for roadway in ordinary rock with hydraulic excavator of 0.9 cum bucket capacity including cutting and loading in tippers, transporting to embankment site with a lift upto 1.5 m and lead upto 1000 m, trimming bottom and side slopes in accordance with requirements of lines, grades and cross-sections as per MoRTH Specification Clause 301.3.5	Cum	44.00
3.9	(i) Excavation in Hard Rock (requiring blasting) with disposal upto 1000 m		
	Excavation for roadway in hard rock (requiring blasting) by drilling, blasting and breaking, trimming of bottom and side slopes in accordance with requirements of lines, grades and cross-sections, loading and disposal of cut rock with a lift upto 1.5 m and leads upto 1000 m as per MoRTH Specification Clause 301.3.5	Cum	177.00
	(ii) Excavation in Hard Rock (blasting prohibited)		
	Excavation for roadway in hard rock (blasting prohibited) with rock breakers including breaking rock, loading in tippers and disposal with a lift upto 1.5 m and lead upto 1000 metres, trimming bottom and side slopes in accordance with requirements of lines, grades and cross-sections as per MoRTH Specification Clause 301.3.5		
	(A) Manual Means	Cum	655.00
	(B) Mechanical Means	Cum	226.00
	(iii) Excavation in Hard Rock (controlled blasting) with disposal upto 1000 m		
	Excavation for roadway in hard rock with controlled blasting by drilling, blasting and breaking, trimming of bottom and side slopes in accordance with requirements of lines, grades and cross-sections, loading and disposal of cut rock with a lift upto 1.5 m and leads upto 1000 m as per MoRTH Specification Clause 301.3.5	Cum	282.00
3.10	Stripping, Storing and Relaying Top Soil from Right-of-Way		
	Stripping, storing and preservation of top soil by keeping it damp in stock piles and keep wet till it is used by road side at 15 m internal and re-application on embankment slopes, cut slopes and other areas in localities where the available embankment material is not conducive to plant growth as per MoRTH Specification Clause 301.3.2.& 305.3.3	Cum	86.00

Item No.	Description	Unit	Rates
3.11	Stripping, Storing and Relaying Top Soil from Borrow Areas in Agricultural Fields		
	Stripping of top soil from borrow areas located in agriculture fields, storing at a suitable place, spreading and relaying after taking the borrow earth to maintain fertility of the agricultural field, finishing it to the required levels to the satisfaction of the farmer/land owner as per MoRTH Specification Clause 301.3.2.& 305.3.3	Cum	82.00
3.12	Turfing with Sods		
	Furnishing and laying of the live sods of perennial turf forming grass on embankment slope, verges or other locations shown on the drawing or as directed by the Engineer including preparation of ground, fetching of sods and watering as per MoRTH Specification Clause 307.	Sqm	73.00
3.13	Seeding and Mulching		
	Preparation of seed bed on previously laid top soil, furnishing and placing of seeds, fertilizer, mulching material, applying bituminous emulsion @ 0.23 litre per sqm and laying and fixing jute netting, including watering for 3 months all as per MoRTH Specification Clause 308.	Sqm	617.00
3.14	Construction of Subgrade and Earthen Shoulders		
	(i) Construction of subgrade and earthen shoulders with approved material obtained from borrow pits with all lifts and leads, transporting to site, spreading, grading to required slope and compacted to meet requirement of Table 300-2 with lead upto 1000 m as per MoRTH Specification Clause 305.3	Cum	124.00
	(ii) Construction of subgrade and earthen shoulders with approved material obtained from borrow pits with all lifts and leads, transporting to site, spreading, grading to required slope and compacted to meet requirement of Table 300-2 with lead upto 50 m as per MoRTH Specification Clause 305.3	Cum	57.00
3.15	Compacting Original Ground		
	(i) Compacting original ground supporting embankment		
	Loosening, Levelling and Compacting original ground supporting embankment to facilitate placement of first layer of embankment, scarified to a depth of 150 mm, mixed with water at OMC and then compacted by rolling so as to achieve minimum dry density as given in Tables 300-1 and 300-2 for embankment construction as per MoRTH Specification Clause 305.3.4	Cum	12.50

Item No.	Description	Unit	Rates
	(ii) Compacting original ground supporting subgrade		
	Loosening of the ground upto a level of 300 mm below the subgrade level, watered, graded and compacted in layers to meet requirement of Tables 300-1 and 300-2 for subgrade construction as per MoRTH Specification Clause 305.3.4	Cum	35.00
3.16	Repairs of damages caused by rain/spillage of water		
	Preparation and surface treatment of formation by removing mud and slurry, watering to the extent needed to maintain the desired moisture content, trimming to the required line, grade, profile and rolling with three wheel 80-100 kN static roller, complete as per MoRTH Specification Clause 305.3.8	Sqm	1.00
3.17	Presplitting Rock Excavation Slopes		
	Carrying out excavation in hard rock to achieve a specified slope of the rock face by controlled use of explosives and blasting accessories in properly aligned and spaced drill holes, collection of the excavated rock by a D-50 dozer, loading in tipper by a front end loader and disposing of the material with a lift upto 1.5 m and lead upto 1000 m as per MoRTH Specification Clause 303.2	Sqm	122.00

Item No.	Description		Unit	Rates
3.18	(i)	Surface Drains in Soil		
		Construction of unlined surface drains of average cross-sectional area 0.40 sqm in soil to specified lines, grades, levels and dimensions. Excavated material to be used in embankment with a lift upto 3m and lead of 50 m (average lead 25 m) as per MoRTH Specification Clause 309.		
	(A)	Manual Means	Rmt.	35.00
	(B)	Mechanical Means	Rmt.	8.00
	(ii)	Surface Drains in Ordinary Rock		
		Construction of unlined surface drain of average cross-sectional area 0.4 sqm in ordinary rock to specified lines, grades, levels and dimensions as per approved design and MoRTH Specification Clause 309. Excavated material to be used in embankment at site.		
	(A)	Manual Means	Rmt.	54.00
	(B)	Mechanical Means	Rmt.	18.00

Item No.	Description	Unit	Rates
Chapter 4 - GRANULAR SUB-BASES, BASES (NON-BITUMINOUS) AND SHOULDERS			
4.1	Granular Sub-base with Well Graded Material (Table 400-1)		
	(A) By Mix in Place Method		
	Construction of granular sub-base by providing well graded material, spreading in uniform layers with Tractor Mount Grader on prepared surface, mixing by mix in place method with rotavator at OMC, and compacting with smooth wheel roller to achieve the desired density, complete as per MoRTH Specification Clause 401.		
	(i) For Grading I Material	Cum	536.00
	(ii) For Grading II Material	Cum	509.00
	(iii) For Grading III Material	Cum	475.00
4.2	i) Gravel/Soil Aggregate Base/Sub-base Nominal Maximum size Grading 80 mm (Table 2.3 of IRC SP 77-2008)		
	Construction of Gravel / Soil Aggregate Sub-base/Base by providing well graded material of nominal maximum size grading 80 mm as per Table 2.3 of IRC SP 77-2008, spreading in uniform layers with tractor mount appropriate grading arrangements on prepared surface, mixing by mix in place method at OMC with tractor mount appropriate rotavator attachment and compaction with three wheel 80-100 KN Static Roller capacity to achieve the desired density complete as per specifications contained in Para 2.2, 3.6 and 3.7 of IRC SP 77-2008	Cum	724.00
	ii) Gravel/Soil Aggregate Base/Sub-base Nominal Maximum size Grading 40 mm (Table 2.3 of IRC SP 77-2008)		
	Construction of Gravel / Soil Aggregate Sub-base/Base by providing well graded material of nominal maximum size grading 40 mm as per Table 2.3 of IRC SP 77-2008, spreading in uniform layers with tractor mount appropriate grading arrangements on prepared surface, mixing by mix in place method at OMC with tractor mount appropriate rotavator attachment and compaction with three wheel 80-100 KN Static Roller capacity to achieve the desired density complete as per specifications contained in Para 2.2, 3.6 and 3.7 of IRC SP 77-2008	Cum	690.00

Item No.	Description	Unit	Rates
	iii) Gravel/Soil Aggregate Base/Sub-base Nominal Maximum size Grading 20 mm (Table 2.3 of IRC SP 77-2008)		
	Construction of Gravel / Soil Aggregate Sub-base/Base by providing well graded material of nominal maximum size grading 20 mm as per Table 2.3 of IRC SP 77-2008, spreading in uniform layers with tractor mount appropriate grading arrangements on prepared surface, mixing by mix in place method at OMC with tractor mount appropriate rotavator attachment and compaction with three wheel 80-100 KN Static Roller capacity to achieve the desired density complete as per specifications contained in Para 2.2, 3.6 and 3.7 of IRC SP 77-2008	Cum	663.00
4.3	i) Gravel/Soil Aggregate Base/Surface Nominal Maximum size Grading 10 mm (Table 2.3 of IRC SP 77-2008)		
	Construction of Gravel / Soil Aggregate Base/Surface by providing well graded material of nominal maximum size grading 10 mm as per Table 2.3 of IRC SP 77-2008, spreading in uniform layers with tractor mount appropriate grading arrangements on prepared surface, mixing by mix in place method at OMC with tractor mount appropriate rotavator attachment and compaction with three wheel 80-100 KN Static Roller capacity to achieve the desired density complete as per specifications contained in Para 2.2, 3.6 and 3.7 of IRC SP 77-	Cum	600.00
	ii) Gravel/Soil Aggregate Base/Surface Nominal Maximum size Grading 5 mm (Table 2.3 of IRC SP 77-2008)		
	Construction of Gravel / Soil Aggregate Base/Surface by providing well graded material of nominal maximum size grading 5 mm as per Table 2.3 of IRC SP 77-2008, spreading in uniform layers with tractor mount appropriate grading arrangements on prepared surface, mixing by mix in place method at OMC with tractor mount appropriate rotavator attachment and compaction with three wheel 80-100 KN Static Roller capacity to achieve the desired density complete as per specifications contained in Para 2.2, 3.6 and 3.7 of IRC SP 77-2008	Cum	580.00
4.4	Lime Stabilisation for Improving Sub grade		
	Laying and spreading available soil in the subgrade on a prepared surface, pulverising, mixing the spread soil in place with rotavator with 2 per cent slaked lime having minimum 70 per cent of contents of CaO, grading with motor grader and compacting with the smooth wheel road roller at OMC to the desired density to form a layer of improved Sub-grade as per MoRTH Specification Clause 402.		
	(A) By Manual Means	Cum	224.00
	(B) By Mechanical Means	Cum	219.00

Item No.	Description	Unit	Rates
4.5	Water Bound Macadam Sub-base/base with Stone Screening		
	1) WBM Grading 1		
	Providing, laying, spreading and compacting stone aggregates of specific sizes to water bound macadam specification including spreading in uniform thickness, hand packing, rolling with smooth wheel roller 80-100 kN in stages to proper grade and camber, applying and brooming, stone screening & binding materials to fill-up the interstices of coarse aggregate, watering and compacting to the required density grading 1 as per MoRTH Specification Clause 404.		
	I Using Hand Broken Aggregate		
	(A) By Manual Means	Cum	1115.00
	(B) By Mechanical Means	Cum	1015.00
	II Using Crusher Broken Aggregate		
	(A) By Manual Means	Cum	1213.00
	(B) By Mechanical Means	Cum	1105.00
	2) WBM Grading 2		
	Providing, laying, spreading and compacting stone aggregates of specific sizes to water bound macadam specification including spreading in uniform thickness, hand packing, rolling with smooth wheel roller 80-100 kN in stages to proper grade and camber, applying and brooming, stone screening to fill-up the interstices of coarse aggregate, watering and compacting to the required density Grading 2 as per MoRTH Specification Clause 404. using Crusher borken aggregate		
	(A) By Manual Means	Cum	1308.00
	(B) By Mechanical Means	Cum	1192.00
4.6	Water Bound Macadam with Crushable Screenings		
	1) WBM Grading 1		
	Providing, laying, spreading and compacting stone aggregates of specific sizes to water bound macadam specification including spreading in uniform thickness, hand packing, rolling with three wheel 80-100 kN static roller in stages to proper grade and camber, applying and brooming, crushable screening to fill-up the interstices of coarse aggregate, watering and compacting to the required density Grading 1 as per MoRTH Specification Clause 404.		
	I Using Hand Broken Aggregate		
	(A) By Manual Means	Cum	1000.00
	(B) By Mechanical Means	Cum	930.00

Item No.	Description		Unit	Rates
	II	Using Crusher Broken Aggregate		
	(A)	By Manual Means	Cum	1141.00
	(B)	Labour	Cum	1034.00
	2)	WBM Grading 2		
		Providing, laying, spreading and compacting stone aggregates of specific sizes to water bound macadam specification including spreading in uniform thickness, hand packing, rolling with three wheel 80-100 kN static roller in stages to proper grade and camber, applying and brooming, crushable screening to fill-up the interstices of coarse aggregate, watering and compacting to the required density Grading 2 as per MoRTH Specification Clause 404. Using Crusher Broken aggregate		
	(A)	By Manual Means	Cum	1179.00
	(B)	By Mechanical Means	Cum	1072.00
4.7		Wet Mix Macadam		
		Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the material with water at OMC in mechanical mixer (Pug Mill), carriage of mixed material by tipper to site, laying in uniform layers in sub-base/base course on a well prepared sub-base and compacting with smooth wheel roller of 80 to 100kN weight to achieve the desired density including lighting, barricading and maintenance of diversion, etc as per Tables 400-12 & 400-13 and MoRTH Specification Clause 406.		
		By Mechanical Means with 1 km lead	Cum	1225.00
4.8		Extra rate for carriage of mixed material additional lead from in item 4.7		
	(i)	2nd Km. to 10th Km	Cum/Km.	4.80
	(ii)	11th Km. to 20th Km	Cum/Km.	4.50
	(iii)	Beyond 20th Km	Cum/Km.	4.00
4.9		Construction of Shoulders as per MoRTH Specification Clause 408.		
	A.	Earthen Shoulders	The rate as applicable for sub-grade construction may be adopted.	
	B.	Hard Shoulders	Rate as applicable for sub-base and/or base may be adopted as per approved design.	
	C.	Paved Shoulders	The rates may be adopted as applicable for different layers of pavement depending upon approved design of paved shoulders.	

