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Some items in This SOR is based on MORTH & MORD Standard Data book

Specification Clause nos must be checked as per Current Specifications

Chapter 1 - General Items

1-1 Earthwork in Hill Road (Hill Side Cutting)

1-1-1 Excavation in soil in Hilly Area by mechanical means

1-1-1-A Excavation in soil in Hilly Area by mechanical means Without useinng Dozer including cutting and trimming of side slopes and disposing of excavated earth with a lift upto 1.5 m and a lead upto 20 m as per Technical Specification Clause 1603.1

Unit = Cum

Taking output = 260 Cum

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL14	Mate	day	0.80	436.72 / Day	349.38
PL15	Beldar/mazdoor (unskilled)	day	20.00	410.97 / Day	8,219.40
Machine					
PMC012	Front end-loader 1 cum bucket capacity	hours	6.00	1000.00 / hours	6,000.00
				Total Resource Cost	**14,568.78**
	Contractor's Profit Including Over Head @12.5%			14,568.78 x 12.5 %	1,821.10
	Labour Cess @1%			16,389.87 x 1 %	163.90
		Cost For 260 Cum			16,553.77
		Rate Per Cum			63.67
		Say Rs. Per Cum			**63.70**

1-1-1-B Extra for Every Additional Lift of 1.5 m or Part thereof

Unit = Cum

Taking output = 10 Cum

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL15	Beldar/mazdoor (unskilled)	day	0.55	410.97 / Day	226.03
				Total Resource Cost	**226.03**
	Contractor's Profit Including Over Head @12.5%			226.03 x 12.5 %	28.25
	Labour Cess @1%			254.29 x 1 %	2.54
		Cost For 10 Cum			256.83
		Rate Per Cum			25.68
		Say Rs. Per Cum			**25.70**

1-1-2 Excavation in Hilly Areas in Ordinary Rock by mechanical means not requiring blasting (With out Dozer)

Excavation in hilly area in ordinary rock not requiring blasting by mechanical means without using Dozer including cutting and trimming of slopes and disposal of cut material with a lift upto 1.5 m and lead upto 20 m as per Clause 1603.2.

Unit = Cum

Taking output = 170 Cum

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL14	Mate	day	0.68	436.72 / Day	296.97
PL15	Beldar/mazdoor (unskilled)	day	26.00	410.97 / Day	10,685.22
Machine					
PMC014	Hydraulic Excavator 0.9/1.0 cum	hours	4.25	1020.00 / hours	4,335.00
				Total Resource Cost	**15,317.19**
	Contractor's Profit Including Over Head @12.5%			15,317.19 x 12.5 %	1,914.65
	Labour Cess @1%			17,231.84 x 1 %	172.32
		Cost For 170 Cum			17,404.16
		Rate Per Cum			102.38
		Say Rs. Per Cum			**102.40**

1-1-3 Excavation in Hilly Areas in Hard Rock requiring blasting

1-1-3-A Excavation in hilly areas in hard rock requiring blasting, by mechanical means without using Dozer , lift upto 1.5 m and disposal of excavated rock upto a lead of 20 m as per Clause 1603.2.

Unit = Cum
Taking output = 170 Cum

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL04	Blaster	day	10.00	462.47 / Day	4,624.70
PL09	Rock Hole Driller	day	2.00	436.72 / Day	873.44
PL14	Mate	day	1.36	436.72 / Day	593.94
PL15	Beldar/mazdoor (unskilled)	day	22.00	410.97 / Day	9,041.34
Machine					
PMC001	Air Compressor 210 cfm	hours	28.00	330.00 / hours	9,240.00
PMC014	Hydraulic Excavator 0.9/1.0 cum	hours	5.00	1020.00 / hours	5,100.00
Material					
PM0072	Electric Detonator	eatch	235.00	12.00 / Nos.	2,820.00
PM0081	Gelatine 80 per cent	Kg.	67.00	100.00 / Kg.	6,700.00
				Total Resource Cost	**38,993.42**
	Contractor's Profit Including Over Head @12.5%			38,993.42 x 12.5 %	4,874.18
	Labour Cess @1%			43,867.60 x 1 %	438.68
		Cost For 170 Cum			44,306.27
		Rate Per Cum			260.63
		Say Rs. Per Cum			**260.60**

1-1-3-B Extra for Every Additional Lift of 1.5 m or Part thereof

Unit = Cum
Taking output = 10 Cum

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL15	Beldar/mazdoor (unskilled)	day	1.08	410.97 / Day	443.85
				Total Resource Cost	**443.85**
	Contractor's Profit Including Over Head @12.5%			443.85 x 12.5 %	55.48
	Labour Cess @1%			499.33 x 1 %	4.99
		Cost For 10 Cum			504.32
		Rate Per Cum			50.43
		Say Rs. Per Cum			**50.40**

1-2 **Excavation in foundation for retaining, breast walls etc, in all types of soils and rocks including all lead, lift and disposal of surplus material as per direction of engineer - in - charge, as per drawing and technical specifications Clause 305.1 of MORD Specifiction**

Unit = cum
Taking output = 10 Cum

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL14	Mate	day	0.32	436.72 / Day	139.75
PL15	Beldar/mazdoor (unskilled)	day	8.00	410.97 / Day	3,287.76
				Total Resource Cost	**3,427.51**
	Contractor's Profit Including Over Head @12.5%			3,427.51 x 12.5 %	428.44
	Labour Cess @1%			3,855.95 x 1 %	38.56
		Cost For 10 Cum			3,894.51
		Rate per Cum			389.45
		Say Rs. Per Cum			**389.50**

1-3 **Random Rubble Stone Masonry laid Dry, in breast walls, retaining walls, etc. including supply of all material, labour, T&P and royaltiies etc. complete as per drawing and technical specifications Clauses 702, 704, 1202 & 1203 of MORD Specifiction**

Unit = cum
Taking output = 1 Cum

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL12	Mason 1st class	day	1.00	462.47 / Day	462.47
PL14	Mate	day	0.10	436.72 / Day	43.67
PL15	Beldar/mazdoor (unskilled)	day	1.50	410.97 / Day	616.46
Material					
PM0047	Bond stone (400 mm x 150 mm x 150 mm)	No.	7.00	14.80 / Nos.	103.60
PM0136	Stone for Random Rubble Masonry	cu.m	1.00	723.50 / Cum	723.50

		Total Resource Cost	**1,949.70**
	Contractor's Profit Including Over Head @12.5%	1,949.70 x 12.5 %	243.71
	Labour Cess @1%	2,193.41 x 1 %	21.93
		Cost For 1 Cum	2,215.34
		Rate per Cum	2,215.34
		Say Rs. Per Cum	**2,215.30**

1-4 **Random Rubble Stone Masonry laid in 1:6 cement and sand mortar, in breast walls, retaining walls, parapets, scuppers, etc. including supply of all material, labour, T&P and royaltiies etc. complete as per drawing and technical specifications Clauses 702, 704, 1202 & 1203 of MORD Specifiction**

Unit = cum
Taking output = 1 Cum

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL01	Bhisti	day	0.140	410.97 Day	57.54
PL12	Mason 1st class	day	1.300	462.47 Day	601.21
PL14	Mate	day	0.140	436.72 Day	61.14
PL15	Beldar/mazdoor (unskilled)	day	2.000	410.97 Day	821.94
Material					
PM0049	Cement	Bag	1.410	6700.00 / MT	472.35
PM0123	Sand (Coarse)	Cum	0.300	1471.10 / Cum	441.33
PM0047	Bond stone (400 mm x 150 mm x 150 mm)	No.	7.00	14.80 / Nos.	103.60
PM0136	Stone for Random Rubble Masonry	Cum	1.00	723.50 / Cum	723.50
	Water Charges @1.5% on Material Group			1,740.78 x 1.5%	26.11
				Total Resource Cost	**3,308.72**
	Contractor's Profit Including Over Head @12.5%			3,308.72 x 12.5 %	413.59
	Labour Cess @1%			3,722.31 x 1 %	37.22
			Cost For 1 Cum		3,759.53
			Rate per Cum		3,759.53
			Say Rs. Per Cum		**3,759.50**

1-5 **Hand Packed stone filling in back of wallls including cost of all materials, royality, T&P etc. complete as per direction of Engineer-in- charge. (As per PWD Uttarakhand specifications)**

Unit = cum
Taking output = 10 Cum

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL01	Bhisti	day	0.40	410.97 / Day	164.39

PL14	Mate	day	0.28	436.72 / Day	122.28
PL15	Beldar/mazdoor (unskilled)	day	10.00	410.97 / Day	4,109.70
Material					
PM0099	Loose stone	Cum	12.00	385.00 / Cum	4,620.00
				Total Resource Cost	**9,016.37**
	Contractor's Profit Including Over Head @12.5%			9,016.37 x 12.5 %	1,127.05
	Labour Cess @1%			10,143.42 x 1 %	101.43
		Cost For 10 Cum			10,244.85
		Rate per Cum			1,024.48
		Say Rs. Per Cum			**1,024.50**

1-6 **Construction of coolie walling including supply of all material, labour, T&P etc. required for proper completion of the work as per direction of Engineer-in- charge. (As per PWD Uttarakhand specifications)**

Unit = cum
Taking output = 2.83 Cum

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL13	Mason 2nd class	day	2.00	462.47 / Day	924.94
PL15	Beldar/mazdoor (unskilled)	day	2.00	410.97 / Day	821.94
PL31	Coolie	day	2.00	410.97 / Day	821.94
Material					
PM0099	Loose stone	Cum	2.83	385.00 / Cum	1,089.55
				Total Resource Cost	**3,658.37**
	Contractor's Profit Including Over Head @12.5%			3,658.37 x 12.5 %	457.30
	Labour Cess @1%			4,115.67 x 1 %	41.16
		Cost For 2.83 Cum			4,156.82
		Rate per Cum			1,468.84
		Say Rs. Per Cum			**1,468.80**

1-7 **Providing and laying of wire crates 3.00x1.50x1.50 in size with GI wire conforming to IS: 280 & IS:4826 in 150mm x 150mm mesh laid with stone boulders. as per direction of Engineer-in- charge. (As per PWD Uttarakhand specifications)**

1-7-1 **GI wire 10 gauge BWG**

Unit = Cum
Taking output = 6.75 Cum

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL14	Mate	day	0.20	436.72 / Day	87.34
PL15	Beldar/mazdoor (unskilled)	day	3.60	410.97 / Day	1,479.49
PL16	Mazdoor (Semi skilled)	day	1.80	436.72 / Day	786.10

Material					
PM2203	Galvanised steel wire crates of mesh size 150 mm x 150 mm woven with 10 gauge bwg GI wire in rolls of required size.	Sqm	22.50	98.00 / Sqm	2,205.00
PM2206	Stone boulder of weight not less than 25 kgs to be used in wirecrates	Cum	6.75	814.50 / Cum	5,497.88
				Total Resource Cost	**10,055.81**
	Contractor's Profit Including Over Head @12.5%			10,055.81 x 12.5 %	1,256.98
	Labour Cess @1%			11,312.78 x 1 %	113.13
		Cost For 6.75 Cum			11,425.91
		Rate per Cum			1,692.73
		Say Rs. Per Cum			**1,692.70**

1-7-2 GI wire 8 gauge BWG

Unit = Cum
Taking output = 6.75 Cum

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL14	Mate	day	0.20	436.72 / Day	87.34
PL15	Beldar/mazdoor (unskilled)	day	3.60	410.97 / Day	1,479.49
PL16	Mazdoor (Semi skilled)	day	1.80	436.72 / Day	786.10
Material					
PM2204	Galvanised steel wire crates of mesh size 150 mm x 150 mm woven with 8 gauge bwg GI wire in rolls of required size.	Sqm	22.50	150.00 / Sqm	3,375.00
PM2206	Stone boulder of weight not less than 25 kgs to be used in wirecrates	Cum	6.75	814.50 / Cum	5,497.88
				Total Resource Cost	**11,225.81**
	Contractor's Profit Including Over Head @12.5%			11,225.81 x 12.5 %	1,403.23
	Labour Cess @1%			12,629.03 x 1 %	126.29
		Cost For 6.75 Cum			12,755.32
		Rate per Cum			1,889.68
		Say Rs. Per Cum			**1,889.70**

1-8 Providing and Laying of Mechanically Woven Double Twisted Hexagonal shaped Gabions (Zinc plus PVC coated), of size 3mX1mX1m with two diaphragms at 1m interval, having mesh opening 100mmx120 mm, mesh wire diameter 2.7mm/3.7mm, edge/selvedge wire diameter 3.4/4.4 mm and lacing wire diameter 2.2/3.2 mm. (The work includes filling boulders in the gabions).

Unit = No.
Taking output = 1 No.

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL14	Mate	day	0.20	436.72 / Day	87.34
PL15	Beldar/mazdoor (unskilled)	day	3.60	410.97 / Day	1,479.49
PL16	Mazdoor (Semi skilled)	day	1.88	436.72 / Day	821.03
Material					
PM2216	Mechanically Woven Double Twisted Hexagonal wiremesh of PVC coated galvanized steel wire , having mesh opening 100mmx120mm and mesh wire diameter 2.7mm/3.7mm for gabions	Sqm	16.00	163.00 / Sqm	2,608.00
PM2206	Stone boulder of weight not less than 25 kgs to be used in wirecrates	Cum	3.00	814.50 / Cum	2,443.50
				Total Resource Cost	**7,439.37**
	Contractor's Profit Including Over Head @12.5%			7,439.37 x 12.5 %	929.92
	Labour Cess @1%			8,369.29 x 1 %	83.69
		Cost For 1 No.			8,452.98
		Rate per No.			8,452.98
		Say Rs. Per No.			**8,453.00**

1-9 **Providing and Laying of Mechanically Woven Double Twisted Hexagonal shaped Gabions of galvanized steel, of size 3mX1mX1m with two diaphragms at 1m interval, having mesh opening 100mmx120 mm, mesh wire diameter 3 mm for gabions, edge/selvedge wire diameter 3.9 mm and lacing wire diameter 2.2 mm. (The work includes filling boulders in the gabions).**

Unit = No.
Taking output = 1 No.

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL14	Mate	day	0.20	436.72 / Day	87.34
PL15	Beldar/mazdoor (unskilled)	day	3.60	410.97 / Day	1,479.49
PL16	Mazdoor (Semi skilled)	day	1.88	436.72 / Day	821.03
Material					
PM2217	Mechanically Woven Double Twisted Hexagonal wire mesh,of galvanized steel having mesh opening 100mmx120mm and mesh wire diameter 3 mm for gabions, rivet	Sqm	16.00	152.00 / Sqm	2,432.00
PM2206	Stone boulder of weight not less than 25 kgs to be used in wirecrates	Cum	3.00	814.50 / Cum	2,443.50
				Total Resource Cost	**7,263.37**

	Contractor's Profit Including Over Head @12.5%	7,263.37 x 12.5 %	907.92
	Labour Cess @1%	8,171.29 x 1 %	81.71
	Cost For 1 No.		8,253.00
	Rate per No.		8,253.00
	Say Rs. Per No.		**8,253.00**

1-10 Clearance of land slides (Slip Clearance)

1-10-1 Clearance of land slides in soil and ordinary rock by a bull-dozer D 80 A-12, 180 HP and disposal of the same on the valley side complete as directed by the Engineer-in-charge.

Unit = Cum
Taking output = 100 Cum

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL14	Mate	day	0.04	436.72 / Day	17.47
PL15	Beldar/mazdoor (unskilled)	day	1.00	410.97 / Day	410.97
Machine					
PMC045	Dozer D - 80 - A 12	hours	1.67	2511.00 / hours	4,193.37
				Total Resource Cost	**4,621.81**
	Contractor's Profit Including Over Head @12.5%			4,621.81 x 12.5 %	577.73
	Labour Cess @1%			5,199.53 x 1 %	52.00
	Cost For 100 Cum				5,251.53
	Rate per Cum				52.52
	Say Rs. Per Cum				**52.50**

1-10-2 Clearing of land slide in hard rock requiring blasting for 50 per cent of the boulders and disposal of the same on the valley side (Using bull-dozer) complete as directed by the Engineer-in-charge.

Unit = Cum
Taking output = 100 Cum

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL04	Blaster	day	0.07	462.47 / Day	32.37
PL09	Rock Hole Driller	day	0.75	436.72 / Day	327.54
PL14	Mate	day	0.09	436.72 / Day	39.30
PL15	Beldar/mazdoor (unskilled)	day	1.50	410.97 / Day	616.46
Machine					
PMC045	Dozer D - 80 - A 12	hours	1.67	2511.00 / hours	4,193.37
PMC133	Air compressor 250 cfm with two leads for pneumatic cutters/hammers.	hours	2.50	2640.00 / day	825.00
Material					
PM0081	Gelatine 80 per cent	Kg	17.50	100.00 / Kg.	1,750.00

PM0223	Electric Detonators @ 1 detonator for	No.	70.00	500.00 / 100 Nos	350.00
				Total Resource Cost	**8,134.04**
	Contractor's Profit Including Over Head @12.5%			8,134.04 x 12.5 %	1,016.76
	Labour Cess @1%			9,150.80 x 1 %	91.51
		Cost For 100 Cum			9,242.31
		Rate per Cum			92.42
		Say Rs. Per Cum			**92.40**

1-10-3 Slip clearance (by manual means) of loose earth and other small loose materials including disposal complete as directed by the Engineer-in-charge.

Unit = Cum
Taking output = 28.34 Cum

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL15	Beldar/mazdoor (unskilled)	day	8.00	410.97 / Day	3,287.76
PL31	Coolie	day	6.00	410.97 / Day	2,465.82
PM1551	Sundries	LS	31.25	1.00 / LS	31.25
				Total Resource Cost	**5,784.83**
	Contractor's Profit Including Over Head @12.5%			5,784.83 x 12.5 %	723.10
	Labour Cess @1%			6,507.93 x 1 %	65.08
		Cost For 28.34 Cum			6,573.01
		Rate per Cum			231.93
		Say Rs. Per Cum			**231.90**

1-10-4 Slip clearance (by manual means) of earth and boulders including disposal complete as directed by the Engineer-in-charge.

Unit = Cum
Taking output = 28.34 Cum

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL15	Beldar/mazdoor (unskilled)	day	10.00	410.97 / Day	4,109.70
PL31	Coolie	day	4.00	410.97 / Day	1,643.88
PM1551	Sundries	LS	42.00	1.00 / LS	42.00
				Total Resource Cost	**5,795.58**
	Contractor's Profit Including Over Head @12.5%			5,795.58 x 12.5 %	724.45
	Labour Cess @1%			6,520.03 x 1 %	65.20
		Cost For 28.34 Cum			6,585.23
		Rate per Cum			232.37
		Say Rs. Per Cum			**232.40**

1-10-5 Slip clearance (by manual means) of boulders only including disposal complete as directed by the Engineer-in-charge.

Unit = Cum
Taking output = 28.34 Cum

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL15	Beldar/mazdoor (unskilled)	day	11.00	410.97 / Day	4,520.67
PL31	Coolie	day	4.00	410.97 / Day	1,643.88
PM1551	Sundries	LS	42.00	1.00 / LS	42.00
				Total Resource Cost	**6,206.55**
	Contractor's Profit Including Over Head @12.5%			6,206.55 x 12.5 %	775.82
	Labour Cess @1%			6,982.37 x 1 %	69.82
		Cost For 28.34 Cum			7,052.19
		Rate per Cum			248.84
		Say Rs. Per Cum			**248.80**

1-11 Setting Out (Construction of Reference Pillars, Back Pillars and Job Pillars)

1-11-1 Construction of reference pillars with RR 1:6 stone masonary and Plastered with 1:4 Mortar, (totally under ground) of length 200mm, width 200mm and height 300mm) as per Fig. 1600.1 (b) and Technical Specification Clause 1602.1 of MORD specifications.

Unit = No.
Taking output = 100 No.

Code	Resource	Unit	Qty.	Rate	Amount
Sub Item					
1-2	Earthwork in Excavation	Cum	1.20	389.50 / Cum	467.40
1-5	Stone Masonary RR 1:6	Cum	1.20	3759.50 Cum	4,511.40
12-3	15 mm thick Plaster 1:4	Sqm	4.00	226.20 Sqm	904.80
	Add 5% for White Washing, Lettering,			5883.60 x 5%	294.18
		Cost For 100 No.			6,177.78
		Rate per No.			61.78
		Say Rs. Per No.			**61.80**

1-11-2 Construction of back pillars of RR 1:6 stone masonary and Plastered with 1:4 Mortar, of length 300mm, width 300mm and height 400mm of which 100 mm shall be below ground level as per Fig. 1600.1 (b) and Technical Specification Clause 1602.3 of MORD specifications

Unit = No.
Taking output = 100 No.

Code	Resource	Unit	Qty.	Rate	Amount
Sub Item					

1-2	Earthwork in Excavation	Cum	0.90	389.50 / Cum	350.55
1-5	Stone Masonary RR 1:6	Cum	3.60	3759.50 Cum	13,534.20
12-3	15 mm thick Plaster 1:4	Sqm	45.00	226.20 Sqm	10,179.00
	Add 5% for White Washing, Lettering,			24063.75 x 5%	1,203.19
		Cost For 100 No.			25,266.94
		Rate per No.			252.67
		Say Rs. Per No.			**252.70**

1-11-3 Construction of Job pillers of RR 1:6 stone masonary and Plastered with 1:4 Mortar, of length 400mm, width 400mm and height 600mm of which 100 mm shall be below ground level as per Fig. 1600.1 (d) and Technical Specification Clause 1602.4 of MORD specifications

Unit = No.
Taking output = 100 No.

Code	Resource	Unit	Qty.	Rate	Amount
Sub Item					
1-2	Earthwork in Excavation	Cum	1.60	389.50 / Cum	623.20
1-5	Stone Masonary RR 1:6	Cum	9.60	3759.50 Cum	36,091.20
12-3	15 mm thick Plaster 1:4	Sqm	96.00	226.20 Sqm	21,715.20
	Add 5% for White Washing, Lettering,			58429.60 x 5%	2,921.48
		Cost For 100 No.			61,351.08
		Rate per No.			613.51
		Say Rs. Per No.			**613.50**

1-12 Providing edge stones of Size 450x350x100 mm on valley side of formation as per drawing and technical specification clause 1608.2.6

Unit = No
Taking output = 100 Nos

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL13	Mason 2nd class	day	1.50	462.47 / Day	693.71
PL14	Mate	day	0.18	436.72 / Day	78.61
PL15	Beldar/mazdoor (unskilled)	day	3.00	410.97 / Day	1,232.91
Material					
PM0069	Hammer Dressed Edge Stone (450 mm x 350 mm x 100 mm)	No.	100.00	24.10 / Nos.	2,410.00
				Total Resource Cost	**4,415.22**
	Contractor's Profit Including Over Head @12.5%			4,415.22 x 12.5 %	551.90
	Labour Cess @1%			4,967.13 x 1 %	49.67
		Cost For 100 Nos			5,016.80
		Rate per Nos			50.17
		Say Rs. Per Nos			**50.20**

1-13 Cleaning of fully choked scupper and catchpit complete as directed by the Engineer-in-charge.

Unit = No
Taking output = 1 Nos

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL15	Beldar/mazdoor (unskilled)	day	6.00	410.97 / Day	2,465.82
				Total Resource Cost	**2,465.82**
	Contractor's Profit Including Over Head @12.5%			2,465.82 x 12.5 %	308.23
	Labour Cess @1%			2,774.05 x 1 %	27.74
		Cost For 1 Nos			2,801.79
		Rate per Nos			2,801.79
		Say Rs. Per Nos			**2,801.80**

1-14 Cleaning of partially choked scupper and catchpit complete as directed by the Engineer-in-charge.

Unit = No
Taking output = 1 Nos

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL15	Beldar/mazdoor (unskilled)	day	3.00	410.97 / Day	1,232.91
				Total Resource Cost	**1,232.91**
	Contractor's Profit Including Over Head @12.5%			1,232.91 x 12.5 %	154.11
	Labour Cess @1%			1,387.02 x 1 %	13.87
		Cost For 1 Nos			1,400.89
		Rate per Nos			1,400.89
		Say Rs. Per Nos			**1,400.90**

2-1 **Cement plum Masonry with 40% plum & 60% 1:3:6 cement concrete including supply of all material, labour, T&P etc. required for proper completion of the work. as per drawings and technical specifications Clause 802, 803, 1202 & 1203 of MORD Specifiction**

Unit = cum
Taking output = 1 Cum

Code	Resource	Unit	Qty.	Rate	Amount
Material					
PM0136	Stone for Random Rubble Masonry	Cum	0.67	723.50 / Cum	484.75
Sub- Item					
11-4-1-1	P.C.C grade M 10 (1:3:6)	Cum	0.60	4905.20 /Cum	2,943.12
	Formwork Charges 4%			3,427.87 @ 4%	137.11
	Contractor's Profit Including Over Head @12.5%			3,564.98 x 12.5 %	445.62
	Labour Cess @1%			4,010.60 x 1 %	40.11
		Cost For 1 Cum			4,050.71
		Rate per Cum			4,050.71
		Say Rs. Per Cum			**4,050.70**

2-2 **Concrete with cement, coarse sand and 40 mm gauge stone ballast in proportion 1:4:8 in foundations and floors including supply of all material, labour and T&P etc. required for proper completion of the work. as per drawings and technical specifications Clause 802, 803, 1202 & 1203**

Unit = Cum
Taking output = 1 Cum

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL01	Bhisti	day	0.270	410.97 Day	110.96
PL12	Mason 1st class	day	0.100	462.47 Day	46.25
PL14	Mate	day	0.090	436.72 Day	39.30
PL15	Beldar/mazdoor (unskilled)	day	2.000	410.97 Day	821.94
Material					
PM0049	Cement	Tonne	0.172	6700.00 / MT	1,152.40
PM0123	Sand (Coarse)	Cum	0.48	1471.10 / Cum	706.13
PM0017	Aggregate (Single size) : 40 mm nominal size	Cum	0.94	1454.20 / Cum	1,366.95
PM1551	Sundries	LS	7.07	1.00 / LS	7.07
				Total Resource Cost	**4,251.00**
	Contractor's Profit Including Over Head @12.5%			4,251.00 x 12.5 %	531.37
	Labour Cess @1%			4,782.37 x 1 %	47.82
		Cost For 1 Cum			4,830.20
		Rate per Cum			4,830.20

	Say Rs. Per Cum	4,830.20

2-3 Cement Concrete (PCC M-30) Pavement:-

Construction of Un-reinforced, Cement concrete pavement, thickness as per design, over a prepeared sub base with 43 grade cement or any other type PCC Grade M-30, 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 then 0.2 cum capacity and appropriate weigh batcher using approved mix design, laid in approved fixed side formwork (Steel channel, laying and fixing of wedges, steel plates including levelling the formwork, as per drawing), spreading the concrete with shovels, rakes, compacted using needle, and plate vibrators, finished in continuous operation and curing of concrete slabs for 14 days, using curing compound where specified and water finishing to lines and grade as per drawings and technical specifications.

Unit = Cum
Taking output = 75.00 Cum (172.50 Tonne) [100m x 3.75m x 0.20m]

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL01	Bhisti	day	14.00	410.97 / Day	5,753.58
PL12	Mason 1st class	day	5.00	462.47 / Day	2,312.35
PL14	Mate	day	7.00	436.72 / Day	3,057.04
PL15	Beldar/mazdoor (unskilled)	day	129.00	410.97 / Day	53,015.13
PL16	Mazdoor (Semi skilled)	day	6.00	436.72 / Day	2,620.32
PL17	Mazdoor/Beldar (Skilled)	day	6.00	462.47 / Day	2,774.82
PL13	Mason 2nd class	day	5.00	462.47 / Day	2,312.35
Machine					
PMC007	Concrete mixer 0.28/0.4 cum	hours	36.00	150.00 / hours	5,400.00
PMC020	Vibrator (Needle type 40mm)	hours	9.00	60.00 / hours	540.00
PMC023	Plate vibrator	hours	9.00	60.00 / hours	540.00
PMC035	Water tanker 6 kl capacity (Truck	hours	5.00	250.00 / hours	1,250.00
Material					
PM0016	Crushed Stone Aggregate (Grading as per Clause 1501.2.4.1 (Table 1500.1) of Specification @0.9 Cum/Cum	Cum	67.500	1990.70 / Cum	1,34,372.25
PM0049	Cement	Tonne	26.250	6700.00 / MT	1,75,875.00
PM0091	Joint filler board	Sqm	3.000	35.00 / Sqm	105.00
	20mm thick [4no.x 3.75x 0.20= 3 Sqm]				
PM0123	Sand (Coarse)	Cum	33.750	1471.10 / Cum	49,649.63

	(as per IS 383 & conforming to clause 1500.2.4.2 @0.45 Cum/Cum				
PM0144	Water	KL	18.000	135.00 / KL	2,430.00
				Total Resource Cost	**4,42,007.47**
	Form Work @3% on all Resources			4,42,007.47 x 3%	13,260.22
	Contractor's Profit Including Over Head @12.5%			4,55,267.69 x 12.5 %	56,908.46
	Labour Cess @1%			5,12,176.15 x 1 %	5,121.76
		Cost For 75 Cum			5,17,297.91
		Rate Per Cum			6,897.31
		Say Rs. Per Cum			**6,897.30**

2-4 **Brick on edge pavement with straight overburnt bricks laid on edge including preparation of subgrade to prescribed camber and including supply of bricks, filling joints with local sand and spreading blinding coat 1cm (3/8") depth of local sand over the entire surface and including supply of all materials, labour and T&P etc. required for proper completion of the work.**

Unit = Sqm
Taking output = 9.29 Sqm

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL12	Mason 1st class	day	0.37	462.47 / Day	171.11
PL15	Beldar/mazdoor (unskilled)	day	2.00	410.97 / Day	821.94
Material					
PM0124	Sand (Fine)	Cum	0.28	1441.10 / Cum	403.51
PM0048	Brick	1000no.	0.55	5800.00 / 1000 Nos	3,190.00
				Total Resource Cost	**4,586.56**
	Contractor's Profit Including Over Head @12.5%			4,586.56 x 12.5 %	573.32
	Labour Cess @1%			5,159.88 x 1 %	51.60
		Cost For 9.29 Sqm			5,211.48
		Rate per Sqm			560.98
		Say Rs. Per Sqm			**561.00**

2-5 **Providing and laying of stone set pavement over 2.5 cm thick bedding layer of PCC 1:2:4 which shall further be placed over 10 cm thick dry stone kharanja or crushed stones base over a prepared subgrade as per drawings and technical specifications. The size of stones shall not be less than 20 cm x 20 cm and thickness of stones shall vary from 10 cm to 15 cm. The work includes filling of joints with PCC 1:2:4 as per the standard drawings and instructions of the Engineer-in-Charge.**

Unit = Sqm
Taking output = 360.00 Sqm

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL13	Mason 2nd class	day	49.00	462.47 / Day	22,661.03
PL14	Mate	day	5.76	436.72 / Day	2,515.51
PL15	Beldar/mazdoor (unskilled)	day	105.00	410.97 / Day	43,151.85
Machine					
PMC035	Water tanker 6 kl capacity (Truck	hours	1.00	250.00 / hours	250.00
Material					
PM0136	Stone for Random Rubble Masonry	Cum	67.82	723.50 / Cum	49,067.77
				Total Resource Cost	**1,17,646.16**
Sub-Itm					
11-4-3-1	PCC 1:2:4 Nominal Mix	Cum	21.96	5393.51 /Cum	1,18,441.54
	Contractor's Profit Including Over Head @12.5%			2,36,087.69 x 12.5 %	29,510.96
	Labour Cess @1%			2,65,598.66 x 1 %	2,655.99
		Cost For 360.00 Sqm			2,68,254.64
		Rate Per Sqm			745.15
		Say Rs. Per Sqm			**745.20**

2-6 Providing and Laying of Interlocking Concrete Block Pavements of M-40 Grade having thickness 80 mm as per drawings and Technical Specification Clause 1504.

Unit = Sqm
Taking output = 225.00 Sqm

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL14	Mate	day	1.00	436.72 / Day	436.72
PL15	Beldar/mazdoor (unskilled)	day	17.00	410.97 / Day	6,986.49
PL13	Mason 2nd class	day	8.00	462.47 / Day	3,699.76
Machine					
PMC035	Water tanker 6 kl capacity (Truck	hours	2.00	250.00 / hours	500.00
Material					
PM2283	Interlocking Blocks (M-40) with 80 mm thickness	Sqm	243.00	504.00 / Sqm	1,22,472.00
	(including for Wastage & Edge Block)				
PM0123	Sand (Coarse)	Cum	7.23	1471.10 / Cum	10,636.05
	for Bed 3cm th = 6.75 Cum for filling of Joints = 0.48 Cum				
PM0144	Water	KL	3.00	135.00 / KL	405.00
	For Wetting of Bedding Sand				
				Total Resource Cost	**1,45,136.02**
	Form Work @3% on all Resources			1,45,136.02 x 3%	4,354.08

	Contractor's Profit Including Over Head @12.5%	1,49,490.10 x 12.5 %	18,686.26
	Labour Cess @1%	1,68,176.37 x 1 %	1,681.76
	Cost For 225 Sqm		1,69,858.13
	Rate Per Sqm		754.93
	Say Rs. Per Sqm		**754.90**

3-1 Tack coat using VG-10 grade bitumen

3-1-1 Over normal bituminous surfaces @0.35kg/sqm,

Unit = Sqm
Taking output = 1750 Sqm

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL14	Mate	day	0.04	436.72 / Day	17.47
PL15	Beldar/mazdoor (unskilled)	day	1.00	410.97 / Day	410.97
Machine					
PMC001	Air Compressor 210 cfm	hours	1.40	330.00 / hours	462.00
PMC006	Bitumen emulsion pressure distributor	hours	1.00	970.00 / hours	970.00
PMC013	Hydraulic broom with tractor	hours	1.40	400.00 / hours	560.00
Material					
PM2289	Bitumen VG-10 (Packed)	Tonne	0.61	48216.00 / MT	29,411.76
				Total Resource Cost	**31,832.20**
	Contractor's Profit Including Over Head @12.5%			31,832.20 x 12.5 %	3,979.02
	Labour Cess @1%			35,811.22 x 1 %	358.11
		Cost For 1750 Sqm			36,169.34
		Rate per Sqm			20.67
		Say Rs. Per Sqm			**20.70**

3-1-2 Over dry and hungry bituminous surfaces @0.40 kg/sqm

Unit = Sqm
Taking output = 1750 Sqm

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL14	Mate	day	0.04	436.72 / Day	17.47
PL15	Beldar/mazdoor (unskilled)	day	1.00	410.97 / Day	410.97
Machine					
PMC001	Air Compressor 210 cfm	hours	1.40	330.00 / hours	462.00
PMC006	Bitumen emulsion pressure distributor	hours	1.00	970.00 / hours	970.00
PMC013	Hydraulic broom with tractor	hours	1.40	400.00 / hours	560.00
Material					
PM2289	Bitumen VG-10 (Packed)	Tonne	0.70	48216.00 / MT	33,751.20
				Total Resource Cost	**36,171.64**
	Contractor's Profit Including Over Head @12.5%			36,171.64 x 12.5 %	4,521.45
	Labour Cess @1%			40,693.09 x 1 %	406.93
		Cost For 1750 Sqm			41,100.02
		Rate per Sqm			23.49
		Say Rs. Per Sqm			**23.50**

3-1-3 Over granular surfaces treated with primer @ 0.40 kg/sqm

Unit = Sqm
Taking output = 1750 Sqm

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL14	Mate	day	0.04	436.72 / Day	17.47
PL15	Beldar/mazdoor (unskilled)	day	1.00	410.97 / Day	410.97
Machine					
PMC001	Air Compressor 210 cfm	hours	1.40	330.00 / hours	462.00
PMC006	Bitumen emulsion pressure distributor	hours	1.00	970.00 / hours	970.00
PMC013	Hydraulic broom with tractor	hours	1.40	400.00 / hours	560.00
Material					
PM2289	Bitumen VG-10 (Packed)	Tonne	0.70	48216.00 / MT	33,751.20
				Total Resource Cost	**36,171.64**
	Contractor's Profit Including Over Head @12.5%			36,171.64 x 12.5 %	4,521.45
	Labour Cess @1%			40,693.09 x 1 %	406.93
		Cost For 1750 Sqm			41,100.02
		Rate per Sqm			23.49
		Say Rs. Per Sqm			**23.50**

3-1-4 Over cement concrete pavement @0.45 kg/sqm

Unit = Sqm
Taking output = 1750 Sqm

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL14	Mate	day	0.04	436.72 / Day	17.47
PL15	Beldar/mazdoor (unskilled)	day	1.00	410.97 / Day	410.97
Machine					
PMC001	Air Compressor 210 cfm	hours	1.40	330.00 / hours	462.00
PMC006	Bitumen emulsion pressure distributor	hours	1.00	970.00 / hours	970.00
PMC013	Hydraulic broom with tractor	hours	1.40	400.00 / hours	560.00
Material					
PM2289	Bitumen VG-10 (Packed)	Tonne	0.79	48216.00 / MT	38,090.64
				Total Resource Cost	**40,511.08**
	Contractor's Profit Including Over Head @12.5%			40,511.08 x 12.5 %	5,063.88
	Labour Cess @1%			45,574.96 x 1 %	455.75
		Cost For 1750 Sqm			46,030.71
		Rate per Sqm			26.30
		Say Rs. Per Sqm			**26.30**

3-2 Cleaning of the existing WBM surface surface and laying 2 cm thick premix carpet over a tack coat (including cost of Tack coat) with graded approved grit and bitumen including heating the bitumen to the required temperature and mixing either in mixer or in hand drums, including cartage of materials, maintenance of side patries, and watering them during operation for proper completion of the work including supply of all labour, material, machine, T&P etc, as per PWD Specification and as directed by the engineer-in-charge.

3-2-1 With VG-30 grade Bitumen

DELETED as per office order no.866/10 अधिप्राप्ति 2023 Date 15-09-2023

3-2-2 With VG-10 grade Bitumen

DELETED as per office order no.866/10 अधिप्राप्ति 2023 Date 15-09-2023

3-3 **Providing and laying Dense Bituminous Macadam with the use of batch type HMP using crushed aggregates of specified grading, premixed with bituminous binder @ 4.25% by weight of total mix 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 specification clause No. 507 complete in all respects.**

3-3-1 **Grading I - 37.5mm nominal size**

Unit = Cum
Taking output = 195.00 Cum (450 Tonne)

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL14	Mate	day	0.84	436.72 / Day	366.84
PL15	Beldar/mazdoor (unskilled)	day	16.00	410.97 / Day	6,575.52
PL17	Mazdoor/Beldar (Skilled)	day	5.00	462.47 / Day	2,312.35
Machine					
PMC012	Front end-loader 1 cum bucket capacity	hours	6.00	1000.00 / hours	6,000.00
PMC027	Three wheel 80-100 kN Static Roller	hours	3.90	520.00 / hours	2,028.00
PMC034	Vibratory roller 80-100 kN	hours	3.90	1400.00 / hours	5,460.00
PMC050	Hotmix Plant 60 to 90 TPH capacity	hours	6.00	12500.00 / hours	75,000.00
PMC056	Paver Finisher Hydrostatic with sensor	hours	6.00	2450.00 / hours	14,700.00
PMC066	Smooth Wheeled Roller 8 tonne	hours	3.90	520.00 / hours	2,028.00
PMC068	Tipper 5.5 cum in tonne.km	hours	4,500.00	4.00 / MT.Km	18,000.00
PMC097	Generator 250 KVA	hours	6.00	1710.00 / hours	10,260.00
Material					
PM0008	Aggregate - Grading I (40 mm nominal Size) 10 mm - 5 / 4.75 mm	Cum	54.58	1990.70 / Cum	1,08,652.41

PM0009	Aggregate - Grading I (40 mm nominal Size) 25 mm – 10 mm	Cum	37.34	1990.70 / Cum	74,332.74
PM0010	Aggregate - Grading I (40 mm nominal Size) 37.25 mm - 25 mm	Cum	63.19	1990.70 / Cum	1,25,792.33
PM0011	Aggregate - Grading I (40 mm nominal Size) 5 mm and below	Cum	126.39	1990.70 / Cum	2,51,604.57
PM0040	Bitumen VG-30 (Bulk)	tonne	19.13	43016.00 / MT	8,22,896.08
PM0095	Lime	tonne	8.62	7000.00 / MT	60,340.00
				Total Resource Cost	**15,86,348.84**
	Contractor's Profit Including Over Head @12.5%			15,86,348.84 x 12.5 %	1,98,293.61
	Labour Cess @1%			17,84,642.45 x 1 %	17,846.42
		Cost For 195.00 Cum			18,02,488.87
		Rate Per Cum			9,243.53
		Say Rs. Per Cum			**9,243.50**

3-3-2 Grading II - 26.5mm nominal size

Unit = Cum
Taking output = 195.00 Cum (450 Tonne)

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL14	Mate	day	0.84	436.72 / Day	366.84
PL15	Beldar/mazdoor (unskilled)	day	16.00	410.97 / Day	6,575.52
PL17	Mazdoor/Beldar (Skilled)	day	5.00	462.47 / Day	2,312.35
Machine					
PMC012	Front end-loader 1 cum bucket capacity	hours	6.00	1000.00 / hours	6,000.00
PMC027	Three wheel 80-100 kN Static Roller	hours	3.90	520.00 / hours	2,028.00
PMC034	Vibratory roller 80-100 kN	hours	3.90	1400.00 / hours	5,460.00
PMC050	Hotmix Plant 60 to 90 TPH capacity	hours	6.00	12500.00 / hours	75,000.00
PMC056	Paver Finisher Hydrostatic with sensor	hours	6.00	2450.00 / hours	14,700.00
PMC066	Smooth Wheeled Roller 8 tonne	hours	3.90	520.00 / hours	2,028.00
PMC068	Tipper 5.5 cum in tonne.km	hours	4,500.00	4.00 / MT.Km	18,000.00
PMC097	Generator 250 KVA	hours	6.00	1710.00 / hours	10,260.00
Material					
PM0012	Aggregate - Grading II (19 mm nominal Size) 10 mm - 5 mm	Cum	80.43	1990.70 / Cum	1,60,112.00
PM0013	Aggregate - Grading II (19 mm nominal Size) 25 mm – 10 mm	Cum	86.16	1990.70 / Cum	1,71,518.71
PM0014	Aggregate - Grading II (19 mm nominal Size) 5 mm and below	Cum	114.90	1990.70 / Cum	2,28,731.43
PM0040	Bitumen VG-30 (Bulk)	tonne	19.13	43016.00 / MT	8,22,896.08
PM0095	Lime	tonne	8.62	7000.00 / MT	60,340.00
				Total Resource Cost	**15,86,328.94**

	Contractor's Profit Including Over Head @12.5%	15,86,328.94 x 12.5 %	1,98,291.12
	Labour Cess @1%	17,84,620.06 x 1 %	17,846.20
	Cost For 195.00 Cum		18,02,466.26
	Rate Per Cum		9,243.42
	Say Rs. Per Cum		**9,243.40**

3-4 **Providing and laying Bituminous Concrete with the use of batch type hot mix plant using crushed aggregates of specified grading, premixed with bituminous binder, 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 specification clause No. 509 complete in all respects**

3-4-1 **for Grading-I (bituminous binder @ 5.2 % of mix)**

Unit = Cum
Taking output = 191.00 Cum (450 Tonne)