Item No.	Description	Unit	Rates
4.10	Lime-Flyash Stabilised Soil Sub-base		
	Construction of sub-base using lime-flyash admixture with granular soil, free from organic matter/deleterious material or clayey silts and low plasticity clays having PI between 5 and 20 and liquid limit less than 25 and commercial dry lime, slaked at site or pre-slaked with CaO content not less than 50 per cent, flyash to conform to gradation as per Clause 4.3 of IRC:SP:20, lime+flyash content ranging between 10 to 30 per cent, the minimum un-confined compressive strength and CBR value after 28-days curing and 4-days soaking to be 0.75 MPa and 25 per cent respectively, all as specified in IRC:88 including a lead upto 1000 m as per MoRTH Specification Clause	Cum	388.00
4.11	Crusher Run Macadam Base		
	Providing crushed run stone aggregate grading conforming to table 400-14 depositing on a prepared surface by hauling vehicles, spreading and mixing with a motor grader, watering and compacting with a three wheel 80-100 kN static roller as per MoRTH Specification Clause 407 to form a layer of sub-base/base		
	A) By mix-in-place method		
	(i) With 53 mm maximum size of aggregates	Cum	908.00
	(ii) With 37.5 mm maximum size of aggregates	Cum	1061.00
	B) By mixing plant method		
	(i) With 53 mm maximum size of aggregates	Cum	1170.00
	(ii) With 37.5 mm maximum size of aggregates	Cum	1235.00
4.12	Brick Soling		
	Laying brick soling layer on prepared sub-grade with brick on end edging according to lines, graded and cross-section shown on the drawing filling joints with sand and earth, spreading 25 mm thick layer of earth over brick soling, watering and rolling the same with three wheel road roller 80-100 kN as per MoRTH Specification Clause 408.4.3.	Sqm	275.00
4.13	Stone Set Pavement		
	Providing and laying stone set pavement on prepared surface with sub-base 100 mm thick compacted Granular Sub-base as per Clause 401.3 and base 75 mm thick compacted water bound macadam grading 1 as per Clause 404.3. The 150 mm thick hammer dressed stones are laid in the herringbone or stretcher bond pattern. The stones are compacted into the bedding sand of 40 mm over the WBM base bounded by edge stone using suitable compacting device. The gaps are filled with fine sand stone dust as per MoRTH Specification Clause 408.	Sqm	465.00

Item No.	Description	Unit	Rates
Chapter 5 - BASES AND SURFACE COURSES (BITUMINOUS)			
5.1	Prime Coat		
	(i) Providing and applying primer coat with bitumen emulsion (SS-1) on prepared surface of granular base(WBM/WMM) including cleaning of road surface and spraying primer at the rate of 0.70-1.0 kg/sqm using mechanical means as per MoRTH Specification Clause 502	Sqm	22.00
	(ii) Providing and applying primer coat with Bitumen emulsion (SS-1) on prepared surface of granular base (Stablised soil baes/Crusher Run Macadam) including cleaning of road surface and spraying primer at the rate of 0.90- 1.2 kg/sqm using mechanical means as per MoRTH Specification Clause 502.	Sqm	27.00
5.2	Tack Coat		
	(i) Providing and applying tack coat with Bitumen emulsion (RS-1) using emulsion distributor at the rate of 0.20 to 0.30 kg per sqm on the prepared bituminous surface cleaned with Hydraulic broom as per MoRTH Specification Clause 503.	Sqm	7.00
	(ii) Providing and applying tack coat with Bitumen emulsion (RS-1) using emulsion distributor at the rate of 0.25 to 0.30 kg per sqm on the prepared granular surfaces treated with primer & cleaned with Hydraulic broom as per MoRTH Specification Clause 503.	Sqm	8.00
	(iii) Providing and applying tack coat with Bitumen emulsion (RS-1) using emulsion pressure distributor at the rate of 0.30 to 0.35 kg per sqm on the prepared non-bituminous surfaces (cement concrete pavement) cleaned with Hydraulic broom as per MoRTH Specification Clause 503.	Sqm	9.00
	Tack Coat using Bitumen (VG-10)		
	(iv) Providing and applying tack coat with Bitumen VG-10 using bitumen pressure distributor at the rate of 0.30 to 0.40 kg per sqm on the prepared bituminous surface cleaned with Hydraulic broom as per MoRTH Specification Clause 503 and IRC-16-2008	Sqm	11.00
	(v) Providing and applying tack coat with Bitumen VG-10 using bitumen pressure distributor at the rate of 0.35 to 0.45 kg per sqm on the prepared granular surfaces treated with primer & cleaned with Hydraulic broom as per MoRTH Specification Clause 503 and IRC-16-2008.	Sqm	13.00
	(vi) Providing and applying tack coat with Bitumen VG-10 using bitumen pressure distributor at the rate of 0.40 to 0.50 kg per sqm on the prepared non-bituminous surfaces (cement concrete pavement) cleaned with Hydraulic broom as per MoRTH Specification Clause 503 and IRC-16-2008.	Sqm	14.00

Item No.	Description	Unit	Rates
5.3	Bituminous Macadam		
	Providing and laying bituminous macadam with hot mix plant using crushed aggregates of grading as per Table 500-7 premixed with bituminous binder, transported to site with all leads laid over a previously prepared surface with paver finisher to the required grade, level and alignment and rolled to achieve the desired compaction as per MoRTH Specification Clause 504.		
	(i) Bitumen (VG-10)	Cum	4525.00
		MT	2057.00
	(ii) Bitumen (VG-30)	Cum	4602.00
		MT	2092.00
5.4	Surface Dressing using Bituminous (Penetrations grade / modified bitumen) Binder		
	Providing and laying surface dressing as wearing course consisting of a layer of bituminous binder laid on the prepared surface, followed by a cover of crushed stone aggregates of specified size and rolling with three wheel 80-100 kN static roller including cleaning the road surface as per MoRTH Specification Clause 509.		
	(A) By Manual Means		
	Case – I: Nominal chipping size 13.2 mm		
	(I) Bitumen (VG-10)	Sqm	58.00
	(II) Bitumen (VG-30)	Sqm	59.00
	(iii) Crumb Rubber Modified Bitumen	Sqm	64.00
	Case – II: Nominal chipping size 9.5 mm		
	(I) Bitumen (VG-10)	Sqm	50.00
	(II) Bitumen (VG-30)	Sqm	51.00
	(iii) Crumb Rubber Modified Bitumen	Sqm	55.00
	(B) By Mechanical Means		
	Case – I: Nominal chipping size 13.2 mm		
	(I) Bitumen (VG-10)	Sqm	43.00
	(II) Bitumen (VG-30)	Sqm	44.00
	(iii) Crumb Rubber Modified Bitumen	Sqm	50.00
	Case – II: Nominal chipping size 9.5 mm		
	(I) Bitumen (VG-10)	Sqm	37.00
	(II) Bitumen (VG-30)	Sqm	38.00
	(iii) Crumb Rubber Modified Bitumen	Sqm	43.00

Item No.	Description	Unit	Rates
5.5	Surface Dressing using Bitumen Emulsion		
	Providing and laying surface dressing as wearing course consisting of a layer of bitumen emulsion laid on the prepared surface, followed by a cover of crushed stone chippings of specified size and rolling with 80-100 kN roller including cleaning the road surface as per MoRTH Specification Clause 509.		
	(A) By Manual Means		
	Case – I: Nominal aggregate size 13.2 mm	Sqm	64.00
	Case – II: Nominal chipping size 9.5 mm	Sqm	57.00
	(B) By Mechanical Means		
	Case – I: Nominal chipping size 13.2 mm	Sqm	50.00
	Case – II: Nominal chipping size 9.5 mm	Sqm	45.00
5.6	Pre-coating Chips		
	Pre-coating of chips with 1 per cent of paving bitumen by weight of chips in a suitable mixer duly heated to 160 degree C as per MoRTH Specification Clause 509.2.2		
	(I) Bitumen (VG-10)	Cum	704.00
	(II) Bitumen (VG-30)	Cum	721.00
5.7	20mm thick Open-Graded Premix Carpet using Bituminous (penetration grade/modified bitumen) Binder		
	Providing, laying and rolling of open-graded premix carpet of 20 mm thickness composed of 13.2 mm to 5.6 mm aggregates either using penetration grade bitumen or emulsion to required line, grade and level to serve as wearing course on a previously prepared base, including mixing in a suitable plant, laying and rolling with a three wheel 80-100 kN static roller capacity, finished to required level and grades to be followed by seal coat of either Type A or Type B or Type C as per MoRTH Specification Clause 510.		
	Case - I By Manual Means		
	(I) Bitumen (VG-10)	Sqm	88.00
	(II) Bitumen (VG-30)	Sqm	90.00
	(IV) Crumb Rubber Modified Bitumen	Sqm	97.00

Item No.	Description		Unit	Rates
	Case - II By Mechanical Means			
	(I)	Bitumen (VG-10)	Sqm	93.00
			MT	2325.00
	(II)	Bitumen (VG-30)	Sqm	94.00
			MT	2350.00
	(IV)	Crumb Rubber Modified Bitumen	Sqm	102.00
			MT	2550.00
5.8	Mix Seal Surfacing			
	Providing, laying and rolling of close-graded premix surfacing material of 20 mm thickness composed of 11.2 mm to 0.9 mm (Type-A) or 13.2 mm to 0.9 mm (Type-B) aggregates using penetration grade bitumen to required line, grade and level to serve as wearing course on a previously prepared base, including mixing in a suitable plant, laying and rolling with a three wheel 8-10 kN static roller and finishing to required level and grades as per MoRTH Specification			
	By Manual Means			
	Type A			
	(I)	Bitumen (VG-10)	Sqm	106.00
	(II)	Bitumen (VG-30)	Sqm	109.00
	(IV)	Crumb Rubber Modified Bitumen	Sqm	120.00
	Type B			
	(I)	Bitumen (VG-10)	Sqm	97.00
	(II)	Bitumen (VG-30)	Sqm	99.00
	(IV)	Crumb Rubber Modified Bitumen	Sqm	109.00
	By Mechanical Means			
	Type A			
	(I)	Bitumen (VG-10)	Sqm	108.00
	(II)	Bitumen (VG-30)	Sqm	110.00
	(IV)	Crumb Rubber Modified Bitumen	Sqm	122.00
	Type B			
	(I)	Bitumen (VG-10)	Sqm	99.00
	(II)	Bitumen (VG-30)	Sqm	101.00
	(IV)	Crumb Rubber Modified Bitumen	Sqm	111.00

Item No.	Description	Unit	Rates
5.9	Seal Coat		
	Providing and laying seal coat sealing the voids in a bituminous surface laid to the specified levels, grade and cross fall using Type A, Type B and Type C as per MoRTH Specification Clause 511		
	A. By Manual Means		
	Case - I : Type A		
	(I) Bitumen (VG-10)	Sqm	43.00
	(II) Bitumen (VG-30)	Sqm	44.00
	(IV) Crumb Rubber Modified Bitumen	Sqm	49.00
	Case - II : Type B		
	(I) Bitumen (VG-10)	Sqm	29.00
	(II) Bitumen (VG-30)	Sqm	29.00
	(IV) Crumb Rubber Modified Bitumen	Sqm	33.00
	B. By Mechanical Means		
	Case - I : Type A		
	(I) Bitumen (VG-10)	Sqm	39.00
	(II) Bitumen (VG-30)	Sqm	40.00
	(IV) Crumb Rubber Modified Bitumen	Sqm	45.00
	Case - II : Type B		
	(I) Bitumen (VG-10)	Sqm	30.00
	(II) Bitumen (VG-30)	Sqm	31.00
	(IV) Crumb Rubber Modified Bitumen	Sqm	35.00

Item No.	Description	Unit	Rates
Chapter 6 - CEMENT CONCRETE PAVEMENT			
6.1	Cement Concrete Pavement		
	Construction of un-reinforced, dowel jointed at expansion and construction joint only, plain cement concrete pavement, thickness as per design, over a prepared sub base, with 43 grade cement or any other type as per Clause 602.2.2 M30 (Grade), coarse and fine aggregates conforming to IS:383, maximum size of coarse aggregate not exceeding 25 mm, mixed in a concrete mixer of not less than 0.2 cum capacity and appropriate weigh batcher using approved mix design, laid in approved fixed side formwork (steel channel, laying and fixing of 125 micron thick polythene film, wedges, steel plates including levelling the formwork as per drawing), spreading the concrete with shovels, rakes, compacted using needle, screed and plate vibrators and finished in continuous operation including provision of contraction and expansion, construction joints, applying debonding strips, primer, sealant, dowel bars, near approaches to bridge/culvert and construction joints, admixtures as approved, curing of concrete slabs for 14-days,	Cum	5516.00
	using curing compound and water finishing to lines and grade as per drawing and MoRTH Specification Clause 602 including vacuum dewatering process with all required equipments		
6.2	Rectangular Concrete Block Pavement		
	Manufacturing, laying of cement concrete blocks of size 0.450 m x 0.300 m x 0.15 m of Cement Concrete (C.C.) M30 grade and spreading 25 mm thick sand under neath and filling joints with sand on existing W.B.M. base, as per IS 15658:2006. and all materials shall conform to MoRTH Specification Clause 602.	Sqm	874.00
6.3	Interlocking Concrete Block Pavement with M-30 Grade 0.30 Mtr x 0.30 Mtr x 0.15 Mtr Edge Blocks (measurements shall be made inner to inner side of edge blocks)		
	(i) Providing and Laying of Interlocking M-30 grade Concrete Block Pavements having thickness 50 mm as per drawings and as per IS 15658:2006. and all materials shall conform to MoRTH Specification Clause 602. with M-30 Grade 0.30 Mtr x 0.30 Mtr x 0.15 Mtr Edge Blocks		
	(a) Category 'A' : Dentated units to key into each other on all four faces Zigzag shape as per IRC:SP:63-2004	Sqm	665.00
	(b) Category 'B' : Dentated only two side like I,Z,T shape as per IRC:SP:63-2004	Sqm	591.00
	(c) Category 'C' : Not dentated on any of its faces like Hexagonal, Rectangular, Square shape as per IRC:SP:63-2004	Sqm	524.00

Item No.	Description	Unit	Rates
	(ii) Providing and Laying of Interlocking M-30 grade Concrete Block Pavements having thickness 60 mm as per drawings and as per IS 15658:2006.and materials conforming to MoRTH Specification Clause 602 with M-30 Grade 0.30 Mtr x 0.30 Mtr x 0.15 Mtr Edge Blocks.		
	(a) Category 'A' : Dentated units to key into each other on all four faces Zigzag shape as per IRC:SP:63-2004	Sqm	742.00
	(b) Category 'B' : Dentated only two side like I,Z,T shape as per IRC:SP:63-2004	Sqm	669.00
	(c) Category 'C' : Not dentated on any of its faces like Hexagonal, Rectangular, Square shape as per IRC:SP:63-2004	Sqm	595.00
	(iii) Providing and Laying of Interlocking M-30 grade Concrete Block Pavements having thickness 80 mm as per drawings and as per IS 15658:2006.and all materials shall conform to MoRTH Specification Clause 602 with M-30 Grade 0.30 Mtr x 0.30 Mtr x 0.15 Mtr Edge Blocks.		
	(a) Category 'A' : Dentated units to key into each other on all four faces Zigzag shape as per IRC:SP:63-2004	Sqm	921.00
	(b) Category 'B' : Dentated only two side like I,Z,T shape as per IRC:SP:63-2004	Sqm	820.00
	(c) Category 'C' : Not dentated on any of its faces like Hexagonal, Rectangular, Square shape as per IRC:SP:63-2004	Sqm	673.00
	(iv) Providing and Laying of Interlocking M-30 grade Concrete Block Pavements having thickness 100 mm as per drawings and as per IS 15658:2006.and all materials shall conform to MoRTH Specification Clause 602. with M-30 Grade 0.30 Mtr x 0.30 Mtr x 0.15 Mtr Edge Blocks.		
	(a) Category 'A' : Dentated units to key into each other on all four faces Zigzag shape as per IRC:SP:63-2004	Sqm	1117.00
	(b) Category 'B' : Dentated only two side like I,Z,T shape as per IRC:SP:63-2004	Sqm	1027.00
	(c) Category 'C' : Not dentated on any of its faces like Hexagonal, Rectangular, Square shape as per IRC:SP:63-2004	Sqm	824.00
	(v) Providing and Laying of Interlocking M-30 grade Concrete Block Pavements having thickness 120 mm as per drawings and as per IS 15658:2006.and all materials shall conform to MoRTH Specification Clause 602. with M-30 Grade 0.30 Mtr x 0.30 Mtr x 0.15 Mtr Edge Blocks.	Sqm	
	(a) Category 'A' : Dentated units to key into each other on all four faces Zigzag shape as per IRC:SP:63-2004	Sqm	1330.00
	(b) Category 'B' : Dentated only two side like I,Z,T shape as per IRC:SP:63-2004	Sqm	1223.00
	(c) Category 'C' : Not dentated on any of its faces like Hexagonal, Rectangular, Square shape as per IRC:SP:63-2004	Sqm	1020.00