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL14	Mate	day	0.84	436.72 / Day	366.84
PL15	Beldar/mazdoor (unskilled)	day	16.00	410.97 / Day	6,575.52
PL17	Mazdoor/Beldar (Skilled)	day	5.00	462.47 / Day	2,312.35
Machine					
PMC012	Front end-loader 1 cum bucket capacity	hours	6.00	1000.00 / hours	6,000.00
PMC027	Three wheel 80-100 kN Static Roller	hours	3.90	520.00 / hours	2,028.00
PMC034	Vibratory roller 80-100 kN	hours	3.90	1400.00 / hours	5,460.00
PMC050	Hotmix Plant 60 to 90 TPH capacity	hours	6.00	12500.00 / hours	75,000.00
PMC056	Paver Finisher Hydrostatic with sensor	hours	6.00	2450.00 / hours	14,700.00
PMC066	Smooth Wheeled Roller 8 tonne	hours	3.90	520.00 / hours	2,028.00
PMC068	Tipper 5.5 cum in tonne.km	hours	4,500.00	4.00 / MT.Km	18,000.00
	Add 10 % of cost of carriage to cover cost of loading and unloading			18000.00 x 10%	1,800.00
PMC097	Generator 250 KVA	hours	6.00	1710.00 / hours	10,260.00
Material					
PM0040	Bitumen VG-30 (Bulk)	Tonne	23.40	43016.00 / MT	10,06,574.40
PM0095	Lime	Tonne	8.60	7000.00 / MT	60,200.00
PM0012	Aggregate - Grading II (19 mm nominal Size) 10 mm - 5 mm	Cum	65.41	1990.70 / Cum	1,30,211.69
PM0014	Aggregate - Grading II (19 mm nominal Size) 5 mm and below	Cum	113.76	1990.70 / Cum	2,26,462.03
PM0190	Aggregates 20 mm to 10 mm	Cum	99.54	1990.70 / Cum	1,98,154.28
				Total Resource Cost	**17,66,133.11**
	Contractor's Profit Including Over Head @12.5%			17,66,133.11 x 12.5 %	2,20,766.64

	Labour Cess @1%	19,86,899.75 x 1 %	19,869.00
		Cost For 191.00 Cum	20,06,768.75
		Rate Per Cum	10,506.64
		Say Rs. Per Cum	**10,506.60**

3-4-2 for Grading-II (bituminous binder @ 5.4 % of mix)

Unit = Cum
Taking output = 191.00 Cum (450 Tonne)

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL14	Mate	day	0.84	436.72 / Day	366.84
PL15	Beldar/mazdoor (unskilled)	day	16.00	410.97 / Day	6,575.52
PL17	Mazdoor/Beldar (Skilled)	day	5.00	462.47 / Day	2,312.35
Machine					
PMC012	Front end-loader 1 cum bucket capacity	hours	6.00	1000.00 / hours	6,000.00
PMC027	Three wheel 80-100 kN Static Roller	hours	3.90	520.00 / hours	2,028.00
PMC034	Vibratory roller 80-100 kN	hours	3.90	1400.00 / hours	5,460.00
PMC050	Hotmix Plant 60 to 90 TPH capacity	hours	6.00	12500.00 / hours	75,000.00
PMC056	Paver Finisher Hydrostatic with sensor	hours	6.00	2450.00 / hours	14,700.00
PMC066	Smooth Wheeled Roller 8 tonne	hours	3.90	520.00 / hours	2,028.00
PMC068	Tipper 5.5 cum in tonne.km	hours	4,500.00	4.00 / MT.Km	18,000.00
	Add 10 % of cost of carriage to cover cost of loading and unloading			18000.00 x 10%	1,800.00
PMC097	Generator 250 KVA	hours	6.00	1710.00 / hours	10,260.00
Material					
PM0040	Bitumen VG-30 (Bulk)	Tonne	24.30	43016.00 / MT	10,45,288.80
PM0095	Lime	Tonne	8.59	7000.00 / MT	60,130.00
PM0012	Aggregate - Grading II (19 mm nominal Size) 10 mm - 5 mm	Cum	70.95	1990.70 / Cum	1,41,240.17
PM0014	Aggregate - Grading II (19 mm nominal Size) 5 mm and below	Cum	122.03	1990.70 / Cum	2,42,925.12
PM0189	Aggregates 13.2 mm to 10 mm	Cum	85.14	1990.70 / Cum	1,69,488.20
				Total Resource Cost	**18,03,603.00**
	Contractor's Profit Including Over Head @12.5%			18,03,603.00 x 12.5 %	2,25,450.37
	Labour Cess @1%			20,29,053.37 x 1 %	20,290.53
		Cost For 191.00 Cum			20,49,343.91
		Rate Per Cum			10,729.55
		Say Rs. Per Cum			**10,729.50**

3-5 **Providing and laying Semi Dense Bituminous Concrete with the use of batch type HMP producing an average output of 75 tonnes per hour using crushed aggregates of specified grading, premixed with bituminous binder 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 specification clause No. 508 complete in all respects**

3-5-1 **Grading I - 13mm using Bitumen VG - 10 (bituminous binder @ 4.5 % of mix)**

Unit = Cum
Taking output = 195 Cum

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL14	Mate	day	0.84	436.72 / Day	366.84
PL15	Beldar/mazdoor (unskilled)	day	16.00	410.97 / Day	6,575.52
PL17	Mazdoor/Beldar (Skilled)	day	5.00	462.47 / Day	2,312.35
Machine					
PMC002	Batch mix HMP 40-60 TPH	hours	6.00	15250.00 / hours	91,500.00
PMC012	Front end-loader 1 cum bucket capacity	hours	6.00	1000.00 / hours	6,000.00
PMC027	Three wheel 80-100 kN Static Roller	hours	3.90	520.00 / hours	2,028.00
PMC034	Vibratory roller 80-100 kN	hours	3.90	1400.00 / hours	5,460.00
PMC056	Paver Finisher Hydrostatic with sensor	hours	6.00	2450.00 / hours	14,700.00
PMC066	Smooth Wheeled Roller 8 tonne	hours	3.90	520.00 / hours	2,028.00
PMC068	Tipper 5.5 cum in tonne.km	hours	4,500.00	4.00 / MT.Km	18,000.00
	Cost of Carriage to Cover Cost of Loading and Unloading 10%			18000.00 x 10%	1,800.00
PMC097	Generator 250 KVA	hours	6.00	1710.00 / hours	10,260.00
Material					
PM0012	Aggregate - Grading II (19 mm nominal Size) 10 mm - 5 mm	Cum	108.87	1990.70 / Cum	2,16,727.51
PM0041	Bitumen VG-10 (Bulk)	Tonne	20.25	40716.00 / MT	8,24,499.00
PM0095	Lime	Tonne	8.62	7000.00 / MT	60,340.00
PM0181	Aggregates below 5.6 mm	Cum	114.60	1990.70 / Cum	2,28,134.22
PM0189	Aggregates 13.2 mm to 10 mm	Cum	57.30	1990.70 / Cum	1,14,067.11
				Total Resource Cost	**16,04,798.55**
	Contractor's Profit Including Over Head @12.5%			16,04,798.55 x 12.5 %	2,00,599.82
	Labour Cess @1%			18,05,398.37 x 1 %	18,053.98
		Cost For 195 Cum			18,23,452.36
		Rate per Cum			9,351.04
		Say Rs. Per Cum			**9,351.00**

3-5-2 **Grading II - 10mm using VG - 10 bitumen (bituminous binder @ 5 % of mix)**

Unit = Cum
Taking output = 195 Cum

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL14	Mate	day	0.84	436.72 / Day	366.84
PL15	Beldar/mazdoor (unskilled)	day	16.00	410.97 / Day	6,575.52
PL17	Mazdoor/Beldar (Skilled)	day	5.00	462.47 / Day	2,312.35
Machine					
PMC002	Batch mix HMP 40-60 TPH	hours	6.00	15250.00 / hours	91,500.00
PMC012	Front end-loader 1 cum bucket capacity	hours	6.00	1000.00 / hours	6,000.00
PMC027	Three wheel 80-100 kN Static Roller	hours	3.90	520.00 / hours	2,028.00
PMC034	Vibratory roller 80-100 kN	hours	3.90	1400.00 / hours	5,460.00
PMC056	Paver Finisher Hydrostatic with sensor	hours	6.00	2450.00 / hours	14,700.00
PMC066	Smooth Wheeled Roller 8 tonne	hours	3.90	520.00 / hours	2,028.00
PMC068	Tipper 5.5 cum in tonne.km	hours	4,500.00	4.00 / MT.Km	18,000.00
	Cost of Carriage to Cover Cost of Loading and Unloading 10%			18000.00 x 10%	1,800.00
PMC097	Generator 250 KVA	hours	6.00	1710.00 / hours	10,260.00
Material					
PM0012	Aggregate - Grading II (19 mm nominal Size) 10 mm - 5 mm	Cum	162.45	1990.70 / Cum	3,23,389.22
PM0041	Bitumen VG-10 (Bulk)	Tonne	22.50	40716.00 / MT	9,16,110.00
PM0095	Lime	Tonne	8.62	7000.00 / MT	60,340.00
PM0181	Aggregates below 5.6 mm	Cum	116.85	1990.70 / Cum	2,32,613.30
				Total Resource Cost	**16,93,483.22**
	Contractor's Profit Including Over Head @12.5%			16,93,483.22 x 12.5 %	2,11,685.40
	Labour Cess @1%			19,05,168.63 x 1 %	19,051.69
		Cost For 195 Cum			19,24,220.31
		Rate per Cum			9,867.80
		Say Rs. Per Cum			**9,867.80**

3-5-3 Grading I - 13mm using Bitumen VG - 30 (bituminous binder @ 4.5 % of mix)

Unit = Cum
Taking output = 195 Cum

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL14	Mate	day	0.84	436.72 / Day	366.84
PL15	Beldar/mazdoor (unskilled)	day	16.00	410.97 / Day	6,575.52
PL17	Mazdoor/Beldar (Skilled)	day	5.00	462.47 / Day	2,312.35
Machine					
PMC002	Batch mix HMP 40-60 TPH	hours	6.00	15250.00 / hours	91,500.00
PMC012	Front end-loader 1 cum bucket capacity	hours	6.00	1000.00 / hours	6,000.00

PMC027	Three wheel 80-100 kN Static Roller	hours	3.90	520.00 / hours	2,028.00
PMC034	Vibratory roller 80-100 kN	hours	3.90	1400.00 / hours	5,460.00
PMC056	Paver Finisher Hydrostatic with sensor	hours	6.00	2450.00 / hours	14,700.00
PMC066	Smooth Wheeled Roller 8 tonne	hours	3.90	520.00 / hours	2,028.00
PMC068	Tipper 5.5 cum in tonne.km	hours	4,500.00	4.00 / MT.Km	18,000.00
	Cost of Carriage to Cover Cost of Loading and Unloading 10%			18000.00 x 10%	1,800.00
PMC097	Generator 250 KVA	hours	6.00	1710.00 / hours	10,260.00
Material					
PM0012	Aggregate - Grading II (19 mm nominal Size) 10 mm - 5 mm	Cum	108.87	1990.70 / Cum	2,16,727.51
PM0040	Bitumen VG-30 (Bulk)	Tonne	20.25	43016.00 / MT	8,71,074.00
PM0095	Lime	Tonne	8.62	7000.00 / MT	60,340.00
PM0181	Aggregates below 5.6 mm	Cum	114.60	1990.70 / Cum	2,28,134.22
PM0189	Aggregates 13.2 mm to 10 mm	Cum	57.30	1990.70 / Cum	1,14,067.11
				Total Resource Cost	**16,51,373.55**
	Contractor's Profit Including Over Head @12.5%			16,51,373.55 x 12.5 %	2,06,421.69
	Labour Cess @1%			18,57,795.25 x 1 %	18,577.95
		Cost For 195 Cum			18,76,373.20
		Rate per Cum			9,622.43
		Say Rs. Per Cum			**9,622.40**

3-5-4 Grading II - 10mm using VG - 30 bitumen (bituminous binder @ 5 % of mix)

Unit = Cum
Taking output = 195 Cum

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL14	Mate	day	0.84	436.72 / Day	366.84
PL15	Beldar/mazdoor (unskilled)	day	16.00	410.97 / Day	6,575.52
PL17	Mazdoor/Beldar (Skilled)	day	5.00	462.47 / Day	2,312.35
Machine					
PMC002	Batch mix HMP 40-60 TPH	hours	6.00	15250.00 / hours	91,500.00
PMC012	Front end-loader 1 cum bucket capacity	hours	6.00	1000.00 / hours	6,000.00
PMC027	Three wheel 80-100 kN Static Roller	hours	3.90	520.00 / hours	2,028.00
PMC034	Vibratory roller 80-100 kN	hours	3.90	1400.00 / hours	5,460.00
PMC056	Paver Finisher Hydrostatic with sensor	hours	6.00	2450.00 / hours	14,700.00
PMC066	Smooth Wheeled Roller 8 tonne	hours	3.90	520.00 / hours	2,028.00
PMC068	Tipper 5.5 cum in tonne.km	hours	4,500.00	4.00 / MT.Km	18,000.00
	Cost of Carriage to Cover Cost of Loading and Unloading 10%			18000.00 x 10%	1,800.00
PMC097	Generator 250 KVA	hours	6.00	1710.00 / hours	10,260.00
Material					

PM0012	Aggregate - Grading II (19 mm nominal Size) 10 mm - 5 mm	Cum	162.45	1990.70 / Cum	3,23,389.22
PM0040	Bitumen VG-30 (Bulk)	Tonne	22.50	43016.00 / MT	9,67,860.00
PM0095	Lime	Tonne	8.62	7000.00 / MT	60,340.00
PM0181	Aggregates below 5.6 mm	Cum	116.85	1990.70 / Cum	2,32,613.30
				Total Resource Cost	**17,45,233.22**
	Contractor's Profit Including Over Head @12.5%			17,45,233.22 x 12.5 %	2,18,154.15
	Labour Cess @1%			19,63,387.38 x 1 %	19,633.87
			Cost For 195 Cum		19,83,021.25
			Rate per Cum		10,169.34
			Say Rs. Per Cum		**10,169.30**

3-6 Providing and laying Slurry Seal consisting of a mixture of fine aggregates, portland cement filler, bituminous emulsion and water on a road surface including cleaning of surface, mixing of slurry seal in a suitable mobile plant, laying and compacting to provide even riding surface as per MoRTH specification

3-6-1 Slurry Seal 5 mm thickness

Unit = Sqm
Taking output = 16000 Sqm

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL14	Mate	day	0.24	436.72 / Day	104.81
PL15	Beldar/mazdoor (unskilled)	day	6.00	410.97 / Day	2,465.82
Machine					
PMC012	Front end-loader 1 cum bucket capacity	hours	6.00	1000.00 / hours	6,000.00
PMC013	Hydraulic broom with tractor	hours	6.00	400.00 / hours	2,400.00
PMC028	Tipper 5.5 cum/10 ton capacity	hours	6.00	550.00 / hours	3,300.00
PMC055	Mobile slurry seal equipment	hours	6.00	800.00 / hours	4,800.00
PMC059	Pneumatic Road Roller	hours	6.00	930.00 / hours	5,580.00
PMC078	Water Tanker	hours	2.00	200.00 / hours	400.00
PMC133	Air compressor 250 cfm with two leads	hours	6.00	2640.00 / day	1,980.00
Material					
PM0043	Bitumen Emulsion (SS-1)	Tonne	19.36	40243.00 / MT	7,79,104.48
PM0095	Lime	Tonne	3.52	7000.00 / MT	24,640.00
PM0144	Water	KL	12.00	135.00 / KL	1,620.00
PM0181	Aggregates below 5.6 mm	Cum	102.08	1990.70 / Cum	2,03,210.66
				Total Resource Cost	**10,35,605.77**
	Contractor's Profit Including Over Head @12.5%			10,35,605.77 x 12.5 %	1,29,450.72
	Labour Cess @1%			11,65,056.49 x 1 %	11,650.56
			Cost For 16000 Sqm		11,76,707.05
			Rate per Sqm		73.54

	Say Rs. Per Sqm	**73.50**

3-6-2 Slurry Seal 3 mm thickness

Unit = Sqm
Taking output = 20000 Sqm

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL14	Mate	day	0.20	436.72 / Day	87.34
PL15	Beldar/mazdoor (unskilled)	day	5.00	410.97 / Day	2,054.85
Machine					
PMC012	Front end-loader 1 cum bucket capacity	hours	6.00	1000.00 / hours	6,000.00
PMC013	Hydraulic broom with tractor	hours	6.00	400.00 / hours	2,400.00
PMC028	Tipper 5.5 cum/10 ton capacity	hours	6.00	550.00 / hours	3,300.00
PMC055	Mobile slurry seal equipment	hours	6.00	800.00 / hours	4,800.00
PMC078	Water Tanker	hours	2.00	200.00 / hours	400.00
PMC133	Air compressor 250 cfm with two leads	hours	6.00	2640.00 / day	1,980.00
Material					
PM0043	Bitumen Emulsion (SS-1)	Tonne	17.16	40243.00 / MT	6,90,569.88
PM0095	Lime	Tonne	2.64	7000.00 / MT	18,480.00
PM0144	Water	KL	12.00	135.00 / KL	1,620.00
PM0155	Well Graded Material for Sub-Base - Grading II 2.36 mm below	Cum	74.80	1076.20 / Cum	80,499.76
				Total Resource Cost	**8,12,191.83**
	Contractor's Profit Including Over Head @12.5%			8,12,191.83 x 12.5 %	1,01,523.98
	Labour Cess @1%			9,13,715.81 x 1 %	9,137.16
		Cost For 20000 Sqm			9,22,852.97
		Rate per Sqm			46.14
		Say Rs. Per Sqm			**46.10**

3-6-3 Slurry Seal 1.5 mm thickness

Unit = Sqm
Taking output = 24000 Sqm

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL14	Mate	day	0.20	436.72 / Day	87.34
PL15	Beldar/mazdoor (unskilled)	day	5.00	410.97 / Day	2,054.85
Machine					
PMC012	Front end-loader 1 cum bucket capacity	hours	6.00	1000.00 / hours	6,000.00
PMC013	Hydraulic broom with tractor	hours	6.00	400.00 / hours	2,400.00
PMC028	Tipper 5.5 cum/10 ton capacity	hours	6.00	550.00 / hours	3,300.00
PMC055	Mobile slurry seal equipment	hours	6.00	800.00 / hours	4,800.00
PMC078	Water Tanker	hours	2.00	200.00 / hours	400.00

PMC133	Air compressor 250 cfm with two leads	hours	6.00	2640.00 / day	1,980.00
Material					
PM0043	Bitumen Emulsion (SS-1)	Tonne	12.67	40243.00 / MT	5,09,878.81
PM0095	Lime	Tonne	1.58	7000.00 / MT	11,060.00
PM0144	Water	KL	12.00	135.00 / KL	1,620.00
PM0155	Well Graded Material for Sub-Base - Grading II 2.36 mm below	Cum	43.30	1076.20 / Cum	46,599.46
				Total Resource Cost	**5,90,180.46**
	Contractor's Profit Including Over Head @12.5%			5,90,180.46 x 12.5 %	73,772.56
	Labour Cess @1%			6,63,953.02 x 1 %	6,639.53
		Cost For 24000 Sqm			6,70,592.55
		Rate per Sqm			27.94
		Say Rs. Per Sqm			**27.90**

3-7 Fog Spray - Providing and applying low viscosity bitumen emulsion for sealing cracks less than 3 mm wide or incipient fretting or disintegration in an existing bituminous surfacing.

3-7-1 By Mechinacal Means

Unit = Sqm
Taking output = 10500 Sqm

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL14	Mate	day	0.12	436.72 / Day	52.41
PL15	Beldar/mazdoor (unskilled)	day	3.00	410.97 / Day	1,232.91
Machine					
PMC006	Bitumen emulsion pressure distributor	hours	6.00	970.00 / hours	5,820.00
PMC013	Hydraulic broom with tractor	hours	6.00	400.00 / hours	2,400.00
PMC133	Air compressor 250 cfm with two leads	hours	6.00	2640.00 / day	1,980.00
Material					
PM1372	Bitumen emulsion medium setting (M.S.) confirming to IS : 8887-1995	Tonne	7.88	40801.00 / M.T.	3,21,511.88
				Total Resource Cost	**3,32,997.20**
	Contractor's Profit Including Over Head @12.5%			3,32,997.20 x 12.5 %	41,624.65
	Labour Cess @1%			3,74,621.85 x 1 %	3,746.22
		Cost For 10500 Sqm			3,78,368.06
		Rate per Sqm			36.04
		Say Rs. Per Sqm			**36.00**

3-7-2 Fog Spray By Mechinacal Means including Blinding Material

Unit = Sqm
Taking output = 10500 Sqm

Code	Resource	Unit	Qty.	Rate	Amount

Labour					
PL14	Mate	day	0.28	436.72 / Day	122.28
PL15	Beldar/mazdoor (unskilled)	day	7.00	410.97 / Day	2,876.79
Machine					
PMC006	Bitumen emulsion pressure distributor	hours	6.00	970.00 / hours	5,820.00
PMC013	Hydraulic broom with tractor	hours	6.00	400.00 / hours	2,400.00
PMC133	Air compressor 250 cfm with two leads	hours	6.00	2640.00 / day	1,980.00
Material					
PM0181	Aggregates below 5.6 mm	Cum	26.25	1990.70 / Cum	52,255.88
PM1372	Bitumen emulsion medium setting (M.S.) confirming to IS : 8887-1995	Tonne	8.67	40801.00 / M.T.	3,53,744.67
				Total Resource Cost	**4,19,199.62**
	Contractor's Profit Including Over Head @12.5%			4,19,199.62 x 12.5 %	52,399.95
	Labour Cess @1%			4,71,599.57 x 1 %	4,716.00
		Cost For 10500 Sqm			4,76,315.56
		Rate per Sqm			45.36
		Say Rs. Per Sqm			**45.40**

3-8 **Providing and laying microsurfacing course, comprising of dry fine aggregates conforming to grading of specification as per IRC: SP-81-2008, polymer /latex modified cationic bitumen emulsion, Ordinary portland cement as filler, chemical additives and water, including proportioning, mixing and laying of microsurfacing coarse using mechanised machine and laying unit all complete as per IRC SP-81 and MORTH specifications and direction of Engineer in Charge.**

3-8-1 **Grading -II** (Fine aggregate Type II grading @ 9.6 kg/sqm, modified emulsion @ 8.5 % by weight of dry aggregates, Cement @ 1.25 % by weight of dry aggregate and Additive @ 1.25 % by weight of dry aggregate)

Unit = Sqm
Taking output = 100 Sqm

Code	Resource	Unit	Qty.	Rate	Amount
	Lum - Sum for Mehanised Machinary & Labour	LS		8600.00	8,600.00
Material					
PM0049	Cement	Tonne	0.012	6700.00 / MT	80.40
PM0078	Fine aggregate/Crushed sand 2.36 mm	Cum	0.56	1540.70 / Cum	862.79
PM2262	Polymer Modified Emulsion	Tonne	0.083	69500.00 / M.T.	5,768.50
PM2263	Microsurfacing Additive	Tonne	0.0128	24300.00 / M.T.	311.04
				Total Resource Cost	**15,622.73**
	Water Charges			15,622.73 x 1%	156.23
	Contractor's Profit Including Over Head @12.5%			15,778.96 x 12.5 %	1,972.37
	Labour Cess @1%			17,751.33 x 1 %	177.51
		Cost For 100 Sqm			17,928.84

	Rate per Sqm	179.29
	Say Rs. Per Sqm	**179.30**

3-8-2 **Grading - III** (Fine aggregate Type III grading @ 13.7 kg/sqm, modified emulsion @8 % by weight of dry aggregates, Cement @ 1.25 % by weight of dry aggregate and Additive @ 1.25 % by weight of dry aggregate)

Unit = Sqm
Taking output = 100 Sqm

Code	Resource	Unit	Qty.	Rate	Amount
	Lum - Sum for Mehanised Machinary & Labour	LS		8600.00	8,600.00
Material					
PM0049	Cement	Tonne	0.017	6700.00 / MT	113.90
PM0078	Fine aggregate/Crushed sand 2.36 mm	Cum	0.80	1540.70 / Cum	1,232.56
PM2262	Polymer Modified Emulsion	Tonne	0.114	69500.00 / M.T.	7,923.00
PM2263	Microsurfacing Additive	Tonne	0.0180	24300.00 / M.T.	437.40
				Total Resource Cost	**18,306.86**
	Water Charges			18,306.86 x 1%	183.07
	Contractor's Profit Including Over Head @12.5%			18,489.93 x 12.5 %	2,311.24
	Labour Cess @1%			20,801.17 x 1 %	208.01
		Cost For 100 Sqm			21,009.18
		Rate per Sqm			210.09
		Say Rs. Per Sqm			**210.10**

3-9 **Mastic Asphalt**

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 antiskid surface with bitumen precoated finegrained hard stone chipping of 13.2 mm nominal size at the rate of 0.005cum per 10 sqm and at an approximate spacing of 10 cm center to center in both directions, pressed into surface when the temperature of surfaces is not less than 100 degree centigrate, protruding 1 mm to 4 mm over mastic surface, all complete as per clause 515.

Unit = Sqm
Taking output = 35 Sqm

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL14	Mate	day	0.44	436.72 / Day	192.16
PL15	Beldar/mazdoor (unskilled)	day	10.00	410.97 / Day	4,109.70
PL17	Mazdoor/Beldar (Skilled)	day	1.00	462.47 / Day	462.47
Machine					

PMC005	Bitumen boiler oil fired 1000 litre	hours	6.00	140.00 / hours	840.00
PMC013	Hydraulic broom with tractor	hours	0.06	400.00 / hours	24.00
PMC054	Mastic Cooker	hours	6.00	120.00 / hours	720.00
PMC074	Tractor	hours	1.00	380.00 / hours	380.00
PMC001	Air Compressor 210 cfm	hours	0.06	330.00 / hours	2.48
Material					
PM2288	Bitumen VG-30 (Packed)	Cum	0.20	50516.00 / MT	10,103.20
PM0078	Fine aggregate/Crushed sand 2.36 mm to 75 micron	Cum	0.39	1540.70 / Cum	600.87
PM0095	Lime	Cum	0.36	7000.00 / MT	2,520.00
PM0188	Aggregates 13.2 mm to 5.6 mm	Cum	0.55	1990.70 / Cum	1,094.89
PM0264	Pre-coated stone chips of 13.2 mm nominal size	Cum	0.018	1756.50 / Cum	31.62
				Total Resource Cost	**21,081.38**
	Contractor's Profit Including Over Head @12.5%			21,081.38 x 12.5 %	2,635.17
	Labour Cess @1%			23,716.55 x 1 %	237.17
		Cost For 35 Sqm			23,953.71
		Rate per Sqm			684.39
		Say Rs. Per Sqm			**684.40**

3-10 20mm Open graded PC (using shredded waste plastic material)

Providing, laying and rolling of open-graded premix carpet of 20 mm thickness composed of 13.2 mm to 5.6 mm aggregates using VG-30 bitumen 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 as per Technical Specification Clause 508. Using Bitumen VG-30 @ 1.34 Kg/Sqm and shredded waste plastic material @ 0.120 Kg/Sqm as per direction of Engineer-in-Charge.

Unit = Sqm
Taking output = 500 Sqm (10 Cum)

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL14	Mate	day	1.08	436.72 / Day	471.66
PL15	Beldar/mazdoor (unskilled)	day	21.00	410.97 / Day	8,630.37
PL16	Mazdoor (Semi skilled)	day	6.00	436.72 / Day	2,620.32
Machine					
PMC005	Bitumen boiler oil fired 1000 litre	hours	4.00	140.00 / hours	560.00
PMC018	Mixall 6-10 t capacity	hours	4.00	855.00 / hours	3,420.00
PMC027	Three wheel 80-100 kN Static Roller	hours	2.00	520.00 / hours	1,040.00
Material					
PM2288	Bitumen VG-30 (Packed)	Tonne	0.670	50516.00 / MT	33,845.72
PM2282	Sharded waste plastic material	Kg.	60.00	37.00 / Kg.	2,220.00
PM0188	Aggregates 13.2 mm to 5.6 mm	Cum	13.50	1990.70 / Cum	26,874.45

		Total Resource Cost	**79,682.52**
	Contractor's Profit Including Over Head @12.5%	79,682.52 x 12.5 %	9,960.31
	Labour Cess @1%	89,642.83 x 1 %	896.43
		Cost For 500 Sqm	90,539.26
		Rate Per Sqm	181.08
		Say Rs. Per Sqm	**181.10**

3-11 Seal Coat (using shredded waste plastic material)

Providing and laying seal coat sealing the voids in a bituminous surface laid to the specified levels, grade and cross fall using Type B as per Technical Specification Clause 510 Using Bitumen VG-30 @ 061 Kg/Sqm and shredded waste plastic material @ 0.07 Kg/Sqm as per direction of Engineer-in-Charge.

Unit = Sqm
Taking output = 1250 Sqm

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL14	Mate	day	0.85	436.72 / Day	371.21
PL15	Beldar/mazdoor (unskilled)	day	15.00	410.97 / Day	6,164.55
PL16	Mazdoor (Semi skilled)	day	2.00	436.72 / Day	873.44
Machine					
PMC005	Bitumen boiler oil fired 1000 litre	hours	2.50	140.00 / hours	350.00
PMC018	Mixall 6-10 t capacity	hours	2.50	855.00 / hours	2,137.50
PMC027	Three wheel 80-100 kN Static Roller	hours	2.50	520.00 / hours	1,300.00
Material					
PM2288	Bitumen VG-30 (Packed)	Tonne	0.763	50516.00 / MT	38,543.71
PM2282	Sharded waste plastic material	Kg.	87.50	37.00 / Kg.	3,237.50
PM0059	Crushed Sand or Grit Passing 2.36 mm and retained on 180 micron	Cum	7.50	1915.70 / Cum	14,367.75
				Total Resource Cost	**67,345.66**
	Contractor's Profit Including Over Head @12.5%			67,345.66 x 12.5 %	8,418.21
	Labour Cess @1%			75,763.87 x 1 %	757.64
			Cost For 1250 Sqm		76,521.51
			Rate Per Sqm		61.22
			Say Rs. Per Sqm		**61.20**

3-12 Seal Coat with Emulsion

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 Technical Specification Clause 510

3-12-1 Type A

Unit = Sqm
Taking output = 1100 Sqm

Emulsion @13 kg per 10Sqm
Crushed Stone Chipping @0.09 Cum per 10Sqm

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL02	Sprayer (for bitumen, tar etc.)	day	1.00	436.72 / Day	436.72
PL14	Mate	day	1.15	436.72 / Day	502.23
PL15	Beldar/mazdoor (unskilled)	day	22.00	410.97 / Day	9,041.34
PL16	Mazdoor (Semi skilled)	day	6.00	436.72 / Day	2,620.32
Machine					
PMC005	Bitumen boiler oil fired 1000 litre	hours	2.20	140.00 / hours	308.00
PMC027	Three wheel 80-100 kN Static Roller	hours	2.20	520.00 / hours	1,144.00
Material					
PM0043	Bitumen Emulsion (SS-1)	Tonne	1.43	40243.00 / MT	57,547.49
PM0063	Crushed Stone Chipping 6.7 mm size 100% passing 11.2 mm and retained on 2.36 mm	Cum	9.90	1990.70 / Cum	19,707.93
				Total Resource Cost	**91,308.03**
	Contractor's Profit Including Over Head @12.5%			91,308.03 x 12.5 %	11,413.50
	Labour Cess @1%			1,02,721.53 x 1 %	1,027.22
		Cost For 1100 Sqm			1,03,748.75
		Rate Per Sqm			94.32
		Say Rs. Per Sqm			**94.30**

3-12-2 Type B

Unit = Sqm
Taking output = 1250 Sqm

Emulsion @11 kg per 10Sqm
Crushed sand or grit @0.06 Cum per 10Sqm

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL14	Mate	day	0.85	436.72 / Day	371.21
PL15	Beldar/mazdoor (unskilled)	day	15.00	410.97 / Day	6,164.55
PL16	Mazdoor (Semi skilled)	day	2.00	436.72 / Day	873.44
Machine					
PMC005	Bitumen boiler oil fired 1000 litre	hours	2.50	140.00 / hours	350.00
PMC018	Mixall 6-10 t capacity	hours	2.50	855.00 / hours	2,137.50
PMC027	Three wheel 80-100 kN Static Roller	hours	2.50	520.00 / hours	1,300.00
Material					
PM0043	Bitumen Emulsion (SS-1)	Tonne	1.375	40243.00 / MT	55,334.13
PM0059	Crushed Sand or Grit Passing 2.36 mm and retained on 180 micron	Cum	7.50	1915.70 / Cum	14,367.75
				Total Resource Cost	**80,898.58**

	Contractor's Profit Including Over Head @12.5%	80,898.58 x 12.5 %	10,112.32
	Labour Cess @1%	91,010.90 x 1 %	910.11
	Cost For 1250 Sqm		91,921.01
	Rate Per Sqm		73.54
	Say Rs. Per Sqm		**73.50**

3-12-3 Type C

Unit = Sqm
Taking output = 1100 Sqm

Emulsion @10 kg per 10Sqm
Crushed stone chipping @0.09 Cum per 10Sqm

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL02	Sprayer (for bitumen, tar etc.)	day	1.00	436.72 / Day	436.72
PL14	Mate	day	1.15	436.72 / Day	502.23
PL15	Beldar/mazdoor (unskilled)	day	22.00	410.97 / Day	9,041.34
PL16	Mazdoor (Semi skilled)	day	5.00	436.72 / Day	2,183.60
Machine					
PMC005	Bitumen boiler oil fired 1000 litre	hours	2.20	140.00 / hours	308.00
PMC027	Three wheel 80-100 kN Static Roller	hours	2.20	520.00 / hours	1,144.00
Material					
PM0043	Bitumen Emulsion (SS-1)	Tonne	1.100	40243.00 / MT	44,267.30
PM0064	Crushed Stone Chipping 6.7 mm size 100% passing 9.5 mm and retained on 2.36 mm	Cum	9.90	1990.70 / Cum	19,707.93
				Total Resource Cost	**77,591.12**
	Contractor's Profit Including Over Head @12.5%			77,591.12 x 12.5 %	9,698.89
	Labour Cess @1%			87,290.01 x 1 %	872.90
		Cost For 1100 Sqm			88,162.91
		Rate Per Sqm			80.15
		Say Rs. Per Sqm			**80.10**

3-13 Add Extra for Warm Mix additive (0.4% by weight of Bitumen or as prescribed by manufacture) complete as per direction of engineer-in-charge on Bitumenious Items

Unit = Kg
Taking output = 1 kg

Code	Resource	Unit	Qty.	Rate	Amount
Material					
PM2290	Warm Mix additive	Kg	1.00	630.00 / Kg.	630.00
				Total Resource Cost	**630.00**

	Contractor's Profit Including Over Head @12.5%	630.00 x 12.5 %	78.75
	Labour Cess @1%	708.75 x 1 %	7.09
	Cost For 1 kg		715.84
	Rate per kg		715.84
	Say Rs. Per kg		**715.80**

4-1-A **Supply and fabrication of steel truss bridge as per detailed drawing attached including supply of all structural steel E-250 confirming IS 226 - 1969 required for proper completion of the bridge including ground errection of the bridge and one coat of approved quality anticirrosive (red oxide) paint of confirming IS 5660, all T&P, nuts and bolts, washers and also including supply and fixing of shop rivets required as per drawing, required equipment shall be arranged by the contractor at his own cost which shall be taken back by the contractor after satisfactory execution of the job, the rates shall include ground errection in the workshop and its dismentling after inspection, approval and removing defects, match marking of all parts, numbering and proper stacking in the premises of workshop before cartage to site of work. The work shall be executed in accordance to IS - 1915. The rates shall include cost of all material, its wastage, cutting, bending if required, welding, making holes, shop riveting, labour, T&P etc. required for proper completion of the work. including cost of cartage from workshop to Bridge Site including safe stacking of parts.**

Unit = Tonne

Taking output = 1 Tonne

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL03	Blacksmith 1st class/ Electrician	day	4.00	462.47 / Day	1,849.88
PL15	Beldar/mazdoor (unskilled)	day	20.00	410.97 / Day	8,219.40
PL16	Mazdoor (Semi skilled)	day	1.00	436.72 / Day	436.72
PL17	Mazdoor/Beldar (Skilled)	day	1.00	462.47 / Day	462.47
PL31	Coolie	day	2.00	410.97 / Day	821.94
PL38	Mistry	day	1.00	462.47 / Day	462.47
PL55	Khallasi/ Helper	day	2.00	462.47 / Day	924.94
Material					
PM0093	Jute rope 12 mm dia	Kg	50.00	68.00 / Kg.	3,400.00
PM0098	Local Wood Piles (1st Class) 100 mm x	Cum	0.45	17391.00 / Cum	7,825.95
PM0101	Structural Steel (E 250)	Tonne	1.025	66000.00 / MT	67,650.00
PM0105	Nuts, Bolts and Rivets	Kg	20.00	89150.00 / MT	1,783.00
PM0637	Welding by gas plant	Cm	500.00	1.00 / cm	500.00
				Total Resource Cost	**94,336.77**
	Contractor's Profit Including Over Head @27.5%			94,336.77 x 27.5%	25,942.61
	Labour Cess @1%			1,20,279.38 x 1 %	1,202.79
			Cost For 1 Tonne		1,21,482.18
			Rate per Tonne		1,21,482.18
			Say Rs. Per Tonne		**1,21,482.20**

4-1-B **Supply and fabrication of steel truss bridge as per detailed drawing attached including supply of all structural steel E-350 confirming IS 226 - 1969 required for proper completion of the bridge including ground errection of the bridge and one coat of approved quality anticirrosive (red oxide) paint of confirming IS 5660, all T&P, nuts and bolts, washers and also including supply and fixing of shop rivets required as per drawing, required equipment shall be arranged by the contractor at his own cost which shall be taken back by the contractor after satisfactory execution of the job, the rates shall include ground errection in the workshop and its dismentling after inspection, approval and removing defects, match marking of all parts, numbering and proper stacking in the premises of workshop before cartage to site of work. The work shall be executed in accordance to IS - 1915. The rates shall include cost of all material, its wastage, cutting, bending if required, welding, making holes, shop riveting, labour, T&P etc. required for proper completion of the work. including cost of cartage from workshop to Bridge Site including safe stacking of parts.**

Unit = Tonne
Taking output = 1 Tonne

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL03	Blacksmith 1st class/ Electrician	day	4.00	462.47 / Day	1,849.88
PL15	Beldar/mazdoor (unskilled)	day	20.00	410.97 / Day	8,219.40
PL16	Mazdoor (Semi skilled)	day	1.00	436.72 / Day	436.72
PL17	Mazdoor/Beldar (Skilled)	day	1.00	462.47 / Day	462.47
PL31	Coolie	day	2.00	410.97 / Day	821.94
PL38	Mistry	day	1.00	462.47 / Day	462.47
PL55	Khallasi/ Helper	day	2.00	462.47 / Day	924.94
Material					
PM0093	Jute rope 12 mm dia	Kg	50.00	68.00 / Kg.	3,400.00
PM0098	Local Wood Piles (1st Class) 100 mm x	Cum	0.45	17391.00 / Cum	7,825.95
PM2287	Structural Steel (E 350)	Tonne	1.025	68500.00 / MT	70,212.50
PM0105	Nuts, Bolts and Rivets	Kg	20.00	89150.00 / MT	1,783.00
PM0637	Welding by gas plant	Cm	500.00	1.00 / cm	500.00
				Total Resource Cost	**96,899.27**
	Contractor's Profit Including Over Head @27.5%			96,899.27 x 27.5%	26,647.30
	Labour Cess @1%			1,23,546.57 x 1 %	1,235.47
		Cost For 1 Tonne			1,24,782.03
		Rate per Tonne			1,24,782.03
		Say Rs. Per Tonne			**1,24,782.00**

4-2 **Erection of Steel Truss (Girder) Bridge (up to 60m span) as per drawing with required camber including cartage of fabricated parts from the place of stack near site including submission of launching plan by the contractor, (duly vetted by a recognised reputable institution/ consultant if required) and approved by the engineer-in-charge. Service bolts to used shall be of approved make. The rate including of cost of all labour, T&P, equipments, civil work and consumables, cost of arranging, fabricating, erecting and dismantling of erection scheme including the cost of its designing, revising, supervision by contractor's designeer at site during erection, also including cost of all safety measures and necessary insurances of bridge and labours for proper completion of the work as per MORTH specification no. 1905 with due regard of mansoon and as per directions of the engineer-in-charge.**

Unit = Tonne

Taking output = 135 Tonne (assuming for 30 m average span bridge)

Code	Resource	Unit	Qty.	Rate	Amount
A) Civil Works					
i) EarthWork in Excavation For Main Towers					
1-2	For Main Towers	Cum	12.96	342.75 / Cum	4,442.05
1-2	For VT Columns	Cum	5.04	342.75 / Cum	1,727.47
1-2	For Anchorage	Cum	24.00	342.75 / Cum	8,226.02
ii) Cement Plum Concrete					
2-1	For Main Towers	Cum	10.37	3080.24 / Cum	31,942.06
2-1	For VT Columns	Cum	4.03	3080.24 / Cum	12,413.35
2-1	For Anchorage	Cum	24.00	3080.24 / Cum	73,925.68
iii) RCC M-25 above Plum Masonary					
11-4-5 (MD)	For Main Towers	Cum	2.59	6362.78 / Cum	16,479.60
11-4-5 (MD)	For VT Columns	Cum	1.01	6362.78 / Cum	6,426.41
B) Steel Reinforcement @ 2% of RCC					
11-7 (MD)	For Main Towers	Tonne	0.41	57010.45 / Tonne	23,374.28
11-7 (MD)	For VT Columns	Tonne	0.16	57010.45 / Tonne	9,121.67
C) Builtup Steel Columns (consedering 33% coefficient for Reusability)					
4-1-A	For Main Towers	Tonne	8.40	94336.77 / Tonne	2,64,142.96
4-1-A	For VT Columns	Tonne	15.40	94336.77 / Tonne	4,84,262.09
	Add 50% of (A) for River Diversion and Access Path etc.			155582.64 x 50%	77,791.32
D) Steel Cable for Suspension & Trolley (consedering 33% coefficient for Reusability)					
PM0247	HTS strand	Tonne	1.10	70000.00 / MT	25,666.67
E) Labour					
i) For Erecting Side Towers and Fixing of Ropes (10 days)					
PL58	Work Supervisor	day	10.00	462.47 / Day	4,624.70
PL14	Mate	day	20.00	436.72 / Day	8,734.40
PL15	Beldar/mazdoor (unskilled)	day	100.00	410.97 / Day	41,097.00
ii) For Staging (10 days)					
PL58	Work Supervisor	day	10.00	462.47 / Day	4,624.70

PL14	Mate	day	20.00	436.72 / Day	8,734.40
PL15	Beldar/mazdoor (unskilled)	day	100.00	410.97 / Day	41,097.00
ii) For Erection (60 days)					
PL58	Work Supervisor	day	60.00	462.47 / Day	27,748.20
PL14	Mate	day	180.00	436.72 / Day	78,609.60
PL15	Beldar/mazdoor (unskilled)	day	1,500.00	410.97 / Day	6,16,455.00
ii) For Dismantling of Temp. Struct. (10 days)					
PL58	Work Supervisor	day	10.00	462.47 / Day	4,624.70
PL14	Mate	day	10.00	436.72 / Day	4,367.20
PL15	Beldar/mazdoor (unskilled)	day	60.00	410.97 / Day	24,658.20
F) Machine, Tools, Sefty equipement etc.					
	Add 50% of Above for Machine, Tools, Sefty equipement etc.			1905316.73 x 50%	9,52,658.36
				Total Resource Cost	**28,57,975.09**
	Contractor's Profit Including Over Head @27.5%			28,57,975.09 x 27.5%	7,85,943.15
	Labour Cess @1%			36,43,918.24 x 1 %	36,439.18
		Cost For 135 Tonne			36,80,357.43
		Rate per Tonne			27,261.91
		Say Rs. Per Tonne			**27,261.90**

4-3 Supplying and fixing of rivets confirming to the latest IS Code including all labour, material, riveting gun, T&P etc. required for proper completion of the work.

4-3-1 24 mm dia rivets

Unit = No.
Taking output = 100 No.