Item No.	Description	Unit	Rates
Chapter 7 - CAUSEWAY AND SUBMERSIBLE BRIDGES			
7.1	Construction of Cut-off Walls/Head Walls		
	(i) Earthwork in excavation for structures as per drawing and MoRTH specification Clause 305.		
	Rate as per item No.11.1 of Chapter 11	Cum	
	(ii) Plain cement concrete M15 grade		
	Rate as per item No.11.4 (ii) of Chapter 11	Cum	
	(iii) Brick masonry in cement mortar 1:4		
	Rate as per item No.11.5 (ii) of Chapter 11	Cum	
	(iv) Stone masonry in cement mortar 1:4		
	Rate as per item No.11.6 (ii) of Chapter 11	Cum	
	(v) Providing P.C.C M20 architectural coping on top of wall		
	Rate as per item No.12.13 of Chapter 12	Sqm	
7.2	Preparation of Subgrade		
	Rate as per item No.3.15 of Chapter 3	Cum	
7.3	Granular Sub-base		
	Rate as per item No.4.1 of Chapter 4	Cum	
7.4	W.B.M. Base Course		
	Rate as per item No.4.7 of Chapter 4	Cum	
7.5	Cement Concrete Slab		
	Rate as per item No.6.4 of Chapter 6	Cum	
7.6	(i) Providing and Laying Apron with Stone Boulders as per Drawings & MoRTH Specification Clause 2503		
	Rate as per item No.14.1 of Chapter 14	Cum	
	(ii) Providing and Laying of Boulder Apron Laid in Wire Crates as per Drawings & MoRTH Specification Clause 2503		
	Rate as per item No.14.2 of Chapter 14	Cum	
	(iii) Providing and Laying of Apron with Cement Concrete Blocks as per Drawing and MoRTH Specification Clause 2503		
	Rate as per item No.14.3 of Chapter 14	Cum	
7.7	Guide Posts		
	Construction of RCC guide posts of 250 mm dia M25 grade cast-in-situ with 20 mm nominal size aggregate, true to line and grade, tolerance of vertical RCC posts not to exceed 1 in 500 as per drawing and MoRTH Specification Clause 1700 & 1600	Each.	600.00

Item No.	Description	Unit	Rates
7.8	Bedding for Causeway		
	(i) Type A (concrete cradle) Bedding Clause 2904		
	As per item No.9.2 of Chapter 9	Cum	
	(ii) Type B (first class) Bedding Clause 2904		
	As per item No.9.2 of Chapter 9	Cum	
7.9	Laying Reinforced Cement Concrete Pipe NP3 as per drawing and MoRTH specification Clause 2900		
	As per item No.9.3 of Chapter 9	Rmt	
7.10	Laying Reinforced Cement Concrete Pipe NP4 as per MoRTH specification Clause 2900		
	As per item No.9.4 of Chapter 9	Rmt	

Item No.	Description	Unit	Rates
<p data-bbox="311 321 665 367">Chapter 8 - HILL ROADS</p> <p data-bbox="649 1039 1144 1144">DELETED</p>			

Item No.	Description	Unit	Rates
Chapter 9 - PIPE CULVERTS			
9.1	Excavation for Structures		
	Earthwork in excavation for foundation of structures upto 3 m depth as per drawing and MoRTH specification Clause 2903 including setting out, construction of shoring and bracing, removal of stumps and other deleterious matter, dressing of sides and bottom and backfilling with approved material.		
	Rate as per item No.11.1 of Chapter 11	Cum	
9.2	Bedding for Pipe		
	(i) Type A (Concrete Cradle) Bedding		
	Laying concrete cradle bedding with M15 Grade Cement Concrete as per Clause 2904 (ii)		
	Rate as per Item No.11.4 (II)(i) of Chapter 11	Cum	
	(ii) Type B (First Class) Bedding		
	Laying (First Class) bedding on well compacted sand, moorum or approved granular material as per Clause 2904 (i)		
	Rate as per Item No.11.2 of Chapter 11	Cum	
9.3	Providing and Laying Reinforced Cement Concrete Pipe NP3 as per design in Single Row		
	Providing and laying reinforced cement concrete pipe NP3 for culverts on first class bedding of granular material in single row including fixing collar with cement mortar 1:2 but excluding excavation, protection works, backfilling, concrete and masonry works in head walls and parapets Clause 2905.		
	(A) 1200 mm dia	Rmt	6065.00
	(B) 1000 mm dia	Rmt	4219.00
	(C) 900 mm dia		3575.00
	(C) 750 mm dia	Rmt	3001.00
	(D) 600 mm dia	Rmt	1783.00
	(E) 300 mm dia	Rmt	665.00

Item No.	Description	Unit	Rates
9.4	Providing and Laying Reinforced Cement Concrete Pipe NP4 as per design in Single Row		
	Providing and laying reinforced cement concrete pipe NP4 for culverts on first class bedding of granular material in single row including fixing collar with cement mortar 1:2 but excluding excavation, protection works, backfilling, concrete and masonry works in head walls and parapets Clause 2905.		
	(A) 1200 mm dia	Rmt	7117.00
	(B) 1000 mm dia	Rmt	4929.00
	(C) 750 mm dia	Rmt	3305.00
9.5	Providing and Laying Reinforced Cement Concrete Pipe NP3 as per Design in Double Row		
	Providing and laying reinforced cement concrete pipe NP3 for culverts on first class bedding of granular material in double row including fixing collar with cement mortar 1:2 but excluding excavation, protection works, backfilling, concrete and masonry works in head walls and parapets as per Clause 2905.		
	(A) 1200 mm dia	Rmt	12130.00
	(B) 1000 mm dia	Rmt	8439.00
	(C) 900 mm dia		7150.00
	(D) 750 mm dia	Rmt	6002.00
9.6	Providing and Laying Reinforced Cement Concrete Pipe NP4 as per Design in Double Row		
	Providing and laying reinforced cement concrete pipe NP4 for culverts on first class bedding of granular material in double row including fixing collar with cement mortar 1:2 but excluding excavation, protection works, backfilling, concrete and masonry works in head walls and parapets as per Clause 2905.		
	(A) 1200 mm dia	Rmt	14235.00
	(B) 1000 mm dia	Rmt	9857.00
	(C) 750 mm dia	Rmt	6611.00
9.7	Laying Cement Concrete Pipe NP3 (buried conduits) on first class bedding of granular material including fixing collar with cement sand mortar 1:2 but excluding excavation, protection works, backfilling, concrete and masonry work in head wall and parapets as per Clause 2905.		
	500 mm dia	Rmt	673.00

Item No.	Description	Unit	Rates
9.8	Laying Cement Concrete Pipe NP4 (buried conduits) on first class bedding of granular material including fixing collar with cement sand mortar 1:2 but excluding excavation, protection works, backfilling, concrete and masonry work in head wall and parapets as per Clause 2905.		
	500 mm dia	Rmt	1006.00
9.9	Plain Cement Concrete M10 (1:3:6 nominal mix) in levelling course below open foundation of Head walls as per drawings & MoRTH Specification Clause 2908		
	Rate as per item No.11.4 of Chapter 11	Cum	
9.10	Brick Masonry Work in cement mortar in foundation of Head walls complete excluding pointing and plastering as per drawing and MoRTH specification Clause 2908		
	(A) Brick Masonry in 1:4 cement mortar		
	Rate as per item No.11.5 (ii) Chapter 11	Cum	
	(B) In cement-lime mortar (1:0.5:4.5)		
	Rate as per item No.11.5 (iii) Chapter 11	Cum	
9.11	Stone Masonry Work in cement mortar in foundation of Head walls complete as per drawing and MoRTH specification Clause 2908		
	(A) In 1:4 cement mortar		
	Rate as per item No.11.6 (II) (ii) Chapter 11	Cum	
	(B) In cement-lime mortar (1:0.5:4.5)		
	Rate as per item No.11.6 (II) (iii) Chapter 11	Cum	
9.12	Pointing with Cement Mortar (1:3) on brickwork as per MoRTH specification Clause 1312.3		
	Rate as per item No.12.2 of Chapter 12	Sqm	
9.13	Plastering with Cement Mortar (1:4), 15 mm thick on brickwork in substructure as per MoRTH specification Clause 1312.4		
	Rate as per item No.12.3 of Chapter 12	Sqm	
9.14	Backfilling in Foundation Trenches as per drawing and MoRTH specification Clause 2907		
	Rate as per Item No.11.2 of Chapter 11	Sqm	
9.15	Providing PCC M20 Architectural Coping on the top of wing wall, return wall etc. complete as per drawing and MoRTH specification Clause 1313		
	Rate as per Item No.12.13 of Chapter 12	Rmt	

Item No.	Description	Unit	Rates
Chapter 10 - TRAFFIC SIGNS, MARKINGS AND OTHER ROAD APPURTENANCES			
10.1	Printing New Letters and Figures of any Shade		
	Printing new letter and figures of any shade with synthetic enamel paint black or any other approved colour to give an even shade as per drawings and MoRTH Specification Clause 801		
	i) Hindi (Matras commas and the like not to be measured and paid for. Half letters shall be counted as half only)	Per Cm Height Per Letter	0.50
	ii) English and Roman	Per Cm Height Per Letter	0.30
10.2	Traffic Signs		
	A. Retro-reflectorised Traffic Signs		
	(1) Providing and fixing of retro-reflectorised cautionary, mandatory and informatory sign as per IRC:67 made of encapsulated lens type reflective sheeting vide Clause 801.3.1 fixed over aluminium sheeting, 1.5 mm thick supported on a mild steel angle iron post 75 mm x 75 mm x 6 mm firmly fixed to the ground by means of properly designed foundation with M15 grade cement concrete 450 mm x 450 mm x 600 mm, 600 mm below ground level as per drawings and MoRTH Specification Clause 801		
	(i) 900 mm equilateral triangle	Each	4907.00
	(ii) 600 mm equilateral triangle	Each	3102.00
	(iii) 600 mm circular	Each	4284.00
	(iv) 800 mm x 600 mm rectangular	Each	6116.00
	(v) 600 mm x 450 mm rectangular	Each	4163.00
	(vi) 600 mm x 600 mm square	Each	5000.00
	(vii) 900 mm side octagon	Each	7902.00
	(2) Providing and fixing of retro-reflectorised cautionary, mandatory and informatory sign as per IRC:67 made of encapsulated lens type reflective sheeting vide Clause 801.3.1, fixed over aluminium sheeting, 1.5 mm thick supported on GI pipe 50 mm dia firmly fixed to the ground by means of properly designed foundation with M-15 grade cement concrete 450 mm x 450 mm x 600 mm, 600 mm below ground level as per drawings and MoRTH Specification Clause 801		
	(i) 900 mm equilateral triangle	Each	4828.00
	(ii) 600 mm equilateral triangle	Each	3024.00

Item No.	Description		Unit	Rates
		(iii) 600 mm circular	Each	4205.00
		(iv) 800 mm x 600 mm rectangular	Each	6038.00
		(v) 600 mm x 450 mm rectangular	Each	4084.00
		(vi) 600 mm x 600 mm square	Each	4921.00
		(vii) 900 mm side octagon	Each	7824.00
	(3)	Providing and fixing of retro-reflectorised cautionary, mandatory and informatory sign as per IRC:67 made of encapsulated lens type reflective sheeting vide Clause 801.3.1, fixed over aluminium sheeting, 1.5 mm thick supported on RCC Post 100 mm x 100 mm firmly fixed to the ground by means of properly designed foundation with M15 grade cement concrete 450 mm x 450 mm x 600 mm, 600 mm below ground level as per approved drawing Clause 801		
		(i) 900 mm equilateral triangle	Each	4342.00
		(ii) 600 mm equilateral triangle	Each	2537.00
		(iii) 600 mm circular	Each	3718.00
		(iv) 800 mm x 600 mm rectangular	Each	5551.00
		(v) 600 mm x 450 mm rectangular	Each	3597.00
		(vi) 600 mm x 600 mm square	Each	4435.00
		(vii) 900 mm side octagon	Each	7337.00
	B	Semi Reflective Traffic Signs		
		Providing and fixing of semi reflective cautionary, mandatory and informatory sign board as per IRC:67 made of 1.5 mm thick MS Sheet duly stove white colour in front and gray colour on back with red reflective border of 65 mm width and required letters and figures with reflective tape engineering grade of required shade and colour supported and welded on 47mm x 47 mm x 12 SWG sheet tube firmly fixed to the ground by mean of properly designed foundations with M-15 grade cement concrete 450x450x600 mm, 600 mm below ground level as per approved drawing and Specifications.		
		(i) 900 mm equilateral triangle	Each	1484.00
		(ii) 600 mm equilateral triangle	Each	1322.00
		(iii) 600 mm circular	Each	1428.00
		(iv) 800 mm x 600 mm rectangular	Each	1592.00
		(v) 600 mm x 450 mm rectangular	Each	1417.00
		(vi) 600 mm x 600 mm square	Each	1492.00
		(vii) 900 mm side octagon	Each	1752.00
	B-II.	Add extra for providing and fixing definition plate of size 600 x 400 mm including all letters with above specifications	Each	198.00

Item No.	Description		Unit	Rates
10.3	Direction and Place Identification signs upto 0.9 sqm size board			
	A. Retro-reflectorised Traffic Signs			
	(i)	Providing and erecting direction and place identification retro-reflectorised sign as per IRC:67 made of encapsulated lens type reflective sheeting vide Clause 801.3.1. fixed over aluminium sheeting, 2 mm thick with area not exceeding 0.9 sqm supported on a mild steel single angle iron post 75 x 75 x 6 mm firmly fixed to the ground by means of properly designed foundation with M-15 grade cement concrete 450 x 450 x 600 mm, 600 mm below ground level as per approved drawing and MoRTH Specification Clause 801. Direction and Place Identification signs upto 0.9 sqm size board	Sqm	11416.00
	(ii)	Providing and erecting direction and place identification retro-reflectorised sign as per IRC:67 made of encapsulated lens type reflective sheeting vide Clause 801.3.1. fixed over aluminium sheeting, 2 mm thick with area not exceeding 0.9 sqm supported on 2 inch dia GI Pipe firmly fixed to the ground by means of properly designed foundation with M-15 grade cement concrete 450 x 450 x 600 mm, 600 mm below ground level as per approved drawing and MoRTH Specification Clause 801, upto 0.9 sqm size board.	Sqm	10585.00
	(iii)	Providing and erecting direction and place identification retro-reflectorised sign as per IRC:67 made of encapsulated lens type reflective sheeting vide Clause 801.3.1, fixed over aluminium sheeting, 2 mm thick with area not exceeding 0.9 sqm supported on RCC Post 100 mm x 100 mm firmly fixed to the ground by means of properly designed foundation with M-15 grade cement concrete 450 x 450 x 600 mm, 600 mm below ground level as per approved drawing and MoRTH Specification Clause 801, upto 0.9 sqm size board	Sqm	10016.00

Item No.	Description		Unit	Rates
	B.	Semi-Reflective Traffic signs		
		Direction and place identification signs up to 0.9 sqm size board		
		Providing and erecting direction and place identifications of semi reflective sign boards as per IRC:67 made of 2 mm thick M.S. Sheet duly stove enameled paint in white colour in front and grey colour on back with red reflective border of 70 mm width and required message, letters, figures with reflective engineering grade tape of required shade and colour. Supported and welded on 47 mm x 47mm of 12 SWG Square tube of 3050 mm height duly strengthened by 25 mm x 5 mm M/s flat iron on edges on back firmly fixed to the ground by means of properly designed foundations with M-15 grade cement concrete 450 mm x 450 mm x 600 mm, 600 mm below ground level as per approved drawing and Specification upto 0.9 sqm size board	Sqm	2599.00
10.4		Direction and Place Identification signs with size more than 0.9 sqm size board		
	A.	Retro-reflectorised Traffic Signs		
	(i)	Providing and erecting direction and place identification retro-reflectorised sign as per IRC:67 made of encapsulated lens type reflective sheeting vide Clause 801.3.1, fixed over aluminium sheeting, 2 mm thick with area exceeding 0.9 sqm supported on mild steel angle iron posts 75 mm x 75 mm x 6 mm, 2 Nos. firmly fixed to the ground by means of properly designed foundation with M-15 grade cement concrete 450 mm x 450 mm x 600 mm, 600 mm below ground level as per approved drawing and MoRTH Specification Clause 801	Sqm	11776.00
	(ii)	Providing and erecting direction and place identification retro-reflectorised sign as per IRC:67 made of encapsulated lens type reflective sheeting vide Clause 801.3.1, fixed over aluminium sheeting, 2 mm thick with area exceeding 0.9 sqm supported on dia GI Pipe firmly fixed to the ground by means of properly designed foundation with M-15 grade cement concrete 450 mm x 450 mm x 600 mm, 600 mm below ground level as per approved drawing and MoRTH Specification Clause 801	Sqm	11672.00

Item No.	Description		Unit	Rates
	(iii)	Providing and erecting direction and place identification retro- reflectorised sign as per IRC:67 made of encapsulated lens type reflective sheeting vide Clause 801.3.1, fixed over aluminium sheeting, 2 mm thick with area exceeding 0.9 sqm supported on RCC Posts 100 mm x 100 mm firmly fixed to the ground by means of properly designed foundation with M 15 grade cement concrete 450 mm x 450 mm x 600 mm, 600 mm below ground level as per approved drawing and MoRTH Specification Clause 801	Sqm	10156.00
	B.	Semi-Reflective Traffic signs		
		Direction and place identification signs more than 0.90 sqm sign board		
		Providing and erecting direction and place identification of semi reflective sign boards as per IRC-67 made of 2 mm thick M.S. Sheet duly stove enameled paint white colour in front and grey colour on back with reflective border of 70 mm width and required message, letters, figures with reflective tape of engineering grade of required shade and colour. Supported and welded on two nos. 47 mm x 47 mm of 12 SWG square tube of 3050 mm height duly strengthened by 25 mm x 5 mm MS flat iron on edges on back firmly fixed to the ground by means of properly designed foundations with M-15 grade cement concrete 450 mm x 450 mm x 600 mm, 600 mm below ground level as per approved drawing and Specification with size more than 0.9 sqm size board	Sqm	2869.00
10.5		Painting Two Coats on New Concrete Surfaces		
		Painting two coats including primer coat after filling the surface with synthetic enamel paint in all shades on new, plastered / concrete surfaces as per drawing and MoRTH Specification Clause 801	Sqm	69.00
10.6		Painting on Steel Surfaces		
		Providing and applying two coats of ready mix paint including primer coat of approved brand on steel surface after through cleaning of surface to give an even shade as per drawing and MoRTH Specification Clause 801	Sqm	69.00
10.7		Painting on Concrete/Steel Surfaces with Epoxy		
		Painting two coats including prime coat with epoxy paint of approved brand on concrete/steel surfaces after through cleaning of surface to give an even shade as per drawing and MoRTH Specification Clause 801	Sqm	126.00

Item No.	Description	Unit	Rates
10.8	Painting lines, Dashes, Arrows, etc. on Road in Two Coats on New Work		
	Painting lines, dashes, arrows, etc. on roads in two coats on new work with ready mixed road marking paint conforming to IS:164 on bituminous/concrete surface, including cleaning the surface of all dirt, dust and other foreign matter, demarcation at site and traffic control as per drawing and MoRTH Specification Clause 803	Sqm	80.00
10.9	Painting lines, Dashes, Arrows, etc. on Roads in Two Coats on Old Work		
	Painting lines, dashes, arrows, etc. on roads in two coats on old work with ready mixed road marking paint conforming to IS:164 on bituminous/concrete surface, including cleaning the surface of all dirt, dust and other foreign matter, demarcation at site and traffic control as per drawing and MoRTH specification Clause 803	Sqm	52.00
10.10	Kilometre Stone		
	Reinforced cement concrete M15 grade kilometre stone/local stone of standard design as per IRC:8 fixing in position including painting and printing, etc as per drawing and MoRTH Specification Clause 801		
	i) 5th Kilometre Stone (precast)	Each	2427.00
	ii) Ordinary Kilometer Stone (Precast)	Each	1439.00
	iii) 200 m stone (precast)	Each	339.00
10.11	Boundary Pillar		
	Reinforced cement concrete M15 grade boundary pillars/local stone of standard design as per IRC:25, fixed in position including finishing and lettering but excluding painting as per drawing and MoRTH Specification Clause 807	Each	355.00
10.12	G.I Barbed Wire Fencing 1.2 m high		
	Providing and fixing 1.2 m high GI barbed wire fencing with 1.8 m RCC posts 150 mm x 150 mm placed every 3 m centre-to-centre founded in M15 grade cement concrete, 0.6 m below ground level, every 15th post, last but one end post and corner post shall be strutted on both sides and end post on one side only and provided with 9 horizontal lines and 2 diagonals interwoven with horizontal wires, fixed with GI staples, turn buckles etc. complete as per MoRTH Specification Clause 808.	Rmt	345.00

Item No.	Description	Unit	Rates
10.13	G.I Barbed Wire Fencing 1.8 m high		
	Providing and fixing 1.8 m high GI barbed wire fencing with 2.4 m RCC M15 grade 150 mm x 150 mm concrete post placed every 3 m centre-to-centre founded in M15 grade cement concrete, 0.6 m below ground level, every 15th post, last but one end post and corner post shall be strutted on both sides and end post on one side only and provided with 12 horizontal lines and 2 diagonals interwoven with horizontal wires, fixed with GI staples, turn buckles etc. complete as per MoRTH Specification Clause 808.	Rmt	464.00
10.14	Tubular Steel Railing on Medium Weight Steel Channel (ISMC series) 100 mm x 50 mm		
	Providing, fixing and erecting 50 mm dia steel pipe railing in 3 rows duly painted on medium weight steel channels (ISMC series) 100 mm x 50 mm, 1.2 m high above ground, 2 m centre-to-centre, complete as per approved drawings ad MoRTH Specification Clause 809	Rmt	1633.00
10.15	Tubular Steel Railing on Precast RCC posts, 1.2 m high above Ground Level		
	Providing, fencing and erecting 50 mm dia painted steel pipe railing in 3 rows on precast M-20 grade RCC vertical posts 175 mm x 175 mm x 1.8 m high (1.2 m above GI) with 3 holes 50 mm dia for pipe, fixed 2 m centre-to- centre complete as per approved drawings and MoRTH Specification Clause 809.	Rmt	1254.00
10.16	Traffic Cone		
	Provision of red fluorescent with white reflective sleeve traffic cone made of Low Density Polyethylene (LDPE) material with a square base of 390 x 390 x 35 mm and a height of 770 mm, 4 kg in weight, placed at 1.5 m interval, all as per BS:873 and as per MoRTH Specification Clause 813.4	Each	481.00
10.17	Rumble Strips		
	Provision of 15 nos. rumble strips covered with premix bituminous carpet, 15-20 mm high at centre, 250 mm wide placed at 1 m centre-to-centre at approved locations to control speed, marked with white strips of road marking paint as per MoRTH Specification Clause 803	Sqm	

Item No.	Description	Unit	Rates
10.18	Safety Devices and Signs in Construction Zones		
	Provision and fixing of traffic signs for limited period at suitable locations in construction zone comprising of warning zone, approach transition zone, working zone and terminal transition zone with a minimum distance of 2-3 m from the edge of the carriageway. The bottom edge of the lowest sign plate to be not less than 2 m above the road level, fixed on 600 mm x 600 mm x 6 mm angle iron post, founded and installed as per approved design and drawings, removed and disposed of after completion of construction work, all as per IRC:SP:55-2001.	Each	
	a) Diversion one km ahead		
	b) Traffic sign ahead		
	c) Road ahead closed		
	d) Men at work		
	e) Road narrow		
	f) Un-even road		
	g) Slippery road		
	h) Loose chippings		
	i) Diversion		
	j) Do not enter		
	k) Road closed		
	l) Stop		
	m) Slow		
	n) Speed limit		
	Note: <i>The rate for traffic signs are already worked out and given elsewhere in this Chapter. The same may be adopted.</i>		
10.19	Road Markers/Road Stud with Lens Reflector		
	Providing and fixing of road stud 100 x 100 mm die cast in aluminium, resistant to corrosive effect of salt and grit, fitted with lense reflectors, installed in concrete or asphaltic surface by drilling holes 30 mm upto a depth of 600 mm and bedded in a suitable bituminous grout or epoxy mortar, all as per BS:873 (Part 4) 1973.as per MoRTH Specification Clause 804.	Each	104.00
10.20	Marking Centre Line and stop lines etc. on road as per IRC pattern with thermoplastic paint of approved quality and make with 8% glass beads laid on the road surface at temperature 160" C with a special applicator machine complete with a special applicator machine complete with labour material and traffic diversion arrangements.	P.Sqm.	507.00

Item No.	Description	Unit	Rates
10.21	Marking Centre Line and stop lines etc. on road as per IRC pattern with thermoplastic paint of approved quality and make without glass beads laid on the road surface at temperature 160° C with a special applicator machine complete with a special applicator machine complete with labour material and traffic diversion arrangements.	P.Sqm.	485.00
10.22	Providing and fixing Mukhya Mantri Sadak Yojana/ Mahatma Gandhi Rajya Sadak Yojana informatory sign board with logo for roads funded by State road fund having M.S. Definition plate of 1.60 mm thickness frame to steel hollow dsection of 75mm x 75mm, 2.5m long stove enamelled paint with hold fast including paint logo as per approved design and colours. The logo shall be made out of 1.6mm thick circular plate duly framed with MS angle 25x25x5 mm on back and fix on 1200mm x 150mm rectangular steel base plate 1.6mm thick, the base of circular shall be plain at the junction of base plate. The size of definition plate shall be 1500x600mm and embedding the posts by M-15 cement concrete block 45 cm x 45 cm x 60 cm, 60 cm below ground level including lettering / writing and painting etc. complete in all respect.as per MoRTH Specification Clause 801.	Each	7774.00
10.23	Providing and fixing PVC Bump Speed Breakers size 350 mm x 250 mm x 50 mm fitted with key hooks complete with labour material and traffic diversion arrangements.	Rmt	2255.00
10.24	Providing and laying rounded hump type speed breakers for crossing speed 25 km/h as per IRC design including providing and applying bitumen emulsion tack coat, making speed breaker in designed profile with bituminous macadam, providing seal coat type B for sealing the voids and marking chequered pattern with thermoplastic paint complete as per IRC : 99-1988		
	(i) 3.70 meter wide and 10 cm high for general traffic	Rmt	2308.00
	(ii) 5.0 meter wide and 10 cm high for heavy truck and bus traffic	Rmt	2942.00
10.25	Providing and Erecting typical Citizen's information Board as per approved drawing & specification made of two MS sheet of 1.6 mm thick each of size 900mm x 750mm stiffend by angle iron 25mmx25mm x 3mm all around the plate & plates fixed on frame of 75mm dia pipe of 12 SWG sheet (vertical post 3050 mm with angle holdfasts and horizontal member 900mm) to be joined by embedded in cement concrete M-15 grade of block of 600mmx 600mm x 750 mm size below ground level as per enclosed drawings & as directed by Engineering incharge. All MS will be stove anmeled on both side lettering. Figuring and border will be with ready mixed synthetic enamel paint of superior quality in required shade and colour etc complete in all respect. All sections of framed post and steel tube will be painted with primer and two coat of epoxy paint as per drawing and as per Specification.	Each	8451.00

Item No.	Description	Unit	Rates
Chapter 11 - FOUNDATION			
11.1	Excavation for Structures		
	Earthwork in excavation for structures as per drawing and MoRTH specifications Clause 304.1 including setting out, construction of shoring and bracing, removal of stumps and other deleterious material and disposal upto a lead of 50 m, dressing of sides and bottom and backfilling in trenches with excavated suitable material.		
	I. Ordinary soil		
	(i) Upto 3 m depth	Cum	155.00
	(ii) 3 m to 6 m depth	Cum	184.00
	II. Ordinary rock (not requiring blasting)		
	Upto 3 m depth	Cum	195.00
	III. Hard rock (requiring blasting)	Cum	345.00
	IV. Hard rock (blasting prohibited)	Cum	348.00
	V. Marshy soil	Cum	290.00
11.2	Fillling in foundation trenches as per drawing and MoRTH specification Clause 304.3.7		
	I. Sand filling	Cum	820.00
	II. Earth filling (For marshy soil)	Cum	103.00
11.3	Fillling annular space around footing in rock as per MoRTH specification Clause 2104.3		
	P.C.C grade M 15		
	Nominal mix 1:2.5:5	Cum	3865.00
11.4	Providing concrete for plain/reinforced concrete in open foundations complete as per drawings and MoRTH specifications Clause 1702, 1703, 2102 & 2104		
	I. P.C.C grade M 10		
	(i) Nominal mix 1:3:6	Cum	2816.00
	(ii) Nominal mix 1:3.6 (Hand mixing)	Cum	2776.00
	II. P.C.C grade M 15		
	(i) Nominal mix (1:2.5:5)	Cum	3038.00
	(ii) Nominal mix 1:2.5:5 (Hand mixing)	Cum	2999.00