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL03	Blacksmith 1st class/ Electrician	day	2.50	462.47 / Day	1,156.18
PL15	Beldar/mazdoor (unskilled)	day	7.00	410.97 / Day	2,876.79
PL56	Riveter	day	2.50	462.47 / Day	1,156.18
PL57	Hammerman	day	2.50	436.72 / Day	1,091.80
Machine					
PMC001	Air Compressor 210 cfm	hours	10.00	330.00 / hours	3,300.00
PMC140	Rivet Gun	hours	10.00	35.00 / hours	350.00
Material					
PM0105	Nuts, Bolts and Rivets	Kg.	38.72	89150.00 / MT	3,451.89
	Add 3% of Material for T&P	LS		3451.89 x 3%	103.56
				Total Resource Cost	**13,486.38**
	Contractor's Profit Including Over Head @27.5%			13,486.38 x 27.5%	3,708.76
	Labour Cess @1%			17,195.14 x 1 %	171.95

Cost For 100 No.		17,367.09
Rate per No.		173.67
Say Rs. Per No.		**173.70**

4-3-2 22 mm dia rivets

Unit = No.
Taking output = 100 No.

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL03	Blacksmith 1st class/ Electrician	day	2.50	462.47 / Day	1,156.18
PL15	Beldar/mazdoor (unskilled)	day	7.00	410.97 / Day	2,876.79
PL56	Riveter	day	2.50	462.47 / Day	1,156.18
PL57	Hammerman	day	2.50	436.72 / Day	1,091.80
Machine					
PMC001	Air Compressor 210 cfm	hours	10.00	330.00 / hours	3,300.00
PMC140	Rivet Gun	hours	10.00	35.00 / hours	350.00
Material					
PM0105	Nuts, Bolts and Rivets	Kg.	32.53	89150.00 / MT	2,900.05
	Add 3% of Material for T&P	LS		2900.05 x 3%	87.00
				Total Resource Cost	**12,917.99**
	Contractor's Profit Including Over Head @27.5%			12,917.99 x 27.5%	3,552.45
	Labour Cess @1%			16,470.44 x 1 %	164.70
	Cost For 100 No.				16,635.14
	Rate per No.				166.35
	Say Rs. Per No.				**166.40**

4-4 Providing and laying of Empty Cement Bags (Gunny Bags) filled with local sand and tightened using sutli and carriage upto site including preparing subgrade before placing in position, also including supply of all material, labour, T&P etc required for proper completion of the work.

Unit = Bag
Taking output = 30 Bag

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL15	Beldar/mazdoor (unskilled)	day	0.25	410.97 / Day	102.74
Machine					
PMC031	Tractor with trolley.	hours	0.17	400.00 / hours	68.00
Material					
PM0279	Sand bags (Cost of sand and Empty cement bag)	Nos.	30.00	8.00 / Nos.	240.00
				Total Resource Cost	**410.74**

	Contractor's Profit Including Over Head @27.5%	410.74 x 27.5%	112.95
	Labour Cess @1%	523.70 x 1 %	5.24
		Cost For 30 Bag	528.93
		Rate per Bag	17.63
		Say Rs. Per Bag	**17.60**

4-5 Supply and Installing of High tensile steel wires / strands including all accessories for stressing, stressing operations and grouting complete as per drawings and technical specifications.

Unit = Rmt
Taking output = 40 Rmt

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL03	Blacksmith 1st class/ Electrician	day	1.00	462.47 / Day	462.47
PL11	Fitter (grade 1)	day	0.25	462.47 / Day	115.62
PL12	Mason 1st class	day	0.25	462.47 / Day	115.62
PL14	Mate	day	0.26	436.72 / Day	113.55
PL15	Beldar/mazdoor (unskilled)	day	5.00	410.97 / Day	2,054.85
Machine					
PMC062	Prestressing Jack with Pump & access 400 Ton	hours	2.50	140.00 / hours	350.00
PMC095	Generator 33 KVA	hours	3.50	450.00 / hours	1,575.00
Material					
PM0049	Cement	Tonne	0.125	6700.00 / MT	837.50
PM0239	Grouting pump with agitator	hours	1.00	764.00 / hours	764.00
PM0247	HTS strand	Tonne	0.385	70000.00 / MT	26,950.00
PM0284	Sheathing duct	Rmt	42.00	93.00 / Rmt	3,906.00
PM0302	Tube anchorage set complete with	Nos.	2.00	1800.00 / Nos.	3,600.00
				Total Resource Cost	**40,844.60**
	Contractor's Profit Including Over Head @27.5%			40,844.60 x 27.5%	11,232.27
	Labour Cess @1%			52,076.87 x 1 %	520.77
		Cost For 40 Rmt			52,597.64
		Rate per Rmt			1,314.94
		Say Rs. Per Rmt			**1,314.90**

4-6 Dewatering from foundation of abutments and wing walls (with pump capacity 4000 lit per Hr.) including wages of operator and fuel including supply of all material, labour and T&P etc. required for proper completion of the work.

Unit = Hours
Taking output = 1 Hrs

Code	Resource	Unit	Qty.	Rate	Amount
Labour					

PL15	Beldar/mazdoor (unskilled)	day	0.125	410.97 / Day	51.37
Machine					
PMC118	Hire charges of Pump set of capacity 4000 litres/hour.	hours	1.00	990.00 / day	123.75
				Total Resource Cost	**175.12**
	Contractor's Profit Including Over Head @27.5%			175.12 x 27.5%	48.16
	Labour Cess @1%			223.28 x 1 %	2.23
		Cost For 1 Hrs			225.51
		Rate per Hrs			225.51
		Say Rs. Per Hrs			**225.50**

4-7 **Dewatering of water caused due to seepage of ground water and surface water due to rain etc. excluding excavation of foundation but during execution of civil works including supply of all machine operator, khalashi, POL, T&P, accessories required for proper completion of the work.**

Unit = HP/Hr.
Taking output = 1 HP/Hr.

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL15	Beldar/mazdoor (unskilled)	day	0.015	410.97 / Day	6.16
Machine					
PMC147	Hire Charges Diesel Pump i/c POL & Accessories	HP/Hr.	1.00	40.00 / HP/Hr.	40.00
				Total Resource Cost	**46.16**
	Contractor's Profit Including Over Head @27.5%			46.16 x 27.5%	12.70
	Labour Cess @1%			58.86 x 1 %	0.59
		Cost For 1 HP/Hr.			59.45
		Rate per HP/Hr.			59.45
		Say Rs. Per HP/Hr.			**59.40**

5-1 Metal Beam Crash Barrier

5-1-1 Type - A, "W" : Metal Beam Crash Barrier

Providing and erecting a "W" metal beam crash barrier comprising of 3 mm thick corrugated sheet metal beam rail, 70 cm above road/ground level, fixed on ISMC series channel vertical post, 150 x 75 x 5 mm spaced 2 m centre to centre, 1.8 m high, 1.1 m below ground/road level, all steel parts and fitments to be galvanised by hot dip process, all fittings to conform to IS:1367 and IS:1364, metal beam rail to be fixed on the vertical post with a spacer of channel section 150 x 75 x 5 mm, 330 mm long complete as per clause 810 (if Concrete Required for Vertical post Fixing will be paid extra)

Unit = Rmt

Taking output = 4.5 Rmt

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL03	Blacksmith 1st class/ Electrician	day	0.50	462.47 / Day	231.24
PL14	Mate	day	0.06	436.72 / Day	26.20
PL15	Beldar/mazdoor (unskilled)	day	1.00	410.97 / Day	410.97
Machine					
PMC074	Tractor	hours	0.10	380.00 / hours	38.00
Material					
PM0220	Corrugated sheet, 3 mm thick, W/ Thrie beam section railing	Kg	41.21	75.00 / Kg.	3,090.75
PM0101	Structural Steel (E 250)	Kg	104.80	66000.00 / MT	6,916.80
	Channel post 150 x 75 x 5 mm,1.8 m long,3 Nos @ 16.4 kg per metre and Spacer 150 x 75 x 5 mm channel 0.33 m long,3 Nos @ 16.4 kg per metre				
PM0105	Nuts, Bolts and Rivets	Kg	20.00	89150.00 / MT	1,783.00
	Add 25 per cent of the cost of material for fabrication, nuts, bolts and washers etc.)			11790.55 x 25%	2,947.64
				Total Resource Cost	**15,444.60**
	Contractor's Profit Including Over Head @12.5%			15,444.60 x 12.5 %	1,930.57
	Labour Cess @1%			17,375.17 x 1 %	173.75
		Cost For 4.5 Rmt			17,548.92
		Rate per Rmt			3,899.76
		Say Rs. Per Rmt			**3,899.80**

5-1-2 **Type - B, "THRIE" : Metal Beam Crash Barrier**

Providing and erecting a "Thrie" metal beam crash barrier comprising of 3 mm thick corrugated sheet metal beam rail, 85 cm above road/ground level, fixed on ISMC series channel vertical post, 150 x 75 x 5 mm spaced 2 m centre to centre, 2 m high with 1.15 m below ground level, all steel parts and fitments to be galvanised by hot dip process, all fittings to conform to IS:1367 and IS:1364, metal beam rail to be fixed on the vertical post with a space of channel section 150 x 75 x 5 mm, 546 mm long complete as per clause 810 (if Concrete Required for Vertical post Fixing will be paid extra)

Unit = Rmt

Taking output = 4.5 Rmt

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL03	Blacksmith 1st class/ Electrician	day	0.50	462.47 / Day	231.24
PL14	Mate	day	0.06	436.72 / Day	26.20
PL15	Beldar/mazdoor (unskilled)	day	1.00	410.97 / Day	410.97
Machine					
PMC074	Tractor	hours	0.10	380.00 / hours	38.00
Material					
PM0220	Corrugated sheet, 3 mm thick, W/ Thrie beam section railing	Kg	72.94	75.00 / Kg.	5,470.50
PM0101	Structural Steel (E 250)	Kg	125.26	66000.00 / MT	8,267.16
	Channel post 150 x 75 x 5 mm,2.0 m long,3 Nos @ 16.4 kg per metre and Spacer 150 x 75 x 5 mm channel 0.546 m long,3 Nos @ 16.4 kg per metre				
PM0105	Nuts, Bolts and Rivets	Kg	30.00	89150.00 / MT	2,674.50
	Add 15 per cent of the cost of material for fabrication, nuts, bolts and washers etc.)			16412.16 x 15%	2,461.82
				Total Resource Cost	**19,580.39**
	Contractor's Profit Including Over Head @12.5%			19,580.39 x 12.5 %	2,447.55
	Labour Cess @1%			22,027.94 x 1 %	220.28
		Cost For 4.5 Rmt			22,248.22
		Rate per Rmt			4,944.05
		Say Rs. Per Rmt			**4,944.00**

5-2 Road Studs / Cat Eye:

Providing and fixing of single mould twin shank reflective road studs of 'category A' Raised pavement markers made out of poly carbonate/ABS moulded body and reflective panels with micro prismatic lens capable of providing total internal reflection of the light entering the lens face with retro reflectance and chromaticity values shall be as given in the detailed specifications and the product shall conform to ASTM D4280. The raised pavement marker shall also meet all the testing conditions of ASTM D4280 and fixed to the road surface using the adhesive recommended by the manufacturer. Two cylindrical Polymer Shanks of not less than 20 mm diameter and not less than 30 mm length shall be molded in the RPM body. The reflective raised pavement markers shall also confirm to the MORTH circular No RW / NH. 33023/10/ 97-DO.III and the length ,height and width of the body shall not be less than 100 mm, 15 mm and 90 mm and base of marker shall be flat within 1.3 mm and outermost faces of configuration of marker shall not deviate more than 1.3 mm from a flat surface. The marker shall support a load of 13635 Kg tested in accordance with ASTM D4280. The marker shall withstand flexural strength of 909 kgf force in accordance with ASTM D4280. Marker lenses shall be moulded of Polycarbonate or methyl methecrylate conforming to ASTM D788. The area of each retro reflectory surface shall not be less than 13.0 sq.cm. The slope or retro – reflectory surface shall be 35 + 5 degree to base. Each reflector shall have a CIL not less than values specified in table 1 of MORTH Section 800 page no. 353 and should accompany two year warranty for satisfactory field performance from the manufacturer.

Unit = No.
Taking output = 100 No.

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL14	Mate	day	1.00	436.72 / Day	436.72
PL17	Mazdoor/Beldar (Skilled)	day	2.00	462.47 / Day	924.94
PL18	Painter (Ist class)	day	1.00	462.47 / Day	462.47
Machine					
PMC146	Drilling Machine	hours	8.00	60.00 / hours	480.00
PMC095	Generator 33 KVA	hours	8.00	450.00 / hours	3,600.00
PMC031	Tractor with trolley.	hours	8.00	400.00 / hours	3,200.00
Material					
PM2268	Adhesive hot bid marker for fixing	Kg	3.18	1225.00 / Kg.	3,895.50
PM2265	Road Studs	No.	100.00	185.00 / Nos.	18,500.00
				Total Resource Cost	**31,499.63**
	Contractor's Profit Including Over Head @12.5%			31,499.63 x 12.5 %	3,937.45
	Labour Cess @1%			35,437.08 x 1 %	354.37
		Cost For 100 No.			35,791.45
		Rate per No.			357.91
		Say Rs. Per No.			**357.90**

5-3 Solar Road Studs:

Providing and fixing Solar Powered Road Studs (Rectangular) of size not less than 100mm x 100 mm x 10 mm or (Circular) of dia 130+/- 6mm and height 30 +/- 2mm (with 8 super bright LEDs for long visibility from distance greater than 800 m) having twin shank and body made of aluminium alloy and poly carbonate material which shall be absolutely weather resistant and strong enough to support a load of 13635 kg tested in accordance with ASTM D 4280 and water resistance as per IP 65 in accordance with IS 12063:1987, fixed to the road surface using adhesives and the procedure recommended by the manufacturer as per Clause No. 804.6 and 804.7 of MORTH specifications.

Unit = No.
Taking output = 100 No.

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL14	Mate	day	1.00	436.72 / Day	436.72
PL17	Mazdoor/Beldar (Skilled)	day	2.00	462.47 / Day	924.94
PL18	Painter (Ist class)	day	1.00	462.47 / Day	462.47
Machine					
PMC146	Drilling Machine	hours	8.00	60.00 / hours	480.00
PMC095	Generator 33 KVA	hours	8.00	450.00 / hours	3,600.00
PMC031	Tractor with trolley.	hours	8.00	400.00 / hours	3,200.00
Material					
PM2268	Adhesive hot bid marker for fixing	Kg	3.18	1225.00 / Kg.	3,895.50
PM2264	Solar Studs	No.	100.00	1870.00 / Nos.	1,87,000.00
				Total Resource Cost	**1,99,999.63**
	Contractor's Profit Including Over Head @12.5%			1,99,999.63 x 12.5 %	24,999.95
	Labour Cess @1%			2,24,999.58 x 1 %	2,250.00
		Cost For 100 No.			2,27,249.58
		Rate per No.			2,272.50
		Say Rs. Per No.			**2,272.50**

5-4 Spring Posts (750 mm height)

Supply and fixing of Plastic Spring Post 750 mm high and 100 mm in dia (having 2 strips of 75mm wide Type IV retroreflective tape fixed around the post) with base dia 400 mm fixed to the ground with adhesive and nuts and bolts.

Unit = No.
Taking output = 100 No.

Code	Resource	Unit	Qty.	Rate	Amount
Labour					

PL14	Mate	day	1.00	436.72 / Day	436.72
PL17	Mazdoor/Beldar (Skilled)	day	2.00	462.47 / Day	924.94
PL18	Painter (Ist class)	day	2.00	462.47 / Day	924.94
Machine					
PMC146	Drilling Machine	hours	8.00	60.00 / hours	480.00
PMC095	Generator 33 KVA	hours	8.00	450.00 / hours	3,600.00
PMC031	Tractor with trolley.	hours	8.00	400.00 / hours	3,200.00
Material					
PM2268	Adhesive hot bid marker for fixing	Kg	6.36	1225.00 / Kg.	7,791.00
PM2285	PVC Spring Post 100mm dia 750mm	No.	100.00	525.00 / Nos.	52,500.00
PM2277	Bolt with Washer	No.	200.00	5.00 / Nos.	1,000.00
				Total Resource Cost	**70,857.60**
	Contractor's Profit Including Over Head @12.5%			70,857.60 x 12.5 %	8,857.20
	Labour Cess @1%			79,714.80 x 1 %	797.15
		Cost For 100 No.			80,511.95
		Rate per No.			805.12
		Say Rs. Per No.			**805.10**

5-5 Spring Posts (900 mm height):

Supply and fixing of Plastic Spring Post 900 mm high and 100 mm in dia (having 2 strips of 75 mm wide Type IV retroreflective tape fixed around the post) with base dia 400 mm fixed to the ground with adhesive and nut and bolts.

Unit = No.
Taking output = 100 No.

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL14	Mate	day	1.00	436.72 / Day	436.72
PL17	Mazdoor/Beldar (Skilled)	day	2.00	462.47 / Day	924.94
PL18	Painter (Ist class)	day	2.00	462.47 / Day	924.94
Machine					
PMC146	Drilling Machine	hours	8.00	60.00 / hours	480.00
PMC095	Generator 33 KVA	hours	8.00	450.00 / hours	3,600.00
PMC031	Tractor with trolley.	hours	8.00	400.00 / hours	3,200.00
Material					
PM2268	Adhesive hot bid marker for fixing	Kg	6.36	1225.00 / Kg.	7,791.00
PM2286	PVC Spring Post 100mm dia 900mm	No.	100.00	690.00 / Nos.	69,000.00
PM2277	Bolt with Washer	No.	200.00	5.00 / Nos.	1,000.00
				Total Resource Cost	**87,357.60**
	Contractor's Profit Including Over Head @12.5%			87,357.60 x 12.5 %	10,919.70
	Labour Cess @1%			98,277.30 x 1 %	982.77
		Cost For 100 No.			99,260.07

	Rate per No.	992.60
	Say Rs. Per No.	**992.60**

5-6 Road Delineators / Vertical Guide Posts:

Providing and fixing of Standard Metal Delineator consisting of minimum retro reflective unit exposed area of 330 sqcm, full cube corner micro prismatic non-metallic retro reflective sheeting on each side conforming with IRC 67 and meeting the coefficient of retro reflection values as per ASTM D 4956 Type XI table specification with pure polyester powder coating with the minimum thickness of powder coating of not less than 40 micron. The posts shall have ellipsoidal or circular design with the height of the pole shall be 800 to 900 mm above the ground with about 200 to 300 anchored with PCC M-15 onto the ground. The front and back faces of the delineator should be curved with a radius of not more than 200 mm and with delta angle (or central angle of curve) lying between 20o and 30 o, to increase the visibility of the delineator for vehicles moving in continuous curves. The delineator shall have sufficient arrangement to make the reflective sheets vandal-proof. Including all test report and warranties as per IRC 67 and IRC 79.

Unit = No.
Taking output = 30 No.

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL14	Mate	day	0.50	436.72 / Day	218.36
PL15	Beldar/mazdoor (unskilled)	day	1.00	410.97 / Day	410.97
Material					
PM0221	Delineator	No.	30.00	934.00 / Nos.	28,020.00
				Total Resource Cost	**28,649.33**
Sub_item					
1-2	Earthwork inn excavation	Cum	0.38	389.50 /Cum	148.01
11-4-2-1	PCC 1:2:5:5	Cum	0.38	4805.70 /Cum	1,826.16
	Contractor's Profit Including Over Head @12.5%			30,623.50 x 12.5 %	3,827.94
	Labour Cess @1%			34,451.44 x 1 %	344.51
		Cost For 30 No.			34,795.96
		Rate per No.			1,159.87
		Say Rs. Per No.			**1,159.90**

5-7 PVC Traffic Cones (600 mm height):

Supply of PVC Traffic Cones of 600 mm height and 3 kg weight with square base and 2 strips of 10 mm wide reflective sheets around the cone.

Unit = No.
Taking output = 1 No.

Code	Resource	Unit	Qty.	Rate	Amount
Material					

PM2274	PVC cone of weight 3 kg. and height 600 mm	No.	1.00	430.00 / Nos.	430.00
		Say Rs. Per No.			**430.00**

5-8 PVC Traffic Cones (750 mm height):
Supply of PVC Traffic Cones of 750 mm height and 3.5 kg weight with square base and 3 strips of 10 mm wide reflective sheets around the cone.

Unit = No.
Taking output = 1 No.

Code	Resource	Unit	Qty.	Rate	Amount
Material					
PM2275	PVC cone of weight 3.5 kg. and height 750 mm	No.	1.00	500.00 / Nos.	500.00
		Say Rs. Per No.			**500.00**

5-9 PVC Traffic Cones (900 mm height):
Supply of PVC Traffic Cones of 900 mm height and 4.0 kg weight with square base and 3 strips of 10 mm wide reflective sheets around the cone.

Unit = No.
Taking output = 1 No.

Code	Resource	Unit	Qty.	Rate	Amount
Material					
PM2276	PVC cone of weight 4.0 kg. and height 900 mm	No.	1.00	540.00 / Nos.	540.00
		Say Rs. Per No.			**540.00**

5-10 Providing and laying of hot applied thermoplastic compound of ISI Mark Approved Quality of 2.5 mm thick including reflectorising glass beads @ 250 gms per sqm area, as per IRC:35 .The finished surface to be level, uniform and free from streaks and holes.

Unit = Sqm
Taking output = 600 Sqm

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL14	Mate	day	0.03	436.72 / Day	13.10
PL15	Beldar/mazdoor (unskilled)	day	0.75	410.97 / Day	308.23
Machine					
PMC065	Road marking machine	hours	10.00	100.00 / hours	1,000.00
PMC031	Tractor with trolley.	hours	0.50	400.00 / hours	200.00
Material					
PM0246	Hot applied thermoplastic compound	Litre	1,500.00	175.00 / litre	2,62,500.00

PM0272	Reflectorising glass beads	Kg	150.00	80.00 / Kg.	12,000.00
				Total Resource Cost	**2,76,021.33**
	Contractor's Profit Including Over Head @12.5%			2,76,021.33 x 12.5 %	34,502.67
	Labour Cess @1%			3,10,524.00 x 1 %	3,105.24
		Cost For 600 Sqm			3,13,629.24
		Rate per Sqm			522.72
		Say Rs. Per Sqm			**522.70**

5-11 Median Markers:

Supply and fixing of Median markers made of tough high impact resistance injection moulded thermoplastic body having isosceles trapezoidal shape with dimensions not less than 120 mm X 100 mm X 100 mm and thickness not less than 18 mm. The marker must have fluoroscent yellow colour Type XI retroreflective sheeting (with a warranty of 10 years by the original sheeting manufacturer) fixed on both sides with size not less than 85 mm X 85 mm fixed with epoxy adhesive and grouting to the surface complete in all respect as per IRC accreditation and the direction of Engineer in Charge.