Item No.	Description		Unit	Rates
	III.	P.C.C. grade M 20		
	(i)	Nominal mix (1:2:4)	Cum	3212.00
	(ii)	Nominal mix 1:2:4 (Hand mixed)	Cum	3172.00
	IV.	R.C.C grade M 20	Cum	3271.00
	V.	R.C.C. grade M 25	Cum	3569.00
11.5	Brick masonry work in cement mortar in foundation complete excluding pointing and plastering as per drawing and MoRTH specifications Clauses 1300, 2102 & 2104			
	I.	Brick masonry in 1:3 cement mortar	Cum	3540.00
	II.	Brick masonry in 1:4 cement mortar	Cum	3290.00
	III.	Brick masonry in cement-lime-mortar (1:0.5:4.5)	Cum	3560.00
11.6	Stone masonry work in cement mortar in foundation complete as per drawing and MoRTH specifications Clauses 1402, 1405, 2102 & 2104.			
	I.	Coursed rubble masonry (1st sort)		
	(i)	In 1:3 cement mortar	Cum	3695.00
	(ii)	In 1:4 cement mortar	Cum	3340.00
	(iii)	In cement-lime-sand mortar (1:0.5:4.5)	Cum	3705.00
	II.	Coursed rubble masonry (2nd sort)		
	(i)	In 1:3 cement mortar	Cum	3291.00
	(ii)	In 1:4 cement mortar	Cum	2522.00
	(iii)	In cement-lime-mortar (1:0.5:4.5)	Cum	2906.00
	III.	Random Rubble Masonry		
	(i)	In 1:3 cement mortar	Cum	3115.00
	(ii)	In 1:4 cement mortar	Cum	2735.00
	(iii)	In 1:6 cement mortar	Cum	2268.00
	(iv)	In cement lime mortar (1:0.5:4.5)	Cum	3320.00
11.7	Supplying, fitting and placing HYSD bar reinforcement in foundation complete as per drawings and MoRTH specifications Clauses 1009,1600 and 2102		Tonne	53007.00
11.8	Supplying, fitting and placing TMT bar reinforcement in foundation complete as per drawings and MoRTH specifications Clauses 1009,1600 and 2102		Tonne	54132.00
11.9	Supplying, fitting and placing MS bar reinforcement in foundation complete as per drawings and MoRTH specifications Clauses 1009,1600 and 2102		Tonne	51883.00

Item No.	Description	Unit	Rates
Chapter 12 - SUBSTRUCTURE			
12.1	Brick masonry work in cement mortar in substructure complete excepting pointing and plastering, as per drawing and MoRTH specification Clauses 1300 & 2200		
	I. In 1:3 cement mortar	Cum	3880.00
	II. In 1:4 Cement mortar	Cum	3590.00
	III. In 1:5 cement mortar	Cum	3060.00
	IV. In cement lime mortar (1:0.5:4.5)	Cum	3920.00
12.2	Pointing with cement mortar (1:3) on Stone work as per drawing and MoRTH specification Clauses 1406 and 2200	Sqm	73.00
12.2 A	Plastering with cement mortar (1:4), 20 mm thick on Stone work.	Sqm	126.00
12.3	Plastering with cement mortar (1:4), 15 mm thick on brickwork in substructure as per MoRTH specification Clauses 1312.4 & 2200	Sqm	120.00
12.4	Stone masonry in cement mortar for substructure complete as per drawing & MoRTH specification Clauses 1402, 1405 & 2200		
	I. Coursed rubble masonry (1st sort)		
	(i) In 1:3 cement mortar	Cum	3837.00
	(ii) In 1:4 cement mortar	Cum	3652.00
	(iii) In 1:5 cement mortar	Cum	3214.00
	(iv) In cement lime mortar (1:0.5:4.5)	Cum	4019.00
	II. Coursed Rubble masonry (2nd sort)		
	(i) In 1:3 cement mortar	Cum	3455.00
	(ii) In 1:4 cement mortar	Cum	3252.00
	(iii) In 1:5 cement mortar	Cum	3143.00
	(iv) In cement lime mortar (1:0.5:4.5)	Cum	3656.00
	III. Random rubble masonry		
	(i) In 1:3 cement mortar	Cum	3286.00
	(ii) In 1:4 cement mortar	Cum	2990.00
	(iii) In 1:5 cement mortar	Cum	2780.00
	(iv) In cement lime mortar (1:0.5:4.5)	Cum	3435.00

Item No.	Description	Unit	Rates
12.5	Plain/reinforced cement concrete in substructure complete as per drawings and MoRTH specification Clauses 1700 and 2200		
	For height upto 5 m		
	I. P.C.C grade M 15		
	(i) Nominal mix (1:2.5:5)	Cum	3214.00
	(ii) Nominal mix 1:2.5:5 (Hand mixing)	Cum	3171.00
	II. P.C.C. grade M 20		
	(i) Nominal mix (1:2:4)	Cum	3397.00
	(ii) Nominal mix 1:2:4 (Hand mixed)	Cum	3355.00
	III. R.C.C grade M 20	Cum	3460.00
	IV. R.C.C. grade M 25	Cum	3784.00
12.6	Supplying, fitting and placing HYSD bar reinforcement (Fe 415) in substructure complete as per drawings and MoRTH specification Clauses 1009,1600 & 2202	Tonne	53100.00
12.7	Supplying, fitting and placing TMT bar reinforcement (Fe 415) in substructure complete as per drawings and MoRTH specification Clauses 1009,1600 & 2202	Tonne	54224.00
12.8	Supplying, fitting and placing with MS bar reinforcement (Fe 415) in substructure complete as per drawings and MoRTH specification Clauses 1009,1600 & 2202	Tonne	51975.00
12.9	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 100 mm dia AC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing and MoRTH specification Clauses 1409, 2204.4, 2206.4 & 2706	Each.	66.00
12.10	Backfilling behind abutment, wing wall and return wall complete as per drawings & MoRTH specification Clause 304.3.7 & 2204.6		
	I) Granular material	Cum	430.00
	II) Sandy material	Cum	1000.00
12.11	Providing and laying filter media with granular crushed aggregates as per specification to a thickness of not less than 600 mm with smaller size towards the soil and bigger size towards the wall and providing over the entire surface behind abutment, wing wall, return wall to the full height, compacted to firm condition complete as per drawing and MoRTH specification Clause 2204.6 & 2504.2.2	Cum	655.00

Item No.	Description	Unit	Rates
12.12	Supplying, fitting and fixing in position true to line and level elastomeric bearing conforming to IRC:83 (Part-II) Section IX complete, including all accessories as per drawings and MoRTH specification Clause 2005	Cucm	0.90
12.13	Providing PCC M-20 architectural coping on the top of wing wall, return wall etc. complete as per drawing and MoRTH specification Clauses 1313, 1411 and 2206.6		
	(A) 150 mm thick	Sqm	602.00
	(B) 75 mm thick	Sqm	306.00
	(C) 50 mm thick	Sqm	204.00
12.14	Providing pressure relief pipes 100 mm dia in bottom slab of box cell on a filter media base of 500 mm x 500 mm as per drawing and MoRTH specification Clause 2705	Each.	280.00

Item No.	Description	Unit	Rates
Chapter 13 - SUPERSTRUCTURE			
13.1	Providing and laying reinforced cement concrete in superstructure as per drawing and MoRTH specifications Clauses 1700, 2302 and 2304		
	I. R.C.C grade M 20		
	(i) For nominal mix 1:2:4	Cum	3775.00
	(ii) For nominal mix 1:2:4 (Hand mixed)	Cum	3693.00
	(iii) For design mix RCC M 20	Cum	3775.00
	II. R.C.C Grade M 25	Cum	4056.00
	III. R.C.C. Grade M 30	Cum	4548.00
13.2	Supplying, fitting, and placing HYSD bar reinforcement in superstructure complete as per drawing and MoRTH specifications Clauses 1009,1600 and 2302	Tonne	53881.00
13.3	Supplying, fitting, and placing TMT bar reinforcement in superstructure complete as per drawing and MoRTH specifications Clauses 1009,1600 and 2302	Tonne	55006.00
13.4	Supplying, fitting, and placing MS bar reinforcement in superstructure complete as per drawing and MoRTH specifications Clauses 1009,1600 and 2302	Tonne	52757.00
13.5	Providing and laying cement concrete wearing course M 30 grade including reinforcement complete as per drawing and MoRTH specifications Clauses 1700 and 2702.2	Cum	8209.00
13.6	Construction of R.C.C. railing of M 25 grade in cast-in-situ with 20 mm nominal size aggregate, true to line and grade, tolerance of vertical railing post not to exceed 1 in 500, centre-to-centre spacing between vertical posts not to exceed 2000 mm as per drawing and MoRTH specifications Clauses 1700, 1500 and 2703.3	Rmt	1965.00
13.7	Providing fitting and fixing mild steel railing complete as per drawing and MoRTH specifications Clause 2703.2	Rmt	2496.00
13.8	Providing and fixing in position pipe railing consisting of IS Rolled steel joist posts designation IS MB 100 (100x75) at 2.5 m interval and three rows of 50 mm dia steel pipes (light) including fixing in position on bridge deck complete as per drawing and MoRTH specifications Clause 2703.2	Rmt	1446.00
13.9	Brick masonry work in cement mortar 1:3 in parapet excluding pointing and plastering as per drawing and MoRTH specifications Clauses 1300, 1500	Cum	3880.00
13.10	Drainage spouts complete as per drawing and MoRTH specifications Clause 2705	Each.	942.00

Item No.	Description	Unit	Rates
13.11	P.C.C. M 15 ordinary grade (1:2.5:5) levelling course below approach slab complete as per drawing and MoRTH specifications Clauses 1700 and 2704		
	(i) Nominal mix (1:2.5:5)	Cum	3020.00
	(ii) Nominal mix 1:2.5:5 (Hand mixing)	Cum	2982.00
13.12	Reinforced Cement Concrete M 25 grade approach slab including reinforcement and formwork complete as per drawing and MoRTH specifications Clauses 1700 and 2704	Cum	7080.00
13.13	Providing and laying of an elastomeric slab seal expansion joint complete as per approved drawing and approved specifications to be installed by manufacturer/supplier or their authorised representative ensuring compliance to the manufacturer's instructions for installation and as per MoRTH specifications Clause 2605 & 2610	Rmt	16732.00
13.14	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 formed into the joint gap with special adhesive binder as per drawing, and MoRTH specifications Clause 2609 & 2610	Rmt	3099.00
13.15	Providing and laying a buried expansion joint, 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, as per specifications.	Rmt	1493.00
13.16	Filler Joint		
	I) Providing and fixing 2 mm thick corrugated copper plate in expansion joint as per drawing and MoRTH specifications Clause 2604	Rmt	3340.00
	II) Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing and MoRTH specifications Clause 2604	Rmt Per Cm Depth	11.00
	III) Providing and fixing in position 20 mm thick premoulded joint filler in expansion joint for fixed ends of simply supported spans, covered with sealant complete as per drawing and MoRTH specifications Clause 2604	Rmt Per Cm Depth	12.00
	IV) Providing and filling joint sealing compound as per drawings and MoRTH specifications with coarse sand and 6 per cent bitumen by weight Clause 2604	Rmt	22.00

Item No.	Description	Unit	Rates
13.17	Stone masonry in cement mortar 1:3 for parapet complete as per drawing and MoRTH specifications Clauses 1400		
	I. Random rubble masonry	Cum	3286.00
	II. Coursed rubble masonry (1st sort)	Cum	3837.00
13.18	Pointing with cement mortar (1:3) on brickwork in parapet as per MoRTH specifications Clauses 1312.3	Sqm	73.00
13.19	Plastering with cement mortar (1:3) 15 mm thick on brickwork in parapet as per MoRTH specifications Clauses 1312.4	Sqm	120.00
13.20	Providing and laying parapet with PCC M 15 as per drawing & MoRTH specifications Clauses 1700 & 2300		
	I. Nominal mix 1:2.5:5 (Hand mixing)	Cum	3280.00
	II. Nominal mix (1:2.5:5)	Cum	3322.00
13.21	Providing bituminous wearing coat comprising of 20 mm thick premix carpet with 5 mm thick seal coat Type B for culverts as per drawing and MoRTH specifications Clauses 2702.1 and 500		
	i. Rate for wearing coat as per item No. 5.9 of Chapter 5	Sqm	
	ii. Rate for seal coat Type B as per item No. 5.12 of Chapter 5	Sqm	
13.22	Providing bituminous wearing coat comprising of 50 mm thick bituminous macadam overlaid by 20 mm thick premix carpet with 5 mm thick seal coat Type B as per drawing and MoRTH specifications Clauses 2702.1 and 500		
	i. Rate for BM layer may be analysed as per item No 5.3 of Chapter 5	Cum	
	ii. Rate of 20 mm premix carpet wearing course as per item No.5.9 of Chapter 5	Sqm	
	iii. Rate of seal coat Type B as per item No. 5.12 of Chapter 5	Sqm	
13.23	Brickwork in arches in cement mortar 1:4 complete including centering and shuttering excluding pointing and plastering as per drawing and MoRTH specifications Clauses 1300 & 1500	Cum	8400.00
13.24	Coursed rubble stone masonry arch (1st sort) in cement mortar (1:4) complete including centering etc. complete as per drawing and MoRTH specifications Clauses 1405.1.4 and 1500	Cum	8223.00

Item No.	Description	Unit	Rates
13.25	Providing & Laying reinforced cement concrete arch complete including centering and shuttering excluding reinforcement as per drawings and MoRTH specifications Clauses 1700, 1500 and 2300		
	I. RCC grade M20 (1:2.4) nominal mix	Cum	5288.00
	II. RCC Grade M 25	Cum	5654.00
13.26	Providing steel R.S.Js/built-up steel sections including cutting, welding/rivetting, hoisting, fixing in position for composite girders with shear connectors complete with painting as per drawing and MoRTH specifications Clause 1900		
	A) Steel section	Quintal	6188.00

Item No.	Description	Unit	Rates
Chapter 14 - PROTECTION WORKS			
14.1	Providing and laying boulder apron for bed protection with stone boulders of minimum size and weight as per Clause 5.3.7.2 of IRC:89, no fragment weighing less than 25 kg laid dry complete as per drawing and MoRTH specifications Clause 2503.2	Cum	695.00
14.2	Providing and laying of boulder apron laid in wire crates with 4 mm dia GI wire conforming to IS:280 and IS:4826 in 100 mm x 100 mm mesh (woven diagonally) including 10 per cent extra for laps and joints laid with stone boulders weighing not less than 25 kg each as per drawing and MoRTH specifications Clause 2503.3	Cum	1626.00
14.3	Providing and laying of apron with cement concrete blocks of size as per Clause 5.3.7.2 of IRC:89, cast-in-situ and made with nominal mix of M-15 grade cement concrete as per drawing and MoRTH specifications Clause 1700 & 2505	Cum	3204.00
14.4	Single bamboo palasiding / walling of whole 2nd class bamboo (Jati or Bethua) 75mm dia and closely packed & driven including fitting fixing with half bamboo kamis horizontally in three rows with cane or tying with wire complete and struts 1.5 m apart longitudinally and providing brush wood as per drawing and Clause 6 of IRC:89		
	A) Driven at least 900 mm below ground and 1200 mm above ground	Rmt	647.00
	B) Driven at least 900 mm below ground and 900 mm above ground on average	Rmt	557.00
14.5	Providing and laying pitching on slopes laid over prepared filter media as per drawing and MoRTH specifications Clause 2504.2.1		
	I. Stone/Boulder	Cum	695.00
	II. Cement concrete blocks of size as per Table 1700.6 cast in cement concrete of grade M 15		
	a) Concrete grade M 15	Cum	3204.00
	III. Brick pitching set in cement mortar 1:4	Cum	3435.00
14.6	Providing and laying filter material underneath pitching in slopes complete as per drawing and MoRTH specifications Clause 2504.2.2	Cum	638.00
14.7	Providing and laying flooring laid over cement concrete bedding complete as per drawing and MoRTH specification Clause 2505		
	I. Rubble stone laid in cement mortar 1:3	Cum	2823.00
	II. Cement concrete blocks grade M 15	Cum	3172.00
	III. Brick on edge laid in cement mortar (1:3)	Cum	4090.00