Unit = No.
Taking output = 100 No.

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL14	Mate	day	1.00	436.72 / Day	436.72
PL15	Beldar/mazdoor (unskilled)	day	2.00	410.97 / Day	821.94
Machine					
PMC146	Drilling Machine	hours	8.00	60.00 / hours	480.00
PMC095	Generator 33 KVA	hours	8.00	450.00 / hours	3,600.00
Material					
PM2268	Adhesive hot bid marker for fixing	Kg	3.18	1225.00 / Kg.	3,895.50
PM2266	Median Marker	No.	100.00	220.00 / Nos.	22,000.00
				Total Resource Cost	**31,234.16**
	Contractor's Profit Including Over Head @12.5%			31,234.16 x 12.5 %	3,904.27
	Labour Cess @1%			35,138.43 x 1 %	351.38
		Cost For 100 No.			35,489.81
		Rate per No.			354.90
		Say Rs. Per No.			**354.90**

5-12 AFP (Aluminum-backed flexible prismatic sheeting) Hazard Marker:

Providing and fixing Aluminum-backed flexible prismatic sheeting consisting of Yellow colored flexible prismatic sheeting with non-metallic prismatic lens as retro reflective elements and conforming to ASTM D 4956-09 Type VI specification values for reboundable sheeting. AFP sheeting shall be of 1ft width and laminated at the back with a 50 micron thick Aluminum (Al) foil with pressure sensitive adhesive and liner. AFP sheeting shall have screen printed arrow/slant line pattern in black color on top & shall not crack when tested for flexibility as per section S2.2.2 of ASTM D 4956-09. The AFP sheeting shall be applied with a neoprene contact adhesive with Polychloroprene as base & the edges of the product shall be sealed all around with a two-part epoxy based structural adhesive and shall be extremely resistant to peel-off & product specification shall confirm to IRC Accreditation.

Unit = Sqm
Taking output = 13.46 Sqm (Roll of 145 Sqft)

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL14	Mate	day	0.20	436.72 / Day	87.34
PL15	Beldar/mazdoor (unskilled)	day	5.00	410.97 / Day	2,054.85
Material					
PM2269	Aluminimum backed flexible prismatic Sheeting	Roll	1.00	70000.00 / 145sqft	70,000.00
				Total Resource Cost	**72,142.19**
	Contractor's Profit Including Over Head @12.5%			72,142.19 x 12.5 %	9,017.77
	Labour Cess @1%			81,159.97 x 1 %	811.60
		Cost For 13.46 Sqm			81,971.57
		Rate per Sqm			6,090.01
		Say Rs. Per Sqm			**6,090.00**

6-1 **Retro-Reflective Traffic Signs with Type IV retro- reflective Sheet**

6-1-1 Providing and fixing of retro reflectorised cautionary, mandatory and informatory sign as per IRC :67 made of Class-B Type IV retro reflective sheeting fixed over 3mm/4mm thick Aluminium composite material sheet vide clause 801.3, depending on the size of the sign fixed over back support frame of min 25 x 25 x 3mm Angle mounted on a mild steel a mild steel circular pipe 65 NB, 3.2 mm thickness, firmly fixed to the ground by means of properly designed foundation with M25 grade cement concrete 45 cm x 45 cm x 60 cm, 60 cm below ground level as per approved drawing. The sign shall be maintained as per section 12 of IRC 67.

6-1-1-1 900 mm equilateral triangle

Unit = per no.
Taking output = 1 No.

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL14	Mate	day	0.01	436.72 / Day	4.37
PL15	Beldar/mazdoor (unskilled)	day	0.25	410.97 / Day	102.74
Machine					
PMC031	Tractor with trolley.	hours	0.01	400.00 / hours	4.00
Material					
PM0101	Structural Steel (E 250)	Kg.	22.76	66000.00 / MT	1,502.16
PM2278	Retro reflective Type IV HIP Sheeting pasted on 3 mm thick ACP/ACM including all	Sqm	0.35	5010.00 / Sqm	1,753.50
				Total Resource Cost	**3,366.77**
Sub- Item					
1-2	EarthWork in Excavation For Foundation	Cum	0.12	342.70 / Cum	41.12
11-4-5	Cement Concrete M-25 Grade	Cum	0.12	6132.80 / Cum	735.94
10-7	Painting Angle Iron Post with Primer and Two Coat of Epoxy Paint as per Specification	Sqm	1.41	73.85 / Sqm	104.12
	Contractor's Profit Including Over Head @12.5%			4,247.95 x 12.5 %	530.99
	Labour Cess @1%			4,778.95 x 1 %	47.79
		Cost For Per No.			4,826.74
		Rate Per No.			4,826.74
		Say Rs. Per No.			**4,826.70**

6-1-1-2 600 mm equilateral triangle

Unit = per no.

Taking output = 1 No.

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL14	Mate	day	0.01	436.72 / Day	4.37
PL15	Beldar/mazdoor (unskilled)	day	0.25	410.97 / Day	102.74
Machine					
PMC031	Tractor with trolley.	hours	0.01	400.00 / hours	4.00
Material					
PM0101	Structural Steel (E 250)	Kg.	22.76	66000.00 / MT	1,502.16
PM2278	Retro reflective Type IV HIP Sheeting pasted on 3 mm thick ACP/ACM including all	Sqm	0.16	5010.00 / Sqm	801.60
				Total Resource Cost	**2,414.87**
Sub- Item					
1-2	EarthWork in Excavation For Foundation	Cum	0.12	342.75 / Cum	41.13
11-4-5	Cement Concrete M-25 Grade	Cum	0.12	6132.80 / Cum	735.94
10-7	Painting Angle Iron Post with Primer and Two Coat of Epoxy Paint as per Specification	Sqm	1.41	73.85 / Sqm	104.12
	Contractor's Profit Including Over Head @12.5%			3,296.06 x 12.5 %	412.01
	Labour Cess @1%			3,708.07 x 1 %	37.08
		Cost For Per No.			3,745.15
		Rate Per No.			3,745.15
		Say Rs. Per No.			**3,745.10**

6-1-1-3 600 mm Circular

Unit = per no.
Taking output = 1 No.

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL14	Mate	day	0.01	436.72 / Day	4.37
PL15	Beldar/mazdoor (unskilled)	day	0.25	410.97 / Day	102.74
Machine					
PMC031	Tractor with trolley.	hours	0.01	400.00 / hours	4.00
Material					
PM0101	Structural Steel (E 250)	Kg.	22.76	66000.00 / MT	1,502.16
PM2278	Retro reflective Type IV HIP Sheeting pasted on 3 mm thick ACP/ACM including all	Sqm	0.28	5010.00 / Sqm	1,402.80
				Total Resource Cost	**3,016.07**
Sub- Item					

1-2	EarthWork in Excavation For Foundation	Cum	0.12	342.75 / Cum	41.13
11-4-5	Cement Concrete M-25 Grade	Cum	0.12	6132.80 / Cum	735.94
10-7	Painting Angle Iron Post with Primer and Two Coat of Epoxy Paint as per Specification	Sqm	1.41	73.85 / Sqm	104.12
	Contractor's Profit Including Over Head @12.5%			3,897.26 x 12.5 %	487.16
	Labour Cess @1%			4,384.42 x 1 %	43.84
		Cost For Per No.			4,428.26
		Rate Per No.			4,428.26
		Say Rs. Per No.			**4,428.30**

6-1-1-4 800 x 600 mm Rectangle

Unit = per no.
Taking output = 1 No.

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL14	Mate	day	0.01	436.72 / Day	4.37
PL15	Beldar/mazdoor (unskilled)	day	0.25	410.97 / Day	102.74
Machine					
PMC031	Tractor with trolley.	hours	0.01	400.00 / hours	4.00
Material					
PM0101	Structural Steel (E 250)	Kg.	22.76	66000.00 / MT	1,502.16
PM2278	Retro reflective Type IV HIP Sheeting pasted on 3 mm thick ACP/ACM including all	Sqm	0.48	5010.00 / Sqm	2,404.80
				Total Resource Cost	**4,018.07**
Sub- Item					
1-2	EarthWork in Excavation For Foundation	Cum	0.12	342.75 / Cum	41.13
11-4-5	Cement Concrete M-25 Grade	Cum	0.12	6132.80 / Cum	735.94
10-7	Painting Angle Iron Post with Primer and Two Coat of Epoxy Paint as per Specification	Sqm	1.41	73.85 / Sqm	104.12
	Contractor's Profit Including Over Head @12.5%			4,899.26 x 12.5 %	612.41
	Labour Cess @1%			5,511.67 x 1 %	55.12
		Cost For Per No.			5,566.78
		Rate Per No.			5,566.78
		Say Rs. Per No.			**5,566.80**

6-1-1-5 600 x 450 mm Rectangle

Unit = per no.

Taking output = 1 No.

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL14	Mate	day	0.01	436.72 / Day	4.37
PL15	Beldar/mazdoor (unskilled)	day	0.25	410.97 / Day	102.74
Machine					
PMC031	Tractor with trolley.	hours	0.01	400.00 / hours	4.00
Material					
PM0101	Structural Steel (E 250)	Kg.	22.76	66000.00 / MT	1,502.16
PM2278	Retro reflective Type IV HIP Sheeting pasted on 3 mm thick ACP/ACM including all	Sqm	0.27	5010.00 / Sqm	1,352.70
				Total Resource Cost	**2,965.97**
Sub- Item					
1-2	EarthWork in Excavation For Foundation	Cum	0.12	342.75 / Cum	41.13
11-4-5	Cement Concrete M-25 Grade	Cum	0.12	6132.80 / Cum	735.94
10-7	Painting Angle Iron Post with Primer and Two Coat of Epoxy Paint as per Specification	Sqm	1.41	73.85 / Sqm	104.12
	Contractor's Profit Including Over Head @12.5%			3,847.16 x 12.5 %	480.89
	Labour Cess @1%			4,328.05 x 1 %	43.28
		Cost For Per No.			4,371.33
		Rate Per No.			4,371.33
		Say Rs. Per No.			**4,371.30**

6-1-1-6 600 x 600 mm Square

Unit = per no.
Taking output = 1 No.

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL14	Mate	day	0.01	436.72 / Day	4.37
PL15	Beldar/mazdoor (unskilled)	day	0.25	410.97 / Day	102.74
Machine					
PMC031	Tractor with trolley.	hours	0.01	400.00 / hours	4.00
Material					
PM0101	Structural Steel (E 250)	Kg.	22.76	66000.00 / MT	1,502.16
PM2278	Retro reflective Type IV HIP Sheeting pasted on 3 mm thick ACP/ACM including all	Sqm	0.36	5010.00 / Sqm	1,803.60
				Total Resource Cost	**3,416.87**
Sub- Item					

1-2	EarthWork in Excavation For Foundation	Cum	0.12	342.75 / Cum	41.13
11-4-5	Cement Concrete M-25 Grade	Cum	0.12	6132.80 / Cum	735.94
10-7	Painting Angle Iron Post with Primer and Two Coat of Epoxy Paint as per Specification	Sqm	1.41	73.85 / Sqm	104.12
	Contractor's Profit Including Over Head @12.5%			4,298.06 x 12.5 %	537.26
	Labour Cess @1%			4,835.32 x 1 %	48.35
		Cost For Per No.			4,883.67
		Rate Per No.			4,883.67
		Say Rs. Per No.			**4,883.70**

6-1-1-7 900mm high Octagon

Unit = per no.
Taking output = 1 No.

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL14	Mate	day	0.01	436.72 / Day	4.37
PL15	Beldar/mazdoor (unskilled)	day	0.25	410.97 / Day	102.74
Machine					
PMC031	Tractor with trolley.	hours	0.01	400.00 / hours	4.00
Material					
PM0101	Structural Steel (E 250)	Kg.	22.76	66000.00 / MT	1,502.16
PM2278	Retro reflective Type IV HIP Sheeting pasted on 3 mm thick ACP/ACM including all	Sqm	0.67	5010.00 / Sqm	3,356.70
				Total Resource Cost	**4,969.97**
Sub- Item					
1-2	EarthWork in Excavation For Foundation	Cum	0.12	342.75 / Cum	41.13
11-4-5	Cement Concrete M-25 Grade	Cum	0.12	6132.80 / Cum	735.94
10-7	Painting Angle Iron Post with Primer and Two Coat of Epoxy Paint as per Specification	Sqm	1.41	73.85 / Sqm	104.12
	Contractor's Profit Including Over Head @12.5%			5,851.16 x 12.5 %	731.39
	Labour Cess @1%			6,582.55 x 1 %	65.83
		Cost For Per No.			6,648.38
		Rate Per No.			6,648.38
		Say Rs. Per No.			**6,648.40**

6-1-2 **Direction and Place Identification Signs upto 0.9 sqm Size Board.**

Providing and erecting direction and place identification retro-reflectorised sign as per IRC :67 made of Type IV retro- reflective sheeting, vide clause 801.3, fixed over Aluminium composite material sheet with overall thickness of 4mm with area not exceeding 0.9 sqm fixed over back support frame of min 35 x 35 x 3mm Angle mounted on a mild steel circular pipe 65 NB, firmly fixed to the ground by means of properly designed foundation with M25 grade cement concrete 45 x 45 x 60 cm, 60 cm below ground level as per approved drawing.

Unit = per Sqm
Taking output = 0.90 Sqm

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL14	Mate	day	0.008	436.72 / Day	3.49
PL15	Beldar/mazdoor (unskilled)	day	0.20	410.97 / Day	82.19
Machine					
PMC031	Tractor with trolley.	hours	0.02	400.00 / hours	8.00
Material					
PM0101	Structural Steel (E 250)	Kg.	26.64	66000.00 / MT	1,758.24
PM2278	Retro reflective Type IV HIP Sheeting pasted on 3 mm thick ACP/ACM including all	Sqm	0.90	5010.00 / Sqm	4,509.00
	Add 2% of Material for Drilling, Gripping, Fixing, Fabrication and Welding Consumables			6267.24 x 2%	125.34
				Total Resource Cost	**6,486.27**
Sub- Item					
1-2	EarthWork in Excavation For Foundation	Cum	0.12	342.75 / Cum	41.13
11-4-5	Cement Concrete M-25 Grade	Cum	0.12	6132.80 / Cum	735.94
10-7	Painting Angle Iron Post with Primer and Two Coat of Epoxy Paint as per Specification	Sqm	1.41	73.85 / Sqm	104.12
	Contractor's Profit Including Over Head @12.5%			7,367.46 x 12.5 %	920.93
	Labour Cess @1%			8,288.39 x 1 %	82.88
		Cost For 0.90 Sqm			8,371.28
		Rate Per Sqm			9,301.42
		Say Rs. Per Sqm			**9,301.40**

6-1-3 **Direction and Place Identification Signs with size more than 0.9 sqm size Board.**

Providing and erecting direction and place identification retro-reflectorised sign as per IRC :67 made of Type IV retro- reflective sheeting, vide clause 801.3, fixed over Aluminium composite material sheet with overall thickness of 4 mm with area exceeding 0.9 sqm fixed over back support frame of min 40 x 40 x 5 mm MS Angle mounted on two nos. of mild steel circular pipe 65 NB ,3.2 mm thickness and 4.5 meter total height firmly fixed to the ground by means of properly designed foundation with M 25 grade cement concrete 45 cm x 45 cm x 60 cm, 60 cm below ground level as per approved drawing

Unit = per Sqm
Taking output = 1.50 Sqm

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL14	Mate	day	0.012	436.72 / Day	5.24
PL15	Beldar/mazdoor (unskilled)	day	0.30	410.97 / Day	123.29
Machine					
PMC031	Tractor with trolley.	hours	0.02	400.00 / hours	8.00
Material					
PM0101	Structural Steel (E 250)	Kg.	55.51	66000.00 / MT	3,663.66
PM2279	Retro reflective Type IV HIP Sheeting pasted on 4 mm thick ACP/ACM including all	Sqm	1.50	5375.00 / Sqm	8,062.50
	Add 2% of Material for Drilling, Gripping, Fixing, Fabrication and Welding Consumables			11726.16 x 2%	234.52
				Total Resource Cost	**12,097.21**
Sub- Item					
1-2	EarthWork in Excavation For Foundation	Cum	0.24	342.75 / Cum	82.26
11-4-5	Cement Concrete M-25 Grade	Cum	0.24	6132.80 / Cum	1,471.87
10-7	Painting Angle Iron Post with Primer and Two Coat of Epoxy Paint as per Specification	Sqm	2.83	73.85 / Sqm	208.98
	Contractor's Profit Including Over Head @12.5%			13,860.33 x 12.5 %	1,732.54
	Labour Cess @1%			15,592.87 x 1 %	155.93
		Cost For 1.5 Sqm			15,748.80
		Rate Per Sqm			10,499.20
		Say Rs. Per Sqm			**10,499.20**

6-1-4 Overhead Signs

Providing and erecting overhead signs with a corrosion resistant type IV HIP retro-reflective sheeting fixed over Aluminium composite material sheet with overall thickness of 4 mm, 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 including nuts, bolts, washers & rivets etc for fixing & as per IRC :67.

6-1-4-A Truss and Vertical Support

Unit = per Tonne
Taking output = 1.00 Tonne

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL03	Blacksmith 1st class/ Electrician	day	2.00	462.47 / Day	924.94
PL14	Mate	day	0.24	436.72 / Day	104.81
PL15	Beldar/mazdoor (unskilled)	day	4.00	410.97 / Day	1,643.88
Machine					
PMC033	Truck 10 t capacity	hours	0.50	480.00 / hours	240.00
PMC044	Cranes c) 3 tonnes	hours	3.00	530.00 / hours	1,590.00
Material					
PM0201	Aluminium alloy/galvanised steel	Tonne	1.02	64150.00 / MT	65,433.00
	Add 1% of Material for Welding Consumables, Nuts & Bolts and Drilling Holes			65433.00 x 1%	654.33
	Add 15% of Material for Drilling, Gripping, Fixing, Fabrication and Welding Consumables			65433.00 x 15%	9,814.95
				Total Resource Cost	**80,405.91**
Sub- Item					
1-2	EarthWork in Excavation For Foundation	Cum	0.86	342.75 / Cum	294.77
11-4-2-1	Cement Concrete M-15 Grade	Cum	0.48	4805.70 / Cum	2,306.73
10-7	Painting Angle Iron Post with Primer and Two Coat of Epoxy Paint as per Specification	Sqm	3.44	73.85 / Sqm	254.03
	Contractor's Profit Including Over Head @12.5%			83,261.44 x 12.5 %	10,407.68
	Labour Cess @1%			93,669.12 x 1 %	936.69
		Cost For 1 Tonne			94,605.81
		Rate Per Tonne			94,605.81
		Say Rs. Per Tonne			**94,605.80**

6-1-4-B Type IV HIP retro- reflective sheeting for Over Head Sign

Unit = per Sqm
Taking output = 1.00 Sqm

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL03	Blacksmith 1st class/ Electrician	day	0.10	462.47 / Day	46.25
PL14	Mate	day	0.01	436.72 / Day	4.37
PL15	Beldar/mazdoor (unskilled)	day	0.15	410.97 / Day	61.65
Material					
PM2279	Retro reflective Type IV HIP Sheeting pasted on 4 mm thick ACP/ACM including all	Sqm	1.00	5375.00 / Sqm	5,375.00
				Total Resource Cost	**5,487.26**
	Contractor's Profit Including Over Head @12.5%			5,487.26 x 12.5 %	685.91
	Labour Cess @1%			6,173.17 x 1 %	61.73
		Cost For 1 Sqm			6,234.90
		Rate Per Sqm			6,234.90
		Say Rs. Per Sqm			**6,234.90**

6-2 Retro-Reflective Traffic Signs with Type XI retro- reflective Sheet-

6-2-1 Providing and fixing of retro reflectorised cautionary, mandatory and informatory sign as per IRC :67 made of Type XI retro reflective sheeting fixed over 3mm/4mm thick Aluminium composite material sheet vide clause 801.3, depending on the size of the sign fixed over back support frame of min 25 x 25 x 3mm Angle mounted on a mild steel circular pipe 65 NB, 3.2 mm thickness firmly fixed to the ground by means of properly designed foundation with M25 grade cement concrete 45 cm x 45 cm x 60 cm, 60 cm below ground level as per approved drawing. The sign shall be maintained as per section 12 of IRC 67.

6-2-1-1 900 mm equilateral triangle

Unit = per no.
Taking output = 1 No.

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL14	Mate	day	0.01	436.72 / Day	4.37
PL15	Beldar/mazdoor (unskilled)	day	0.25	410.97 / Day	102.74
Machine					
PMC031	Tractor with trolley.	hours	0.01	400.00 / hours	4.00
Material					
PM0101	Structural Steel (E 250)	Kg.	22.76	66000.00 / MT	1,502.16

PM2280	Retro reflective Type XI DG3 HIP Sheeting pasted on 3 mm thick ACP/ACM including all	Sqm	0.35	8870.00 / Sqm	3,104.50
				Total Resource Cost	**4,717.77**
Sub- Item					
1-2	EarthWork in Excavation For Foundation	Cum	0.12	342.75 / Cum	41.13
11-4-5	Cement Concrete M-25 Grade	Cum	0.12	6132.80 / Cum	735.94
10-7	Painting Angle Iron Post with Primer and Two Coat of Epoxy Paint as per Specification	Sqm	1.41	73.85 / Sqm	104.12
	Contractor's Profit Including Over Head @12.5%			5,598.96 x 12.5 %	699.87
	Labour Cess @1%			6,298.83 x 1 %	62.99
		Cost For Per No.			6,361.82
		Rate Per No.			6,361.82
		Say Rs. Per No.			**6,361.80**

6-2-1-2 600 mm equilateral triangle

Unit = per no.
Taking output = 1 No.