Item No.	Description	Unit	Rates
14.8	Providing and laying of dry rubble flooring complete as per drawings and MoRTH specifications Clause 2506	Cum	1325.00
14.9	Providing and laying curtain walls complete as per drawing and MoRTH specification Clause 2507		
	I. Brick masonry in cement mortar (1:4)	Cum	3520.00
	II. Coursed rubble masonry (2nd sort) in cement mortar (1:4)	Cum	3252.00
	III. Cement concrete grade M 10	Cum	3160.00
14.10	Construction of flexible apron 1 m thick comprising of loose stone boulders weighing not less than 25 kg beyond curtain wall	Cum	705.00
14.11	Construction of toe walls for protection of slopes as per drawing and MoRTH specifications Clause 2507.1		
	I. Random rubble masonry in case of stone pitching laid with cement mortar (1:5)	Cum	2765.00
	II. Brick masonry in cement mortar 1:4 in case of brick pitching	Cum	3375.00
	III. Cement concrete grade M 10 in case of concrete block pitching	Cum	3160.00

Item No.	Description	Unit	Rates
Chapter 15 - MAINTENANCE OF ROADS			
15.1	Restoration of Rain Cuts		
	i) Restoration of rain cuts with soil, moorum gravel or a mixture of these, clearing the loose soil, benching for 300mm width laying fresh material in layers not exceeding 250 mm and compaction with plate compactor or power rammer to restore the original alignment, level and slopes as per drawings and MoRTH specifications Clause 3002		
	A. Manual Means	Cum	150.00
	B. Mechanical Means	Cum	111.00
15.2	1. Maintenance of Earthen shoulder (filling with fresh selected soil)		
	Making up loss of material/irregularities on shoulders to the design level by adding fresh approved selected soil and compacting it with appropriate equipment at OMC upto a lead of 1000 m as per MoRTH specification Clause 3003	Sqm	21.00
	2. Maintenance of Earhen shoulder (stripping of excess soil)		
	Stripping excess soil from the shoulder surface to achieve the approved level and compacting with plate compactor at OMC as per drawings and MoRTH Specification Clause 3003	Sqm	7.50
15.3	Maintenace of bituminous surface road		
	i. Repair to pot holes by removal of failed material, trimming the sides to vertical and levelling the bottom, cleaning the same with compressed air or any appropriate method filled with 75mm B.M, applying bitumen emulsion prime coat at the bottom and bitumen emulsion tack coat on sides and on bottom as per MoRTH specifications Clauses 3004.2	Cum	4700.00
		MT	2136.00
	ii. Patch repair on already filled pot holes with 75 mm BM with 20 mm premix carpet and seal coat Type B as per drawings and MoRTH specification Clause 3004.2	Sqm	141.00
	iii. Repair to pot holes and removal of loose material, trimming of sides, cleaning of surface by providing tack coat, 20 mm thick pre-mix carpet and seal coat type B as per MoRTH specification Clause 3004.2	Sqm	156.00
	iv. Repair to pot holes and removal of loose material, trimming of sides, cleaning of surface by providing tack coat with bitumen emulsion, 20 mm thick pre-mix carpet using catonic bitumen emulsion and seal coat type B with bitumen emulsion as per MoRTH specification Clause 3004.2	Sqm	159.00

Item No.	Description	Unit	Rates
	vi. Repair to pot holes and removal of loose material, trimming of sides, cleaning of surface by providing tack coat, 13mm thick pre-mix carpet and seal coat type B as per MoRTH specification Clause 3004.2	Sqm	124.00
15.4	Maintenance of Gravel Road		
	Maintenance of gravel road including making up the loss of profile, rectifying corrugated surface, filling up of depressions, pot holes and erosion gullies by adding fresh material and compacting it with appropriate equipment or to strip excess of material from the road surface as per drawings and MoRTH specification Clause 401	Sqm	121.00
15.5	Maintenance of WBM Road		
	Maintenance of WBM road including filling up of pot holes, ruts and rectifying corrugated surface, damaged edges and ravelling as per MoRTH specification Clause 404	Sqm	115.00
15.6	Maintenance of Drains		
	The maintenance of drains include erosion, repair, clearing, cleaning, reshaping, regrading, deepening of side drains as well as catch water drains as per MoRTH specification Clause 201 & 2800.	m	1.25
15.7	(I) Maintenance of Culverts		
	Maintenance of Hume pipe Culvert by way of Clearing, Cleaning, Erosion repair, repairs to cracks, parapet wall and protection work as per drawing and MoRTH specification Clause 201 & 2800	One Each. Hume Pipe	950.00
	(II) Maintenance of Culverts Slab type		
	Maintenance of Slab type Culverts by way of clearing, Cleaning, Erosion repair, repairs to cracks, parapet walls and Protection works as per drawing and MoRTH specification Clause 201 & 2800	Culvert	1812.00
15.8	Maintenance of Causeway		
	Maintenance of Causeway by way of minor Surface repairs, replacing Guide Posts, repair of flood gauges, removal of debris, providing boulders and protection work and painting as per MoRTH specification Clause 201 & 2800	Rmt	50.00
15.9	Maintenance of Road Signs		
	Maintenance of road signs by way of cleaning and repainting of mandatory / regulatory / cautionary / informatory and place identifications sign board as per drawings and MoRTH specification Clause 800 & 3000	Km	934.00

Item No.	Description	Unit	Rates
15.10	Maintenance of steel and RCC Railing		
	(i) Repair of steel railing to bring it to original shape cleaning and repainting as per drawing and MoRTH specification Clause 1900		
	Steel Railing	Rmt	231.00
	(ii) Repair of RCC railing to bring it to the original shape, cleaning and repainting as per drawings and MoRTH specification Clause 2800		
	RCC Railing	Rmt	1261.00
15.11	Maintenance of 200 metre and km stones		
	Maintenance of 200 metre km stone by way of refiting of tilted stones repairing with cement mortar, cleaning, repairing and lettering on 200 metre km stone and 5th km stone as per drawing and MoRTH specification Clause 1900 and 2800.		
	(i) Painting two coats with synthetic enamel paint	Km	135.00
	(ii) Printing letters and figures of any shade with synthtic enamel paint of any approved colour to give an even shade	Km	608.00
15.12	Cutting of branches of trees shrubs and trimming of grass and weeds		
	(i) Cutting of branches of trees and shrubs from the road way or with in R.O.W including disposal of wood and leaves to suitable location as per MoRTH specification Clause 201	One Tree	58.00
	(ii) Cutting of shrubs from the road way or with in R.O.W and disposal of shrubs to suitable locations as per MoRTH specifications Clause 201	Each	3.00
	(iii) Trimming of grass and weeds from the shoulders/berms and disposing off the same to suitable locations as per MoRTH specifications Clause 201	Sqm	1.00
15.13	White washing of parapet walls of CD work and tree trunkcs		
	White washing two coats on parapet walls and tree trunks including preparation of surface by cleaning scraping etc. as per MoRTH specifications Clause 800	Sqm	10.00
15.14	Periodical Renewal to existing bituminous surface		
	1 Open graded Premix carpet 20 mm thick		
	(i) Tack coat		
	Rates as per item 5.2 (ii)	Sqm	
	(ii) Pre-mix carpet using bituminous (penetration grade modified bitumen) binder		
	Rates as per item No. 5.9	Sqm	

Item No.	Description			Unit	Rates
			OR		
	(iii)	Premix carpet using bitumen Emulsion			
		Rates as per item No. 5.10		Sqm	
	(iv)	Seal coat Type A, B or C			
		Rates as per item No. 5.11		Sqm	
	2	Surface dressing single coat/first coat or 2nd coat			
		Rates as per item No. 5.6		Sqm	
15.15	Maintenance of Road Furnitures				
	Painting two coats with superior grade synthetic enamel paint of approved quality to give an even shade including writing lettering and figures with synthetic enamel paint as per IRC specifications.				
	(i)	5th Kilometre Stone		Each	180.00
	(ii)	Ordinary Kilometre Stone		Each	142.00
	(iii)	Hectometer and Boundry Stone		Sqm	34.00
	(iv)	Guide Stone, Guard Stone, Tree Guards and Posts		Each	142.00
	(v)	Water Gauges		Each	142.00
	(vi)	Number of Bridge & Culverts		Each	59.00
	(vii)	Traffic Sign Boards (cautionary, mandatory & informatory)		Each	122.00
	(viii)	Direction & Place Identification sign boards including painting of posts.		Sqm	215.00

Chapter 16 - Additional Items

Item No.	Description	Unit	Rates
16.1	Removal of blown sand including taking out and disposal of excavated material with lead up to 50Mtr. and lift up to 1.5 Mtr disposed soil to be levelled and neatly dressed.	P.Cum	10.00
16.2	Dagbelling.		
16.2.1	100 mm x 100mm size	P.100 Mtr	58.00
16.2.2	200 mm x 100 mm size	P.100 Mtr	73.00
16.3	Dressing of berms including digging of earth upto 10 cm depth.	P.Cum.	13.00
16.4	Labour charges for digging out of sludge humps on black topped surface including removal and disposing of the dismantled material aside up to 50 M lead.	P.Sqm	28.00
16.5	Cutting of black top surface upto 30 mm depth for fixing of kerb / dand stone / medians including cleaning of surface laying bed mortar and removal of dismantled material with all lead and traffic diversion arrangements etc.	P.Sqm	20.00
16.6	Scarifying old bituminous road by making 50x50mm furrows criss-cross at 1.0 metre intervals at 45 degree to the center line of the carriageway	P.Sqm	1.70
16.7	Cutting black top surface upto 1.5 M depth including all layers of crust for laying pipe line etc. and making good to original condition (excluding cost of bitumen)	P.Sqm	500.00
16.8	Supplying, filling and stitching of empty cement bags either of plastic or jute with earth available at site, of weight not less than 40 Kg., including excavation etc. complete.	P. Bag	8.60
16.9	Labour charges for making cofferdam by loading, transporting earth-filled cement bags, dropping at required location in water including transportation by boat (if required) complete, excluding cost of empty cement bags.		
16.9.1	with lead upto 50 Mtr.	P. Bag	2.20
16.9.2	with lead 50 mtr to 100 Mtr.	P. Bag	4.40
16.9.3	with lead 100 mtr to 150 Mtr.	P. Bag	4.40
16.9.4	with lead 150 mtr to 200 Mtr.	P. Bag	6.00
16.10	Compacting soil at optimum moisture content with power road roller including watering soil at O.M.C., charges of T & P, cost of water and finishing of formation to required camber and grade etc. complete in layers not exceeding 15 cm. compacted thickness of :		
16.10.1	95% proctor density.	P. Cum	13.50
16.10.2	97% proctor density.	P. Cum	13.50
16.10.3	100% proctor density.	P. Cum	14.50

Item No.	Description	Unit	Rates
16.11	Supply of graded broken hard stone aggregates free from Katcha stuff, deleterious and organic matter, as per IRC/MoRTH Specifications, including stacking as per the Standard Specifications with an average lead of 20 Kms.		
16.11.1	63mm to 45mm Crusher broken	P. Cum	555.00
16.11.2	53mm to 22.4mm Crusher broken	P. Cum	605.00
16.11.3	13.2mm/11.2mm Crusher broken	P. Cum	675.00
16.11.4	6.7mm Crusher broken	P. Cum	615.00
16.11.5	13.2mm Crusher-broken screening (IRC Grade 'A')	P. Cum	519.00
16.11.6	11.2mm Crusher broken Screening (IRC Grade 'B')	P. Cum	462.00
16.12	Collection of binding material/mooram for W.B.M. course (P.I. 4 to 6), including stacking as per Standard Specifications	P. Cum	67.00
16.13	Collection of quarry rubbish (P.I. less than 6), grading as per MoRTH specification's Table 400-1, including stacking as per the Standard Specifications with an average lead of 20 Kms.	P. Cum	67.00
16.14	Supply of Bitumen/Emulsion (bulk) at Hot Mix Plant / Work Site including kind of all taxes with all leads from refinery		
16.14.1	Bitumen Grade VG-10	P.MT	30623.00
16.14.2	Bitumen Grade VG-30	P.MT	31683.00
16.14.3	Modified Bitumen Grade CRMB-60	P.MT	36948.00
16.14.4	Bitumen Cationic Emulsion (RS-1)	P.MT	25482.00
16.14.5	Bitumen Cationic Emulsion (SS-1)	P.MT	24974.00
16.15	Supply of Bitumen/Emulsion (packed in suitable size of drums) at Hot Mix Plant / Work Site including kind of all taxes with all leads from refinery		
16.15.1	Bitumen Grade (VG-10)	P.MT	35764.00
16.15.2	Bitumen Grade (VG-30)	P.MT	36813.00
16.15.3	Modified Bitumen Grade CRMB-60	P.MT	38955.00
16.15.4	Bitumen Cationic Emulsion (RS-1)	P.MT	31728.00
16.15.5	Bitumen Cationic Emulsion (SS-1)	P.MT	33205.00
16.16	Providing and laying dense graded bituminous macadam with 100-120 TPH batch type HMP producing an average output of 75 tones per hour using crushed aggregates of specified grading, premixed with bituminous binder @ 4.0 to 4.5 per cent by weight of total mix and filler, transporting the hot mix to work site, laying with a hydrostatic paver finisher with sensor control to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MoRTH Specifications Clause 505 complete in all respects.		
16.16.1	Grading - I (40 mm (Nominal Size))	P. Cum	5291.00
		P. MT	2293.00
16.16.2	Grading - II (19 mm (Nominal Size))	P. Cum	5343.00
		P. MT	2315.00