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL14	Mate	day	0.01	436.72 / Day	4.37
PL15	Beldar/mazdoor (unskilled)	day	0.25	410.97 / Day	102.74
Machine					
PMC031	Tractor with trolley.	hours	0.01	400.00 / hours	4.00
Material					
PM0101	Structural Steel (E 250)	Kg.	22.76	66000.00 / MT	1,502.16
PM2280	Retro reflective Type XI DG3 HIP Sheeting pasted on 3 mm thick ACP/ACM including all	Sqm	0.16	8870.00 / Sqm	1,419.20
				Total Resource Cost	**3,032.47**
Sub- Item					
1-2	EarthWork in Excavation For Foundation	Cum	0.12	342.75 / Cum	41.13
11-4-5	Cement Concrete M-25 Grade	Cum	0.12	6132.80 / Cum	735.94
10-7	Painting Angle Iron Post with Primer and Two Coat of Epoxy Paint as per Specification	Sqm	1.41	73.85 / Sqm	104.12
	Contractor's Profit Including Over Head @12.5%			3,913.66 x 12.5 %	489.21
	Labour Cess @1%			4,402.87 x 1 %	44.03
		Cost For Per No.			4,446.89

Rate Per No.		4,446.89
Say Rs. Per No.		**4,446.90**

6-2-1-3 600 mm Circular

Unit = per no.
Taking output = 1 No.

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL14	Mate	day	0.01	436.72 / Day	4.37
PL15	Beldar/mazdoor (unskilled)	day	0.25	410.97 / Day	102.74
Machine					
PMC031	Tractor with trolley.	hours	0.01	400.00 / hours	4.00
Material					
PM0101	Structural Steel (E 250)	Kg.	22.76	66000.00 / MT	1,502.16
PM2280	Retro reflective Type XI DG3 HIP Sheeting pasted on 3 mm thick ACP/ACM including all	Sqm	0.28	8870.00 / Sqm	2,483.60
				Total Resource Cost	**4,096.87**
Sub- Item					
1-2	EarthWork in Excavation For Foundation	Cum	0.12	342.75 / Cum	41.13
11-4-5	Cement Concrete M-25 Grade	Cum	0.12	6132.80 / Cum	735.94
10-7	Painting Angle Iron Post with Primer and Two Coat of Epoxy Paint as per Specification	Sqm	1.41	73.85 / Sqm	104.12
	Contractor's Profit Including Over Head @12.5%			4,978.06 x 12.5 %	622.26
	Labour Cess @1%			5,600.32 x 1 %	56.00
		Cost For Per No.			5,656.32
		Rate Per No.			5,656.32
		Say Rs. Per No.			**5,656.30**

6-2-1-4 800 x 600 mm Rectangle

Unit = per no.
Taking output = 1 No.

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL14	Mate	day	0.01	436.72 / Day	4.37
PL15	Beldar/mazdoor (unskilled)	day	0.25	410.97 / Day	102.74
Machine					
PMC031	Tractor with trolley.	hours	0.01	400.00 / hours	4.00
Material					
PM0101	Structural Steel (E 250)	Kg.	22.76	66000.00 / MT	1,502.16

PM2280	Retro reflective Type XI DG3 HIP Sheeting pasted on 3 mm thick ACP/ACM including all	Sqm	0.48	8870.00 / Sqm	4,257.60
				Total Resource Cost	**5,870.87**
Sub- Item					
1-2	EarthWork in Excavation For Foundation	Cum	0.12	342.75 / Cum	41.13
11-4-5	Cement Concrete M-25 Grade	Cum	0.12	6132.80 / Cum	735.94
10-7	Painting Angle Iron Post with Primer and Two Coat of Epoxy Paint as per Specification	Sqm	1.41	73.85 / Sqm	104.12
	Contractor's Profit Including Over Head @12.5%			6,752.06 x 12.5 %	844.01
	Labour Cess @1%			7,596.07 x 1 %	75.96
		Cost For Per No.			7,672.03
		Rate Per No.			7,672.03
		Say Rs. Per No.			**7,672.00**

6-2-1-5 600 x 450 mm Rectangle

Unit = per no.
Taking output = 1 No.

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL14	Mate	day	0.01	436.72 / Day	4.37
PL15	Beldar/mazdoor (unskilled)	day	0.25	410.97 / Day	102.74
Machine					
PMC031	Tractor with trolley.	hours	0.01	400.00 / hours	4.00
Material					
PM0101	Structural Steel (E 250)	Kg.	22.76	66000.00 / MT	1,502.16
PM2280	Retro reflective Type XI DG3 HIP Sheeting pasted on 3 mm thick ACP/ACM including all	Sqm	0.27	8870.00 / Sqm	2,394.90
				Total Resource Cost	**4,008.17**
Sub- Item					
1-2	EarthWork in Excavation For Foundation	Cum	0.12	342.75 / Cum	41.13
11-4-5	Cement Concrete M-25 Grade	Cum	0.12	6132.80 / Cum	735.94
10-7	Painting Angle Iron Post with Primer and Two Coat of Epoxy Paint as per Specification	Sqm	1.41	73.85 / Sqm	104.12
	Contractor's Profit Including Over Head @12.5%			4,889.36 x 12.5 %	611.17
	Labour Cess @1%			5,500.53 x 1 %	55.01
		Cost For Per No.			5,555.53

	Rate Per No.		5,555.53
	Say Rs. Per No.		**5,555.50**

6-2-1-6 600 x 600 mm Square

Unit = per no.
Taking output = 1 No.

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL14	Mate	day	0.01	436.72 / Day	4.37
PL15	Beldar/mazdoor (unskilled)	day	0.25	410.97 / Day	102.74
Machine					
PMC031	Tractor with trolley.	hours	0.01	400.00 / hours	4.00
Material					
PM0101	Structural Steel (E 250)	Kg.	22.76	66000.00 / MT	1,502.16
PM2280	Retro reflective Type XI DG3 HIP Sheeting pasted on 3 mm thick ACP/ACM including all	Sqm	0.36	8870.00 / Sqm	3,193.20
				Total Resource Cost	**4,806.47**
Sub- Item					
1-2	EarthWork in Excavation For Foundation	Cum	0.12	342.75 / Cum	41.13
11-4-5	Cement Concrete M-25 Grade	Cum	0.12	6132.80 / Cum	735.94
10-7	Painting Angle Iron Post with Primer and Two Coat of Epoxy Paint as per Specification	Sqm	1.41	73.85 / Sqm	104.12
	Contractor's Profit Including Over Head @12.5%			5,687.66 x 12.5 %	710.96
	Labour Cess @1%			6,398.62 x 1 %	63.99
		Cost For Per No.			6,462.60
		Rate Per No.			6,462.60
		Say Rs. Per No.			**6,462.60**

6-2-1-7 900mm high Octagon

Unit = per no.
Taking output = 1 No.

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL14	Mate	day	0.01	436.72 / Day	4.37
PL15	Beldar/mazdoor (unskilled)	day	0.25	410.97 / Day	102.74
Machine					
PMC031	Tractor with trolley.	hours	0.01	400.00 / hours	4.00
Material					
PM0101	Structural Steel (E 250)	Kg.	22.76	66000.00 / MT	1,502.16

PM2280	Retro reflective Type XI DG3 HIP Sheeting pasted on 3 mm thick ACP/ACM including all	Sqm	0.67	8870.00 / Sqm	5,942.90
				Total Resource Cost	**7,556.17**
Sub- Item					
1-2	EarthWork in Excavation For Foundation	Cum	0.12	342.75 / Cum	41.13
11-4-5	Cement Concrete M-25 Grade	Cum	0.12	6132.80 / Cum	735.94
10-7	Painting Angle Iron Post with Primer and Two Coat of Epoxy Paint as per Specification	Sqm	1.41	73.85 / Sqm	104.12
	Contractor's Profit Including Over Head @12.5%			8,437.36 x 12.5 %	1,054.67
	Labour Cess @1%			9,492.03 x 1 %	94.92
		Cost For Per No.			9,586.95
		Rate Per No.			9,586.95
		Say Rs. Per No.			**9,586.90**

6-2-2 Direction and Place Identification Signs upto 0.9 sqm Size Board.

Providing and erecting direction and place identification retro-reflectorised sign as per IRC :67 made of Type XI retro- reflective sheeting, vide clause 801.3, fixed over Aluminium composite material sheet with overall thickness of 4mm with area not exceeding 0.9 sqm fixed over back support frame of min 35 x 35 x 3mm Angle mounted on a mild steel circular pipe 65 NB, firmly fixed to the ground by means of properly designed foundation with M25 grade cement concrete 45 x 45 x 60 cm, 60 cm below ground level as per approved drawing.

Unit = per Sqm
Taking output = 0.90 Sqm

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL14	Mate	day	0.008	436.72 / Day	3.49
PL15	Beldar/mazdoor (unskilled)	day	0.20	410.97 / Day	82.19
Machine					
PMC031	Tractor with trolley.	hours	0.02	400.00 / hours	8.00
Material					
PM0101	Structural Steel (E 250)	Kg.	22.64	66000.00 / MT	1,494.24
PM2280	Retro reflective Type XI DG3 HIP Sheeting pasted on 3 mm thick ACP/ACM including all	Sqm	0.90	8870.00 / Sqm	7,983.00

	Add 2% of Material for Drilling, Gripping, Fixing, Fabrication and Welding Consumables			9477.24 x 2%	189.54
				Total Resource Cost	**9,760.47**
Sub- Item					
1-2	EarthWork in Excavation For Foundation	Cum	0.12	342.75 / Cum	41.13
11-4-5	Cement Concrete M-25 Grade	Cum	0.12	6132.80 / Cum	735.94
10-7	Painting Angle Iron Post with Primer and Two Coat of Epoxy Paint as per Specification	Sqm	1.41	73.85 / Sqm	104.12
	Contractor's Profit Including Over Head @12.5%			10,641.66 x 12.5 %	1,330.21
	Labour Cess @1%			11,971.87 x 1 %	119.72
		Cost For 0.90 Sqm			12,091.59
		Rate Per Sqm			13,435.10
		Say Rs. Per Sqm			**13,435.10**

6-2-3 **Direction and Place Identification Signs with size more than 0.9 sqm size Board.**

Providing and erecting direction and place identification retro-reflectorised sign as per IRC :67 made of Type XI retro- reflective sheeting, vide clause 801.3, fixed over Aluminium composite material sheet with overall thickness of 4 mm with area exceeding 0.9 sqm fixed over back support frame of min 40 x 40 x 5 mm MS Angle mounted on two nos. of mild steel circular pipe 65 NB, 3.2 mm thickness and 4.5 meter total height firmly fixed to the ground by means of properly designed foundation with M 25 grade cement concrete 45 cm x 45 cm x 60 cm, 60 cm below ground level as per approved drawing.

Unit = per Sqm
Taking output = 1.50 Sqm

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL14	Mate	day	0.012	436.72 / Day	5.24
PL15	Beldar/mazdoor (unskilled)	day	0.30	410.97 / Day	123.29
Machine					
PMC031	Tractor with trolley.	hours	0.02	400.00 / hours	8.00
Material					
PM0101	Structural Steel (E 250)	Kg.	55.51	66000.00 / MT	3,663.66
PM2281	Retro reflective Type XI DG3 HIP Sheeting pasted on 4 mm thick ACP/ACM including all	Sqm	1.50	9150.00 / Sqm	13,725.00

	Add 2% of Material for Drilling, Gripping, Fixing, Fabrication and Welding Consumables			17388.66 x 2%	347.77
				Total Resource Cost	**17,872.96**
Sub- Item					
1-2	EarthWork in Excavation For Foundation	Cum	0.24	342.75 / Cum	82.26
11-4-5	Cement Concrete M-25 Grade	Cum	0.24	6132.80 / Cum	1,471.87
10-7	Painting Angle Iron Post with Primer and Two Coat of Epoxy Paint as per Specification	Sqm	2.83	73.85 / Sqm	208.98
	Contractor's Profit Including Over Head @12.5%			19,636.08 x 12.5 %	2,454.51
	Labour Cess @1%			22,090.59 x 1 %	220.91
		Cost For 1.50 Sqm			22,311.50
		Rate Per Sqm			14,874.33
		Say Rs. Per Sqm			**14,874.30**

6-2-4 Overhead Signs

Providing and erecting overhead signs with a corrosion resistant Type XI retro-reflective sheeting fixed over Aluminium composite material sheet with overall thickness of 4 mm, 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 including nuts, bolts, washers & rivets etc for fixing & as per IRC :67.

6-2-4-A Truss and Vertical Support

Unit = per Tonne
Taking output = 1.00 Tonne

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL03	Blacksmith 1st class/ Electrician	day	2.00	462.47 / Day	924.94
PL14	Mate	day	0.24	436.72 / Day	104.81
PL15	Beldar/mazdoor (unskilled)	day	4.00	410.97 / Day	1,643.88
Machine					
PMC033	Truck 10 t capacity	hours	0.50	480.00 / hours	240.00
PMC044	Cranes c) 3 tonnes	hours	3.00	530.00 / hours	1,590.00
Material					
PM0201	Aluminium alloy/galvanised steel	Tonne	1.02	64150.00 / MT	65,433.00

	Add 1% of Material for Welding Consumables, Nuts & Bolts and Drilling Holes			65433.00 x 1%	654.33
	Add 15% of Material for Drilling, Gripping, Fixing, Fabrication and Welding Consumables			65433.00 x 15%	9,814.95
				Total Resource Cost	**80,405.91**
Sub- Item					
1-2	EarthWork in Excavation For Foundation	Cum	0.86	342.75 / Cum	294.77
11-4-2-1	Cement Concrete M-15 Grade	Cum	0.48	4805.70 / Cum	2,306.73
10-7	Painting Angle Iron Post with Primer and Two Coat of Epoxy Paint as per Specification	Sqm	3.44	73.85 / Sqm	254.03
	Contractor's Profit Including Over Head @12.5%			83,261.44 x 12.5 %	10,407.68
	Labour Cess @1%			93,669.12 x 1 %	936.69
		Cost For 1 Tonne			94,605.81
		Rate Per Tonne			94,605.81
		Say Rs. Per Tonne			**94,605.80**

6-2-4-B Type IV HIP retro- reflective sheeting for Over Head Sign

Unit = per Sqm
Taking output = 1.00 Sqm

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL03	Blacksmith 1st class/ Electrician	day	0.10	462.47 / Day	46.25
PL14	Mate	day	0.01	436.72 / Day	4.37
PL15	Beldar/mazdoor (unskilled)	day	0.15	410.97 / Day	61.65
Material					
PM2281	Retro reflective Type XI DG3 HIP Sheeting pasted on 4 mm thick ACP/ACM including all	Sqm	1.00	9150.00 / Sqm	9,150.00
				Total Resource Cost	**9,262.26**
	Contractor's Profit Including Over Head @12.5%			9,262.26 x 12.5 %	1,157.78
	Labour Cess @1%			10,420.04 x 1 %	104.20
		Cost For 1 Sqm			10,524.24
		Rate Per Sqm			10,524.24
		Say Rs. Per Sqm			**10,524.20**

7-1 Laying Cement Concrete Pipe NP3 (burried 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 masonary work in head wall and parapets.

7-1-1 500 mm dia

Unit = Rmt
Taking output = 7.5 Rmt (3 pipes of 2.5m Length)

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL12	Mason 1st class	day	0.11	462.47 / Day	50.87
PL14	Mate	day	0.04	436.72 / Day	17.47
PL15	Beldar/mazdoor (unskilled)	day	0.90	410.97 / Day	369.87
Material					
PM0049	Cement	Tonne	0.010	6700.00 / MT	67.00
PM0115	RCC Pipe NP3 (500 mm dia)	Rmt	7.50	1700.00 / Rmt	12,750.00
PM0124	Sand (Fine)	Cum	0.020	1441.10 / Cum	28.82
				Total Resource Cost	**13,284.04**
	Contractor's Profit Including Over Head @12.5%			13,284.04 x 12.5 %	1,660.50
	Labour Cess @1%			14,944.54 x 1 %	149.45
		Cost For 7.50 Rmt			15,093.99
		Rate Per Rmt			2,012.53
		Say Rs. Per Rmt			**2,012.50**

7-1-2 300 mm dia

Unit = Rmt
Taking output = 7.5 Rmt (3 pipes of 2.5m Length)

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL12	Mason 1st class	day	0.09	462.47 / Day	41.62
PL14	Mate	day	0.03	436.72 / Day	13.10
PL15	Beldar/mazdoor (unskilled)	day	0.72	410.97 / Day	295.90
Material					
PM0049	Cement	Tonne	0.006	6700.00 / MT	40.20
PM2284	RCC Pipe NP3 (300 mm dia)	Rmt	7.50	975.00 / Rmt	7,312.50
PM0124	Sand (Fine)	Cum	0.012	1441.10 / Cum	17.29
				Total Resource Cost	**7,720.62**
	Contractor's Profit Including Over Head @12.5%			7,720.62 x 12.5 %	965.08
	Labour Cess @1%			8,685.69 x 1 %	86.86
		Cost For 7.50 Rmt			8,772.55
		Rate Per Rmt			1,169.67
		Say Rs. Per Rmt			**1,169.70**

7-2 Rumble Strips

Provision of rumble strips of premix bituminous carpet, 25 mm high at centre, 300 mm wide placed at 1 m centre-to-centre at approved locations to control speed, marked with white strips of road marking paint.

Unit = Rmt

Taking output = 48 Rmt (8 no 6m Length)

Code	Resource	Unit	Qty.	Rate	Amount
Sub- Item					
15-3-3	Premix Carpet	Cum	0.24	14645.00 / Cum	3,514.80
	(48*0.005028= 0.24 Cum)				
	Add 50% Extra				1,757.40
				Total Resource Cost	**5,272.20**
		Cost For 48 Rmt			5,272.20
		Rate Per Rmt			109.84
		Say Rs. Per Rmt			**109.80**

Chapter 8 - Warm Mix Technology

8-1 Bituminous Macadam with Warm Mix Technology

Providing and laying Bituminous macadam with the use of asphalt mixing plant using crushed aggregates of grading as per Table 500.4, premixed with bituminous binder and warm mix additive, transported to site upto a lead of 1000 m 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 Technical Specification Clause 504 using the Warm Mix (WMA) Asphalt Technlogy as per IRC:SP: 101-2009. (Bitumen VG-10 @ 3.3% of the weight of mix and warm mix additive @ 0.4% of the weight of bitimen have been used for analysis purpose. The choice of bitumen will depend upon the prevailing site conditions and shall be in accordance with Clause 504 of MORD

8-1-1 ***with Bitumen VG-10***

Unit = Cum

Taking output = 102.50 Cum (Taking Density 2.20g/cc hence 225 Tonne)

Total weight of mix = 225 t
Weight of bitumen = 7.425 t
Weight of Warm Mix Additive = 29.70 Kg
Weight of aggregate = 225 – 7.425 - 0.0297 = 217.5453 t
Taking density of aggregate = 1.5 t/Cum
Volume of aggregate = 145.03 Cum
Bitumen @3.3% of Mix & warm mix additive @ 0.4% of bitumen

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL14	Mate	day	0.52	436.72 / Day	227.09
PL15	Beldar/mazdoor (unskilled)	day	10.00	410.97 / Day	4,109.70
PL17	Mazdoor/Beldar (Skilled)	day	3.00	462.47 / Day	1,387.41
Machine					
PMC001	Air Compressor 210 cfm	hours	1.10	330.00 / hours	363.00
PMC148	Batch mix Warm Mix Asphalt Plant 40-	hours	6.00	20847.46 / hours	1,25,084.76
PMC010	Electric generator set, 125 KVA	hours	6.00	2796.61 / hours	16,779.66
PMC012	Front end-loader 1 cum bucket capacity	hours	6.00	1000.00 / hours	6,000.00
PMC013	Hydraulic broom with tractor	hours	1.10	400.00 / hours	440.00
PMC021	Paver finisher	hours	6.00	1180.00 / hours	7,080.00
PMC027	Three wheel 80-100 kN Static Roller	hours	12.00	520.00 / hours	6,240.00
PMC028	Tipper 5.5 cum/10 ton capacity	hours	6.21	550.00 / hours	3,415.50
PMC034	Vibratory roller 80-100 kN	hours	6.00	1400.00 / hours	8,400.00
Material					
PM0012	Aggregate - Grading II (19 mm nominal	Cum	58.01	1990.70 / Cum	1,15,480.51
PM0013	Aggregate - Grading II (19 mm nominal	Cum	58.01	1990.70 / Cum	1,15,480.51
PM0014	Aggregate - Grading II (19 mm nominal	Cum	29.01	1990.70 / Cum	57,750.21
PM2290	Warm Mix additive	Kg	29.700	630.00 / Kg.	18,711.00
PM0041	Bitumen VG-10 (Bulk)	Tonne	7.425	40716.00 / MT	3,02,316.30
				Total Resource Cost	**7,89,265.65**
	Contractor's Profit Including Over Head @12.5%			7,89,265.65 x 12.5 %	98,658.21
	Labour Cess @1%			8,87,923.85 x 1 %	8,879.24
		Cost For 102.50 Cum			8,96,803.09
		Rate Per Cum			8,749.30
		Say Rs. Per Cum			**8,749.30**

8-1-2 ***with Bitumen VG-30***

Unit = Cum

Taking output = 102.50 Cum (Taking Density 2.20g/cc hence 225 Tonne)

Total weight of mix = 225 t
Weight of bitumen = 7.425 t
Weight of Warm Mix Additive = 29.70 Kg
Weight of aggregate = 225 – 7.425 - 0.0297 = 217.5453 t
Taking density of aggregate = 1.5 t/Cum
Volume of aggregate = 145.03 Cum
Bitumen @3.3% of Mix & warm mix additive @ 0.4% of bitumen

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL14	Mate	day	0.52	436.72 / Day	227.09
PL15	Beldar/mazdoor (unskilled)	day	10.00	410.97 / Day	4,109.70
PL17	Mazdoor/Beldar (Skilled)	day	3.00	462.47 / Day	1,387.41
Machine					
PMC001	Air Compressor 210 cfm	hours	1.10	330.00 / hours	363.00
PMC148	Batch mix Warm Mix Asphalt Plant 40-	hours	6.00	20847.46 / hours	1,25,084.76
PMC010	Electric generator set, 125 KVA	hours	6.00	2796.61 / hours	16,779.66
PMC012	Front end-loader 1 cum bucket capacity	hours	6.00	1000.00 / hours	6,000.00
PMC013	Hydraulic broom with tractor	hours	1.10	400.00 / hours	440.00
PMC021	Paver finisher	hours	6.00	1180.00 / hours	7,080.00
PMC027	Three wheel 80-100 kN Static Roller	hours	12.00	520.00 / hours	6,240.00
PMC028	Tipper 5.5 cum/10 ton capacity	hours	6.21	550.00 / hours	3,415.50
PMC034	Vibratory roller 80-100 kN	hours	6.00	1400.00 / hours	8,400.00
Material					
PM0012	Aggregate - Grading II (19 mm nominal	Cum	58.01	1990.70 / Cum	1,15,480.51
PM0013	Aggregate - Grading II (19 mm nominal	Cum	58.01	1990.70 / Cum	1,15,480.51
PM0014	Aggregate - Grading II (19 mm nominal	Cum	29.01	1990.70 / Cum	57,750.21
PM2290	Warm Mix additive	Kg	29.700	630.00 / Kg.	18,711.00
PM0040	Bitumen VG-30 (Bulk)	Tonne	7.425	43016.00 / MT	3,19,393.80
				Total Resource Cost	**8,06,343.15**
	Contractor's Profit Including Over Head @12.5%			8,06,343.15 x 12.5 %	1,00,792.89
	Labour Cess @1%			9,07,136.04 x 1 %	9,071.36
			Cost For 102.50 Cum		9,16,207.40
			Rate Per Cum		8,938.61
			Say Rs. Per Cum		**8,938.60**

8-2 Dense Bituminous Macadam with Warm Mix Technology

Providing and laying Dense Bituminous Macadam with 100-120 TPH batch type Asphalt Mixing Plant producing an average output of 75 tonnes per hour using crushed aggregates of specified grading, premixed with bituminous binder @ 4.25% by weight of total mix of mix, warm mix additive @ 0.4% by weight of bitumen 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 specification clause No. 507 complete in all respects.