Item No.	Description	Unit	Rates
16.17	Providing and laying bituminous concrete with 100-120 TPH batch type hot mix plant producing an average output of 75 tonnes per hour using crushed aggregates of specified grading, premixed with bituminous binder @ 5.4 to 5.6 per cent of mix and filler, transporting the hot mix to work site, laying with a hydrostatic paver finisher with sensor control to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MoRTH Specifications Clause 507 complete in all respects		
16.17.1	for Grading-I(19 mm nominal size) Bitumen (VG-10)	P.Cum	6067.00
		P. MT	2575.00
16.17.2	for Grading-I (19 mm nominal size) Bitumen (VG-30)	P.Cum	6204.00
		P. MT	2633.00
16.17.3	for Grading-I(19mm nominal size) Bitumen CRMB 60	P.Cum	6885.00
		P. MT	2922.00
16.17.4	for Grading-II(13 mm nominal size) Bitumen (VG-10)	P.Cum	6043.00
		P. MT	2565.00
16.17.5	for Grading-II(13 mm nominal size) Bitumen (VG-30)	P.Cum	6180.00
		P. MT	2623.00
16.17.6	for Grading-II(13 mm nominal size) Bitumen CRMB 60	P.Cum	6861.00
		P. MT	2912.00
16.18	Labour charges for patching W.B.M. using crushed / broken aggregates including preparation of pot hole scarifying & reshaping to the required grade and camber as per the standard specifications, spreading of material consolidation with mechanical drop hammer of 11.40 kg hand rammer or 8-10 tone power roller, spreading and consolidation of binding material including cost of fuel & lubricants and hire charges of T&P.	P. Cum.	188.00

Item No.	Description	Unit	Rates
16.19	Providing and laying 25 mm thick Mastic Asphalt wearing course 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 anti-skid surface with bitumen precoated fine grained hard stone chipping of 13.2 mm nominal size at the rate of 0.005 cum 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 is not less than 100 C protruding 1 mm to 4 mm over mastic surface, all complete as per Clause 516.	P.Sqm.	364.00
16.20	Providing & laying penetration macadam patching upto 5 cm. depth (semi grout) with 0.60 Cum. Of coarse aggregate (Crusher broken) & 0.15 Cum of key aggregate (as per MoRTH specification) & spreading of binder, cleaning area of patch, pot holes, cut of regular shape with vertical side, removing all loose & disintegrated material, spreading & compacting of aggregate with 8-10 tonne power road roller including cost of aggregate, fuel, lubrication, hire charges machinery, T & P, including cost of bitumen with application of tack coat.	P.Sqm.	220.00
16.21	Labour charges for premix patch work using mixed material from the hot mix plant, including cleaning of patch/pot holes area, cutting it to regular shape vertical edges, removing all loose and disintegrated material, application of tack coat as per specifications laying of patching material and compacting with power roller including cost of fuel, hire charges of T & P etc. complete.		
16.21.1	Using Straight run bitumen	P.Sqm.	19.00
16.21.2	Using cationic emulsion.	P.Sqm.	17.00
16.22	Supply at plant site Close-graded premix surfacing material for patch work with specified graded crushed aggregate as per Table No. 500-19 of MoRTH specification clause 508.2.4 premixed with (VG-10) bitumen binder 5% in Hot Mix Plant (30-40tonne) including cost of aggregate, binder and machines with fuel etc.	P.MT.	2382.00
16.23	Carriage of mix material from Plant Site to Work Site for patch repairing work including staying of tipper at site up to completion of patch repair work upto 1 km.	P.MT.	148.00
16.24	Extra rate for carriage of mixed material beyond 1st Km.		

Item No.	Description	Unit	Rates
16.24.1	2nd Km to 10th Km	P.MT./Km	3.50
16.24.2	11th Km to 20th Km	P.MT./Km	3.40
16.24.3	Beyond 20th Km	P.MT./Km	2.90
16.25	Providing & laying surface dressing patching using stone chipping 0.10 cum per 10 sqm and bitumen 10 kg per 10 sqm including heating of binder, cleaning the area of patch, potholes cuts to regular shape with vertical sides, removing all loose & disintegrated material, application of binder, covering the same with stone chippings and compacting with 8-10 tonne power road roller including cost of fuel, binder, hire charges of T&P etc.	P.Sqm.	63.00
16.26	Providing and laying Built up spray grout (BUSG) patching 75mm thick in two layers (Each layer consisting of spreading aggregate - crusher broken @ 0.50 cum per 10 sqm area as per MoRTH specification, laying first layer after application of tack coat @ 3.75 kg per 10 sqm including cost of tack coat, rolling with 8-10 tonne power road roller, application of first spray of binder @ 15 kg per 10 sqm, spreading & rolling of second layer of coarse aggregate with 8-10 tonne power road roller, application of second spray of binder @ 15 kg per 10 sqm and laying key aggregate on the top of second layer and rolling with 8-10 tonne power road roller including heating and spraying of binder, cleaning the area of patch, potholes cut to regular shape with vertical sides, removing all loose and disintegrated material including cost of coarse aggregate, key aggregate, rolling & hire charges of machinery, T&P, cost of fuel, bitumen etc. complete.	P.Sqm.	241.00
16.27	Providing and laying of cold pot hole patching mix for repair of road in adverse climate condition on the prepared surface, cleaning with hydraulic broom as per specification including laying in proper camber & grade with regular size, compaction with hand rammer/ road roller and transportation with all lead and lift complete in all respect as per direction of engineer - in - charge.	P.Sqm.	793.00
		P.Kg.	20.00
16.28	Supply of cold pot hole patching mix for repair of road in adverse climate condition transportation with all lead and lift complete in all respect as per direction of engineer - in - charge.	P.Kg.	17.00

Item No.	Description	Unit	Rates
16.29	Labour charges for laying of cold pot hole patching mix for repair of road in adverse climate condition on the prepared surface, cleaning with hydraulic broom as per specification including laying in proper camber & grade with regular size, compaction with hand rammer/ road roller and transportation with all lead and lift complete in all respect as per direction of engineer - in - charge.	P.Kg.	2.80
16.30	Construction of speed breaker of IRC standard having width of 3.70 M including cost of stone aggregate (50-25mm) size hire charges for roller for consolidation and compaction and other machines required for the work (including cost of bitumen)	P.Sqm.	169.00
16.31	Construction of un-reinforced, dowel jointed at expansion and construction joint only, plain cement concrete pavement, thickness as per design, over a prepared sub base, with 53 grade cement or any other type as per Clause 602.2.2 M-35 (Grade), coarse and fine aggregates conforming to IS:383, maximum size of coarse aggregate not exceeding 25 mm, mixed in a concrete mixer of not less than 0.2 cum capacity and appropriate weigh batcher using approved mix design, laid in approved fixed side formwork (steel channel, laying and fixing of 125 micron thick polythene film, wedges, steel plates including levelling the formwork as per drawing), spreading the concrete with shovels, rakes, compacted using needle, screed and plate vibrators and finished in continuous operation including provision of contraction and expansion, construction joints, applying debonding strips, primer, sealant, dowel bars, near approaches to bridge/culvert and construction joints, admixtures as approved, curing of concrete slabs for 14-days,		
	using curing compound and water finishing to lines and grade as per drawing and MoRTH Specification Clause 602 including vaccum dewatering process with all required equipments	P.Cum	5856.00

Item No.	Description	Unit	Rates
16.32	Construction of un-reinforced, dowel jointed at expansion and construction joint only, plain cement concrete pavement, thickness as per design, over a prepared sub base, with 53 grade cement or any other type as per Clause 602.2.2 M-40 (Grade), coarse and fine aggregates conforming to IS:383, maximum size of coarse aggregate not exceeding 25 mm, mixed in a concrete mixer of not less than 0.2 cum capacity and appropriate weigh batcher using approved mix design, laid in approved fixed side formwork (steel channel, laying and fixing of 125 micron thick polythene film, wedges, steel plates including levelling the formwork as per drawing), spreading the concrete with shovels, rakes, compacted using needle, screed and plate vibrators and finished in continuous operation including provision of contraction and expansion, construction joints, applying debonding strips, primer, sealant, dowel bars, near approaches to bridge/culvert and construction joints, admixtures as approved, curing of concrete slabs for 14-days,		
	using curing compound and water finishing to lines and grade as per drawing and MoRTH Specification Clause 602 including vaccum dewatering process with all required equipments	P.Cum.	6277.00
16.33	Construction of un-reinforced, dowel jointed at expansion and construction joint only, plain cement concrete pavement M30 (Grade), thickness as per design, over a prepared sub base, with 43 grade cement as per Clause 602.2.2 , coarse and fine aggregates conforming to IS:383, maximum size of coarse aggregate not exceeding 25 mm, mixed in a in fully automatic Batching Plant and transported to site in transit mixer for having continous agitated mixer, manufactured as per approved mix design including pumping of R.M.C. from transit mixer to site of laying , with all lead and lift including cost of admixtures in recommended portion as per IS 9103 to accelerate/ retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer in charge laid in approved fixed side formwork (steel channel, laying and fixing of 125 micron thick polythene film, wedges, steel plates including levelling the formwork as per drawing), spreading the concrete with shovels, rakes, compacted using needle, screed and plate vibrators and finished in continuous operation including provision of contraction and expansion, construction		
	using curing compound and water finishing to lines and grade as per drawing and MoRTH Specification Clause 602 including vaccum dewatering process with all required equipments	P.Cum.	6140.00

Item No.	Description	Unit	Rates
16.34	Construction of un-reinforced, dowel jointed at expansion and construction joint only, plain cement concrete pavement M35 (Grade), thickness as per design, over a prepared sub base, with 43 grade cement as per Clause 602.2.2 , coarse and fine aggregates conforming to IS:383, maximum size of coarse aggregate not exceeding 25 mm, mixed in a in fully automatic Batching Plant and transported to site in transit mixer for having continuous agitated mixer, manufactured as per approved mix design including pumping of R.M.C. from transit mixer to site of laying , with all lead and lift including cost of admixtures in recommended portion as per IS 9103 to accelerate/ retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer in charge laid in approved fixed side formwork (steel channel, laying and fixing of 125 micron thick polythene film, wedges, steel plates including levelling the formwork as per drawing), spreading the concrete with shovels, rakes, compacted using needle, screed and plate vibrators and finished in continuous operation including provision of contraction and expansion, construction		
	using curing compound and water finishing to lines and grade as per drawing and MoRTH specification Clause 602 Including vacuum dewatering process with all required equipments	P.Cum.	6721.00
16.35	Providing & mixing admixture in Cement Mass Concrete flooring, CC Road, RCC work, Canal Lining and Shotcrete Non Circular with ribbed surface Structural Synthetic Macro Fiber 42 - 50 mm length, specific gravity of > 1.30 and diameter 0.80 - 1.20 mm and melting point > 220 degree centigrade @ 0.75 % - 1.00 % by cement weight in design mix as per direction of Engineer-in-charge.	P.Kg.	638.00
16.36	Providing & mixing admixture in Cement Concrete flooring/ Cement Plaster/ Plain or RCC work, Synthetic Polyester Triangular Construction Fiber of length 6 mm / 12 mm / 18 mm with specific gravity 1.34 to 1.40 and diameter 10 - 40 microns and melting point > 220 degrees centigrade by using 125 gm fiber for 50 kgs cement used as per direction of Engineer-in-charge.	P.Kg.	484.00
16.37	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.	P.Rmt.	7584.00

Item No.	Description	Unit	Rates
Note	1. The installation shall be done by the manufacturer or his authorised representative to the satisfaction of the Engineer.		
	2. The concreting for joining the expansion joint assembly with the deck has not been included in this analysis as the same is catered in the quantities of RCC deck.		
16.38	Expansion joint 25 mm wide and depth 200 to 300 mm using 25 mm thick bitumen impregnated board/SILFLEX (Capcel HD 100) confirming manufactures specifications , dowel bars 25mm M.S. rod 500 mm long @ 200 mm C/C with pvc sleeve as per IRC 58 (1988) including required steel bar (16 mm dia.) chairs, making holes in board, placing whole assembly in groove including cost of sealing compound.	P.Rmt.	1089.00
16.39	Providing & Fixing in position bitumen impregnated board / SILFLEX (Capcell HD 100) confirming manufactures specifications in expansion joint with sealent as per IRC-15-2002 of size :		
16.39.1	12mm thick	P.Sqm.	627.00
16.39.2	18mm thick	P.Sqm.	919.00
16.39.3	25mm thick	P.Sqm.	1210.00
16.40	Cutting of construction joint/ longitudinal joint 4 to 6 mm. wide & 75 to 100 mm deep using mechanical concrete cutter including cost of diamond bit cutting wheel and filling of bitumen sealing compound in groove including cost of sealing compound.	P.Rmt.	57.00
16.41	Supply & fixing of M-20 grade precast cement concrete Kerb or Dand upto 60 cm length over 20 mm thick base of cement mortar 1:6 including jointing earth work, painting & jointing with cement mortar 1:4 of size		
16.41.1	10 x 15 cm	P.Rmt.	137.00
16.41.2	15 x 15 cm	P.Rmt.	174.00
16.41.3	20 x 20 cm	P.Rmt.	264.00
16.41.4	20 x 25 cm	P.Rmt.	315.00
16.41.5	(20 x 25) x 30 cm 2	P.Rmt.	400.00
16.41.6	(22.5 x 25) x 30 cm 2	P.Rmt.	415.00
16.42	Providing and filling joint sealing compound in CC Pavement/Structures as per drawings and MoRTH specifications with coarse sand and 6 per cent bitumen by weight	P.Rmt.	15.00

Item No.	Description	Unit	Rates
16.43	Applying epoxy mortar over leached, honey combed and spalled concrete surface and exposed steel reinforcement complete as per MoRTH Specification	P.Sqm.	428.00
16.44	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 as per clause 2807.1., 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 conforming to clause 2807.6.	P.Sqm.	178.00
16.45	Applying pre-packed cement based polymer mortar of strength 45 Mpa at 28 days for replacement of spalled concrete including removal of old damaged concrete and all arrangement for applying it complete as per MoRTH specifications.	P.Sqm.	707.00
16.46	Applying Epoxy bonding of new concrete to old concrete including removal of old damaged concrete and all arrangement for applying it complete as per MoRTH specifications.	P.Sqm.	580.00
16.47	Providing and fixing of Reinforced Ferro cement Drain cover designed for class "AA" loading duly marked on cover with adequate steel reinforcement having thickness 75 mm to 150 mm anti- corrosive bitumen painted M.S. plate Rim and on M.S. lifting hooks admixture like plasticizer bond improving compound shrinkage resistance compound abrasion resistant complete as per approved design etc.		
16.47.1	for drain Opeining Size 300 to 450 mm Standard Drain Cover Size 600mm x 800mm x 75mm	P.Sqm.	1667.00
16.47.2	for drain Opeining Size 451 to 700 mm Standard Drain Cover Size 1000mm x 800mm x 100mm	P.Sqm.	1931.00
16.47.3	for drain Opeining Size 701 to 1200 mm Standard Drain Cover Size 1500mm x 600mm x 125mm	P.Sqm.	2459.00
16.47.4	for drain Opeining Size 1201 to 1500 mm Standard Drain Cover Size 2100mm x 500mm x 150mm	P.Sqm.	3509.00

Item No.	Description	Unit	Rates
16.48	Supply & fixing of Fiber reinforced Ferro cement drain cover (light duty) designed for side drain for class "B" Road loading duly marked on cover with adequate steel reinforcement having thickness 50 mm to 75 mm anti corrosive bitumen painted M.S. plate Rim and on M.S. lifting hooks additives & admixture like plasticizer shrinkage resistance compound abrasion resistant as per approved drawing and design complete in all respect.		
16.48.1	for drain Opeining Size 300 to 450 mm Standard Drain Cover Size 600mm x 1200mm x 50mm	P.Sqm.	660.00
16.48.2	for drain Opeining Size 451 to 700 mm Standard Drain Cover Size 1000mm x 900mm x 60mm	P.Sqm.	787.00
16.48.3	for drain Opeining Size 701 to 1200 mm Standard Drain Cover Size 1500mm x 700mm x 70mm	P.Sqm.	963.00
16.48.4	for drain Opeining Size 1201 to 1500 mm Standard Drain Cover Size 1800mm x 600mm x 75mm	P.Sqm.	1315.00
16.49	P & P Precast dense cement concrete (Vibro-pressed) drain section block of different size as per approved drawing and design and strength as per IS code:2185 Part I of grade 'D' (5.00mm) proper quality of additive/admixture like plasticizer etc. added to produce high quality and durable drain section blocks of "L" shape "U" shape etc. as per approved design and drawing complete with fixing and jointing in C.M. 1:4 in proper grade and level complete in all respect including earth work and disposal of surplus earth within 0.5 Km lead .		
16.49.1	40mm thick	P.Sqm.	396.00
16.49.2	Up to 60mm thick	P.Sqm.	528.00
16.49.3	Up to 80mm thick	P.Sqm.	660.00
16.49.4	Up to 115mm thick	P.Sqm.	792.00
16.50	Providing and fixing stone slab covering over drains (Kota/Bijoliya Quarry) having thickness 75 mm to 150 mm including filling of joints in cement mortar 1:3 with 50 mm thick cement concrete flooring in 1:2:4 mix complete with good finish as per approved drawings and specifications.		
16.50.1	for drain Opeining Size 300 to 450 mm Stone Patty drain cover size 800mm x 600mm x 75mm	P.Sqm.	634.00
16.50.2	for drain Opeining Size 451 to 600 mm Stone Patty drain cover size 1000mm x 600mm x 100mm	P.Sqm.	843.00
16.50.3	for drain Opeining Size 601 to 1000 mm Stone Patty drain cover size 1500mm x 600mm x 150mm	P.Sqm.	964.00
16.51	Provision of red fluorescent with white reflective sleeve traffic cone made of Low Density Polyethylene (LDPE) material with a square base of 390 x 390 x 35 mm and a height of 770 mm, 4 kg in weight, placed at 1.5 m interval, all as per BS:873	Each	480.00

Item No.	Description	Unit	Rates
16.52	Deleted		
16.53	Deleted		
16.54	Deleted		
16.55	Deleted		
16.56	Supply of Caution Diversion sign board size 1800 x 600 mm having centre height of 75 cm made out of 1.25 mm thick M.S. sheet duly framed with angle iron size 40 x 40 x 5 mm fixed on two moving wheels and stands, made out of 75 x 40 mm channel having two solid rubber wheels mounted on ball bearings, boards is processed in stoving enamel blue and machine cut sheet reflective letter and arrow on one side and the other side having arrow only complete in all respect.	Each	3751.00
16.57	Supplying & Fixing route Marker reflective sign boards consisting of shield marked on M.S. flat 14 gauge of size 40 x 60 cm and definition plate of 30 x 25 cm, 14 gauge, fixed on mild steel posts of T Iron or Angle Iron for NH/SH :	Each	1870.00
16.58	Supply & Fixing of flood gauge (water Gauge) as per I.R.C. 67 standard 200 cm long fixed on angle iron posts 50x50x6 mm, 2.6 M. long.	Each	1770.00
16.59	Supplying of men at work sign board (folding type) made of 1.25 mm thick M.S. sheet size 900x900x900 mm painted in white stove enamelled paint and reflective machine cut sheet Men's emblem and letter MEN AT WORK in red colours and additional attachment of size 150x900 mm plate for gang number and name with white stoving enameled back ground both plates are fixed on a folding stand of M.S. (heavy) steel tube of size 13.2 mm outer dia as per IS-1239 (part-I) 1979 duly painted in grey colour and both the plates are painted on back side in grey enamel paint.	Each	1320.00
16.60	Supply of Sign Board size 120x75 made out of 1.25 mm thick M.S. sheet duly framed with 33.3 mm ODMS black tube medium class as per IS- 1239 (Part-I) 1979 with inner support of M.S. flat 12x3 mm whole structure is fixed on two posts of 42 mm ODMS black tube (Medium class) as per IS-1239 processed with blue stoving enamel paint and white figuring direction arrow in superior quality of synthetic enamel paint	Each	1843.00

Item No.	Description	Unit	Rates
16.61	Supply of 'L' type Bollard made out of 1.25 mm thick M.S. sheet height 134 cm, welded in circular type ring section having upper dia 15 cm. and lower dia 21 cm with another attachment of 15x15 cm circular section with 15 cm. face plate and hold fast at bottom, whole body is processed in white stoving enamel and red reflective 3 hands, each of 7.5 cm end one reflective sheet of 15 cm. dia provided to it complete in all respect.	Each	1755.00
16.62	Supply of Swiss Type Bollard made out of 1.25 mm thick M.S. sheet, total height 135 cm, the lower portion is made in tapered circular section having upper dia 15 cm and lower dia 20 cm with attachment of one mandatory plate 7 mm thick M fixed with the help of 7 cm long, 30mm dia chrome plated M.S. tube this part is fixed on the body with another attachment of a cap 30x7 cm. whole body is processed in black stoving enamel and mandatory plate in Azure blue, with one compulsory keep left arrow with 10mm border reflective strip each of 7.5 cm on body complete in all respect.	Each	2019.00
16.63	Supply of Hazard Marker made out of 2 mm thick M.S. sheet size 300x300x3 mm framed with angle iron 25x25x3 mm and fixed on channel posts 75x40x6 mm and hold fast at bottom whole body is painted in white stoving enamel and 6 Nos., 5 cm dia reflective sheet on white reflective background with additional border of 1.25 cm all around it.	Each	699.00
16.64	Supply of Swiss type of Hazard marker, made out of 2 mm thick M.S. sheet size of box is 15x15 cm with hold fast at bottom, the body is painted in orange stoving enamel paint with white/high intensity grade micro-prismatic type sheeting, on all four side.	Each	963.00
16.65	P & F Delinator with 30 cm. outer dia RCC hume pipe NP-2 (As per IS-458/ 1971) pipe 1. OM. Long 40 cm embedded in cement concrete (1:4:8) block of size 50x50x40 cm. including excavation upto 40 cm depth. The inside of pipe shall be filled with C.C. (1:4:8) stone grit max size 20 mm or less upto the top with semi circular humping. The pipes shall be painted white/black with enamel paint with red dots two Nos. on each side	Each	479.00
16.66	Providing and fixing Central Road Fund display board size 180-160 cm made out of 1.6 mm thick MS sheet duly framed with angle iron 65x65x5 mm size having 2 Nos posts 3 m long from ground level and 0.45 m embended in M-15 cement concrete block 300x300x600 mm in ground on shoulder of road including painting & lettering as per MoRTH specifications clause 801 with enameled paint complete in all respects.	Each	6669.00

Item No.	Description	Unit	Rates
16.67	Supplying of Cat's Eye made of aluminium alloy size 75x100x22 mm having 21 biconvex lenses embedded in circular disk of ABS plastic on each side.	Each	220.00
16.68	Supply of centerline Raised Pavement Marker (RPM) size 125 x75x20 mm made out of Aluminium alloy duly white powder coating paint with two side reflective having fixing provision with nail complete in all respect.	Each	358.00
16.69	Half bricks circular Tree Guard in 50 class designation bricks, internal diameter 1.25 m and height 1.2 m above ground and 0.20 m below ground, bottom two courses laid dry and top three courses in lime mortar 1 : 2 (a-lime putty, 2 - surkhi) or cement mortar 1 : 6 (1 cement : 6 fine sand) and the integrated course being in dry honey comb as per design complete.	Each	503.00
16.70	Painting with superior grade enamel paint of approved quality to give an even shade including writing lettering figuring etc. complete as per IRC standers of Bollards with 3 Nos. reflective type 7 cm wide strips including cost of providing new strips.		
16.70.1	Painting old work (Labour Rate)	Each	352.00
16.71.2	Painting old work (Complete Rate)	Each	600.00
16.72	Making double drum Tree Guard Tree Guard 52 cm dia at middle and 75 cm at top level and 1.9 m high as per standard design from empty coaltar drums supplied free by the department including providing and fixing 4 Nos. legs 40 cm long of 30x30 mm M.S angle and 5 Nos. 20x3 mm M.S. flats riveted to tree guard with rivets complete in all respect including painting inside and outside of tree guard with :		
16.72.1	One coat of coaltar / or anti corrosive paint.	Each	276.00
16.72.2	Two or more coats of ready mixed paint of approved quality and shade over a priming coat	Each	369.00
16.73	Fixing of sign board having including excavation cement concrete 1:5:10 (30x30x60cm) and transportation complete of size :		
16.73.1	Two Post		
16.73.1.1	150x120x&120x75 cm	Each	578.00
16.73.1.2	60x75, 90x60 cm, 75x45 cm & 60x45 cm	Each	462.00
16.73.2	Single Post	Each	286.00

Item No.	Description	Unit	Rates
16.74	Providing and erecting overhead signs with a corrosion resistant 2mm thick aluminium alloy sheet reflectorised with high intensity retro-reflective sheeting of encapsulated lense type with vertical and lateral clearance given in clause 802.2 and 802.3 and installed as per clause 802.7 over a designed support system of aluminium alloy or galvanised steel trestles and trusses of sections and type as per structural design requirements and approved plans		
16.74.1	Truss and Vertical Support	P.MT.	3287.00
16.74.2	Aluminium Alloy Plate for Over Head Sign	P.Sqm.	9349.00
	Note :- 1. The cost of excavation and foundation concrete for fixing of vertical support system to be worked out separately as per the approved drawing/design and to be included in the estimate.		
	2. Lettering and arrow marks on sign board to be provided separately as per actual requirement. Rates for these items have been included separately in this chapter.		
16.75	Barricading with sal ballies as per design including tying with vertical posts by coconut strings complete in all respect with two horizontal members and vertical supports upto 2.5m centre to centre and for 3 days period including removal and cleaning the site complete in all respect.		
16.75.1	Height 1.2m upto 1.5m above ground level		
16.75.1.1	Labour Charge	P. Mtr.	10.00
16.75.1.2	Complete	P. Mtr.	30.00
16.75.2	Height upto 1.2m height above ground level		
16.75.2.1	Labour Charge	P. Mtr.	10.00
16.75.2.2	Complete	P. Mtr.	25.00
16.75.3	Add extra in barricading for each subsequent day after 3 days.	P. Mtr.	2.00
16.76	Construction of Foundation / Inauguration Pedastal in 23 cm thick Brick masonry in CM 1:4 of size 1.20m x 1.80m above ground level with adequate foundation including providing and fixing of Granite stone of size 0.75m x0.60m with engraving letters and figures,cement plaster,white washing etc. complete as per direction of Engineer in charge.	Each	9470.00

Item No.	Description	Unit	Rates
16.77	Supply & Planting of shady plants (Neem, Peepal, Goolar, Jamun, Imli or other specified) along road side including the following activities:- 1. Preparation of soil including cleaning & removing of unwanted shrubs removal of stones & garbage. 2. Supply of plant at site of two years of age & height more than 1.50 Mtr 3. Supply of dry manure (Farm yard manure organic) 4. Supply of Insecticides 5. Digging of pits size 60x60x60 cms. Including removal of stones. Manuring application of insecticides & watering at least 15 liter per plant after planting. 6. Half brick Circular tree guard in second class bricks, internal dia 1.25 meter and height 1.20 meter above ground and 0.20 meter below ground, bottom two courses laid dry and top three courses in cement mortar 1:6 (1Cement : 6 Sand) and the intermediate courses being in dry honey comb masonry, as per design complete.		
	7. Watering to plants. 8.Maintenance of plants by the contractor including of pits/bids preparation of Thavala Hoeing weeding etc. & application of insecticides etc. & security. If the plant die during maintenance contractor has to replace same height plant at his own cost.		
	Note:- SD Shall be refunded after counting of plants on completion of defect liability period of 5 years	P.Plant	1275.00
16.78	Detail survey of site with total station including plane table survey of builtup area showing road level, boundary walls, electric poles, adjacent building / plot details, set back, other existing structures (temporary or permanent), sewer lines & septic tank, main plumbing lines, nalahs or drains water bodies/water logging areas as may be required depending upon the site conditions/ topography of the area including printout on required size paper in three copies & one soft copy of approved media		
16.78.1	Rate per Km. Builtupt area less than 10%	P.Km.	6678.00
16.78.2	Rate per Hect. Builtupt area less than 10%	P.Hect	3339.00
16.78.3	Rate per Hect. Builtupt area 10% to 50%	P.Hect	6678.00
16.78.4	Rate per Hect. Builtupt area greater than 50%	P.Hect	13356.00

Item No.	Description	Unit	Rates
16.79	Survey of Proposed road including printout of Plan, L-Section & Cross section on A-3 size paper in three copies & one soft copy of approved media (For L-Section levels are to be taken at an interval of 25m on plain terrain and 10m on rolling & at CD works) including computation of quantities of earth work in cutting / filling as per L-Section & Cross section	P.Km.	2226.00
16.80	Conducting Traffic Census at Traffic Count Station including collection of data during census, tabulation and computerised information preparation arrangement of lightht, furniture for sitting of two persons, installation and maintenance of tent materials, banners sign boards etc. during census engagement of at least metric educated two persons per shift of eight hours etc. complete as directed by Engineer-in-charge for a period of seven days.	Each Station	12015.00
16.81	Construction of a permanent type barricade made with brick work in mud mortar, 1.5 m high, 4 m long, 600 mm thick, plastered with cement mortar 1:6, painted with yellow and white strips	Each	11705.00
16.82	Providing and carrying out video shoting of roads, bridges, buildings, other programmes including hiring of vehicle equipments for video shooting, titling, lightening, mixing, lettering, editing, including cost of two colour CDs of approved makes and quality etc. complete.		
16.82.1	Within 50 Kms.	Per Day	3000.00
16.82.2	Beyond 50 kms.	Per Day	3250.00
16.82.3	Work upto 5 hours per day only.	Per Day	1800.00
16.83	Shooting of still photographs outdoor and indoor of construction and other works of building, bridges, roads etc. at any distances.		
16.83.1	Post Card size	3 No's	75.00
16.83.2	4"x6" size	3 No's	100.00
16.83.3	5"x7" size	3 No's	160.00
16.83.4	8"x12" Size (A-4 Size)	3 No's	300.00
16.83.5	20"x30" size (Banner Size)	1 No.	725.00
16.83.6	Extra Copies :		
16.83.6.1	Post Card size	1 No.	10.00
16.83.6.2	4"x6" size	1 No.	15.00
16.83.6.3	5"x7" size	1 No.	20.00
16.83.6.4	8"x12" Size (A-4 Size)	1 No.	75.00
16.83.6.5	20"x30" size (Banner Size)	1 No.	550.00
16.84	Labour charges for fixing of Cat's Eye as per MoRTH specification excluding cost of Cat's Eye.	Each	7.00