8-2-1 Grading I - 37.5mm nominal size

Unit = Cum
Taking output = 195.00 Cum (450 Tonne)

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL14	Mate	day	0.84	436.72 / Day	366.84
PL15	Beldar/mazdoor (unskilled)	day	16.00	410.97 / Day	6,575.52
PL17	Mazdoor/Beldar (Skilled)	day	5.00	462.47 / Day	2,312.35
Machine					
PMC012	Front end-loader 1 cum bucket capacity	hours	6.00	1000.00 / hours	6,000.00
PMC027	Three wheel 80-100 kN Static Roller	hours	3.90	520.00 / hours	2,028.00
PMC034	Vibratory roller 80-100 kN	hours	3.90	1400.00 / hours	5,460.00
PMC149	Warm Mix Asphalt Plant 60- 90 TPH	hours	6.00	11750.00 / hours	70,500.00
PMC056	Paver Finisher Hydrostatic with sensor	hours	6.00	2450.00 / hours	14,700.00
PMC066	Smooth Wheeled Roller 8 tonne	hours	3.90	520.00 / hours	2,028.00
PMC068	Tipper 5.5 cum in tonne.km	hours	4,500.00	4.00 / MT.Km	18,000.00
PMC097	Generator 250 KVA	hours	6.00	1710.00 / hours	10,260.00
Material					
PM0008	Aggregate - Grading I (40 mm nominal	Cum	54.56	1990.70 / Cum	1,08,612.59
PM0009	Aggregate - Grading I (40 mm nominal	Cum	37.33	1990.70 / Cum	74,312.83
PM0010	Aggregate - Grading I (40 mm nominal	Cum	63.18	1990.70 / Cum	1,25,772.43
PM0011	Aggregate - Grading I (40 mm nominal	Cum	126.39	1990.70 / Cum	2,51,604.57
PM2290	Warm Mix additive	Kg	76.520	630.00 / Kg.	48,207.60
PM0040	Bitumen VG-30 (Bulk)	tonne	19.13	43016.00 / MT	8,22,896.08
PM0095	Lime	tonne	8.62	7000.00 / MT	60,340.00
				Total Resource Cost	**16,29,976.82**
	Contractor's Profit Including Over Head @12.5%			16,29,976.82 x 12.5 %	2,03,747.10
	Labour Cess @1%			18,33,723.92 x 1 %	18,337.24
		Cost For 195.00 Cum			18,52,061.16
		Rate Per Cum			9,497.75
		Say Rs. Per Cum			**9,497.70**

8-2-2 Grading II - 26.5mm nominal size

Unit = Cum
Taking output = 195.00 Cum (450 Tonne)

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL14	Mate	day	0.84	436.72 / Day	366.84
PL15	Beldar/mazdoor (unskilled)	day	16.00	410.97 / Day	6,575.52
PL17	Mazdoor/Beldar (Skilled)	day	5.00	462.47 / Day	2,312.35
Machine					
PMC012	Front end-loader 1 cum bucket capacity	hours	6.00	1000.00 / hours	6,000.00
PMC027	Three wheel 80-100 kN Static Roller	hours	3.90	520.00 / hours	2,028.00
PMC034	Vibratory roller 80-100 kN	hours	3.90	1400.00 / hours	5,460.00
PMC149	Warm Mix Asphalt Plant 60- 90 TPH	hours	6.00	11750.00 / hours	70,500.00
PMC056	Paver Finisher Hydrostatic with sensor	hours	6.00	2450.00 / hours	14,700.00
PMC066	Smooth Wheeled Roller 8 tonne	hours	3.90	520.00 / hours	2,028.00
PMC068	Tipper 5.5 cum in tonne.km	hours	4,500.00	4.00 / MT.Km	18,000.00
PMC097	Generator 250 KVA	hours	6.00	1710.00 / hours	10,260.00
Material					

PM0012	Aggregate - Grading II (19 mm nominal	Cum	80.42	1990.70 / Cum	1,60,092.09
PM0013	Aggregate - Grading II (19 mm nominal	Cum	86.15	1990.70 / Cum	1,71,498.81
PM0014	Aggregate - Grading II (19 mm nominal	Cum	114.87	1990.70 / Cum	2,28,671.71
PM2290	Warm Mix additive	Kg	76.520	630.00 / Kg.	48,207.60
PM0040	Bitumen VG-30 (Bulk)	tonne	19.13	43016.00 / MT	8,22,896.08
PM0095	Lime	tonne	8.62	7000.00 / MT	60,340.00
				Total Resource Cost	**16,29,937.00**
	Contractor's Profit Including Over Head @12.5%			16,29,937.00 x 12.5 %	2,03,742.13
	Labour Cess @1%			18,33,679.13 x 1 %	18,336.79
		Cost For 195.00 Cum			18,52,015.92
		Rate Per Cum			9,497.52
		Say Rs. Per Cum			**9,497.50**

8-3 Bituminous Concrete with Warm Mix Technology

Providing and laying Bituminous Concrete with 60-90 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 and warm mix additive @ 0.4% by weight of bitumen, 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 specification clause No. 509 complete in all respects

8-3-1 for Grading-I (bituminous binder @ 5.2 % of mix)

Unit = Cum
Taking output = 191.00 Cum (450 Tonne)

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL14	Mate	day	0.84	436.72 / Day	366.84
PL15	Beldar/mazdoor (unskilled)	day	16.00	410.97 / Day	6,575.52
PL17	Mazdoor/Beldar (Skilled)	day	5.00	462.47 / Day	2,312.35
Machine					
PMC012	Front end-loader 1 cum bucket capacity	hours	6.00	1000.00 / hours	6,000.00
PMC027	Three wheel 80-100 kN Static Roller	hours	3.90	520.00 / hours	2,028.00
PMC034	Vibratory roller 80-100 kN	hours	3.90	1400.00 / hours	5,460.00
PMC149	Warm Mix Asphalt Plant 60- 90 TPH	hours	6.00	11750.00 / hours	70,500.00
PMC056	Paver Finisher Hydrostatic with sensor	hours	6.00	2450.00 / hours	14,700.00
PMC066	Smooth Wheeled Roller 8 tonne	hours	3.90	520.00 / hours	2,028.00
PMC068	Tipper 5.5 cum in tonne.km	hours	4,500.00	4.00 / MT.Km	18,000.00
	Add 10 % of cost of carriage to cover cost of loading and unloading			18000.00 x 10%	1,800.00
PMC097	Generator 250 KVA	hours	6.00	1710.00 / hours	10,260.00
Material					
PM0040	Bitumen VG-30 (Bulk)	Tonne	23.40	43016.00 / MT	10,06,574.40
PM0095	Lime	Tonne	8.60	7000.00 / MT	60,200.00
PM2290	Warm Mix additive	Kg	93.600	630.00 / Kg.	58,968.00
PM0012	Aggregate - Grading II (19 mm nominal	Cum	64.40	1990.70 / Cum	1,28,201.08
PM0014	Aggregate - Grading II (19 mm nominal	Cum	113.73	1990.70 / Cum	2,26,402.31
PM0190	Aggregates 20 mm to 10 mm	Cum	99.52	1990.70 / Cum	1,98,114.46
				Total Resource Cost	**18,18,490.97**

	Contractor's Profit Including Over Head @12.5%	18,18,490.97 x 12.5 %	2,27,311.37
	Labour Cess @1%	20,45,802.34 x 1 %	20,458.02
	Cost For 191.00 Cum		20,66,260.36
	Rate Per Cum		10,818.12
	Say Rs. Per Cum		**10,818.10**

8-3-2 for Grading-II (bituminous binder @ 5.4 % of mix)

Unit = Cum
Taking output = 191.00 Cum (450 Tonne)

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL14	Mate	day	0.84	436.72 / Day	366.84
PL15	Beldar/mazdoor (unskilled)	day	16.00	410.97 / Day	6,575.52
PL17	Mazdoor/Beldar (Skilled)	day	5.00	462.47 / Day	2,312.35
Machine					
PMC012	Front end-loader 1 cum bucket capacity	hours	6.00	1000.00 / hours	6,000.00
PMC027	Three wheel 80-100 kN Static Roller	hours	3.90	520.00 / hours	2,028.00
PMC034	Vibratory roller 80-100 kN	hours	3.90	1400.00 / hours	5,460.00
PMC149	Warm Mix Asphalt Plant 60- 90 TPH	hours	6.00	11750.00 / hours	70,500.00
PMC056	Paver Finisher Hydrostatic with sensor	hours	6.00	2450.00 / hours	14,700.00
PMC066	Smooth Wheeled Roller 8 tonne	hours	3.90	520.00 / hours	2,028.00
PMC068	Tipper 5.5 cum in tonne.km	hours	4,500.00	4.00 / MT.Km	18,000.00
	Add 10 % of cost of carriage to cover cost of loading and unloading			18000.00 x 10%	1,800.00
PMC097	Generator 250 KVA	hours	6.00	1710.00 / hours	10,260.00
Material					
PM0040	Bitumen VG-30 (Bulk)	Tonne	24.30	43016.00 / MT	10,45,288.80
PM0095	Lime	Tonne	8.59	7000.00 / MT	60,130.00
PM2290	Warm Mix additive	Kg	97.200	630.00 / Kg.	61,236.00
PM0012	Aggregate - Grading II (19 mm nominal	Cum	70.94	1990.70 / Cum	1,41,220.26
PM0014	Aggregate - Grading II (19 mm nominal	Cum	122.00	1990.70 / Cum	2,42,865.40
PM0189	Aggregates 13.2 mm to 10 mm	Cum	85.12	1990.70 / Cum	1,69,448.38
				Total Resource Cost	**18,60,219.56**
	Contractor's Profit Including Over Head @12.5%			18,60,219.56 x 12.5 %	2,32,527.44
	Labour Cess @1%			20,92,747.00 x 1 %	20,927.47
	Cost For 191.00 Cum				21,13,674.47
	Rate Per Cum				11,066.36
	Say Rs. Per Cum				**11,066.40**

8-4 Semi Dense Bituminous Concrete with Warm Mix Technology

Providing and laying Semi Dense Bituminous Concrete with 100-120 TPH batch type HMP producing an average output of 75 tonnes per hour using crushed aggregates of specified grading, premixed with bituminous binder, filler and warm mix additive @ 0.4% by weight of bitumen 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 specification clause No. 508 complete in all respects

8-4-1 Grading I - 13mm using Bitumen VG - 10 (bituminous binder @ 4.5 % of mix)

Unit = Cum
Taking output = 195 Cum

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL14	Mate	day	0.84	436.72 / Day	366.84
PL15	Beldar/mazdoor (unskilled)	day	16.00	410.97 / Day	6,575.52
PL17	Mazdoor/Beldar (Skilled)	day	5.00	462.47 / Day	2,312.35
Machine					
PMC148	Batch mix Warm Mix Asphalt Plant 40-	hours	6.00	20847.46 / hours	1,25,084.76
PMC012	Front end-loader 1 cum bucket capacity	hours	6.00	1000.00 / hours	6,000.00
PMC027	Three wheel 80-100 kN Static Roller	hours	3.90	520.00 / hours	2,028.00
PMC034	Vibratory roller 80-100 kN	hours	3.90	1400.00 / hours	5,460.00
PMC056	Paver Finisher Hydrostatic with sensor	hours	6.00	2450.00 / hours	14,700.00
PMC066	Smooth Wheeled Roller 8 tonne	hours	3.90	520.00 / hours	2,028.00
PMC068	Tipper 5.5 cum in tonne.km	hours	4,500.00	4.00 / MT.Km	18,000.00
	Cost of Carriage to Cover Cost of			18000.00 x 10%	1,800.00
PMC097	Generator 250 KVA	hours	6.00	1710.00 / hours	10,260.00
Material					
PM0012	Aggregate - Grading II (19 mm nominal	Cum	108.86	1990.70 / Cum	2,16,707.60
PM0041	Bitumen VG-10 (Bulk)	Tonne	20.25	40716.00 / MT	8,24,499.00
PM0095	Lime	Tonne	8.62	7000.00 / MT	60,340.00
PM2290	Warm Mix additive	Kg	81.000	630.00 / Kg.	51,030.00
PM0181	Aggregates below 5.6 mm	Cum	114.57	1990.70 / Cum	2,28,074.50
PM0189	Aggregates 13.2 mm to 10 mm	Cum	57.29	1990.70 / Cum	1,14,047.20
				Total Resource Cost	**16,89,313.78**
	Contractor's Profit Including Over Head @12.5%			16,89,313.78 x 12.5 %	2,11,164.22
	Labour Cess @1%			19,00,478.00 x 1 %	19,004.78
			Cost For 195 Cum		19,19,482.78
			Rate per Cum		9,843.50
			Say Rs. Per Cum		**9,843.50**

8-4-2 Grading II - 10mm using VG - 10 bitumen (bituminous binder @ 5 % of mix)

Unit = Cum
Taking output = 195 Cum

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL14	Mate	day	0.84	436.72 / Day	366.84
PL15	Beldar/mazdoor (unskilled)	day	16.00	410.97 / Day	6,575.52
PL17	Mazdoor/Beldar (Skilled)	day	5.00	462.47 / Day	2,312.35
Machine					
PMC148	Batch mix Warm Mix Asphalt Plant 40-	hours	6.00	20847.46 / hours	1,25,084.76
PMC012	Front end-loader 1 cum bucket capacity	hours	6.00	1000.00 / hours	6,000.00
PMC027	Three wheel 80-100 kN Static Roller	hours	3.90	520.00 / hours	2,028.00
PMC034	Vibratory roller 80-100 kN	hours	3.90	1400.00 / hours	5,460.00
PMC056	Paver Finisher Hydrostatic with sensor	hours	6.00	2450.00 / hours	14,700.00
PMC066	Smooth Wheeled Roller 8 tonne	hours	3.90	520.00 / hours	2,028.00
PMC068	Tipper 5.5 cum in tonne.km	hours	4,500.00	4.00 / MT.Km	18,000.00
	Cost of Carriage to Cover Cost of			18000.00 x 10%	1,800.00
PMC097	Generator 250 KVA	hours	6.00	1710.00 / hours	10,260.00

Material					
PM0012	Aggregate - Grading II (19 mm nominal	Cum	162.42	1990.70 / Cum	3,23,329.49
PM0041	Bitumen VG-10 (Bulk)	Tonne	22.50	40716.00 / MT	9,16,110.00
PM0095	Lime	Tonne	8.62	7000.00 / MT	60,340.00
PM2290	Warm Mix additive	Kg	90.000	630.00 / Kg.	56,700.00
PM0181	Aggregates below 5.6 mm	Cum	116.82	1990.70 / Cum	2,32,553.57
				Total Resource Cost	**17,83,648.54**
	Contractor's Profit Including Over Head @12.5%			17,83,648.54 x 12.5 %	2,22,956.07
	Labour Cess @1%			20,06,604.61 x 1 %	20,066.05
		Cost For 195 Cum			20,26,670.66
		Rate per Cum			10,393.18
		Say Rs. Per Cum			**10,393.20**

8-4-3 Grading I - 13mm using Bitumen VG - 30 (bituminous binder @ 4.5 % of mix)

Unit = Cum
Taking output = 195 Cum

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL14	Mate	day	0.84	436.72 / Day	366.84
PL15	Beldar/mazdoor (unskilled)	day	16.00	410.97 / Day	6,575.52
PL17	Mazdoor/Beldar (Skilled)	day	5.00	462.47 / Day	2,312.35
Machine					
PMC148	Batch mix Warm Mix Asphalt Plant 40-	hours	6.00	20847.46 / hours	1,25,084.76
PMC012	Front end-loader 1 cum bucket capacity	hours	6.00	1000.00 / hours	6,000.00
PMC027	Three wheel 80-100 kN Static Roller	hours	3.90	520.00 / hours	2,028.00
PMC034	Vibratory roller 80-100 kN	hours	3.90	1400.00 / hours	5,460.00
PMC056	Paver Finisher Hydrostatic with sensor	hours	6.00	2450.00 / hours	14,700.00
PMC066	Smooth Wheeled Roller 8 tonne	hours	3.90	520.00 / hours	2,028.00
PMC068	Tipper 5.5 cum in tonne.km	hours	4,500.00	4.00 / MT.Km	18,000.00
	Cost of Carriage to Cover Cost of			18000.00 x 10%	1,800.00
PMC097	Generator 250 KVA	hours	6.00	1710.00 / hours	10,260.00
Material					
PM0012	Aggregate - Grading II (19 mm nominal	Cum	108.86	1990.70 / Cum	2,16,707.60
PM0040	Bitumen VG-30 (Bulk)	Tonne	20.25	43016.00 / MT	8,71,074.00
PM0095	Lime	Tonne	8.62	7000.00 / MT	60,340.00
PM2290	Warm Mix additive	Kg	81.000	630.00 / Kg.	51,030.00
PM0181	Aggregates below 5.6 mm	Cum	114.57	1990.70 / Cum	2,28,074.50
PM0189	Aggregates 13.2 mm to 10 mm	Cum	57.29	1990.70 / Cum	1,14,047.20
				Total Resource Cost	**17,35,888.78**
	Contractor's Profit Including Over Head @12.5%			17,35,888.78 x 12.5 %	2,16,986.10
	Labour Cess @1%			19,52,874.88 x 1 %	19,528.75
		Cost For 195 Cum			19,72,403.62
		Rate per Cum			10,114.89
		Say Rs. Per Cum			**10,114.90**

8-4-4 Grading II - 10mm using VG - 30 bitumen (bituminous binder @ 5 % of mix)

Unit = Cum
Taking output = 195 Cum

Code	Resource	Unit	Qty.	Rate	Amount

Labour					
PL14	Mate	day	0.84	436.72 / Day	366.84
PL15	Beldar/mazdoor (unskilled)	day	16.00	410.97 / Day	6,575.52
PL17	Mazdoor/Beldar (Skilled)	day	5.00	462.47 / Day	2,312.35
Machine					
PMC148	Batch mix Warm Mix Asphalt Plant 40-	hours	6.00	20847.46 / hours	1,25,084.76
PMC012	Front end-loader 1 cum bucket capacity	hours	6.00	1000.00 / hours	6,000.00
PMC027	Three wheel 80-100 kN Static Roller	hours	3.90	520.00 / hours	2,028.00
PMC034	Vibratory roller 80-100 kN	hours	3.90	1400.00 / hours	5,460.00
PMC056	Paver Finisher Hydrostatic with sensor	hours	6.00	2450.00 / hours	14,700.00
PMC066	Smooth Wheeled Roller 8 tonne	hours	3.90	520.00 / hours	2,028.00
PMC068	Tipper 5.5 cum in tonne.km	hours	4,500.00	4.00 / MT.Km	18,000.00
	Cost of Carriage to Cover Cost of			18000.00 x 10%	1,800.00
PMC097	Generator 250 KVA	hours	6.00	1710.00 / hours	10,260.00
Material					
PM0012	Aggregate - Grading II (19 mm nominal	Cum	162.42	1990.70 / Cum	3,23,329.49
PM0040	Bitumen VG-30 (Bulk)	Tonne	22.50	43016.00 / MT	9,67,860.00
PM0095	Lime	Tonne	8.62	7000.00 / MT	60,340.00
PM2290	Warm Mix additive	Kg	90.000	630.00 / Kg.	56,700.00
PM0181	Aggregates below 5.6 mm	Cum	116.82	1990.70 / Cum	2,32,553.57
				Total Resource Cost	**18,35,398.54**
	Contractor's Profit Including Over Head @12.5%			18,35,398.54 x 12.5 %	2,29,424.82
	Labour Cess @1%			20,64,823.36 x 1 %	20,648.23
		Cost For 195 Cum			20,85,471.59
		Rate per Cum			10,694.73
		Say Rs. Per Cum			**10,694.70**

8-5 **Providing and laying Semi Dense Bituminous Concrete with the use of batch type HMP producing an average output of 75 tonnes per hour using crushed aggregates of specified grading, premixed with bituminous binder 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 specification clause No. 508 complete in all respects *using Shredded Waste Plastic material***

8-5-1 **Grading I - 13mm using Bitumen VG - 10 (bituminous binder @ 4.5 % of mix)**

Unit = Cum
Taking output = 195 Cum

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL14	Mate	day	0.84	436.72 / Day	366.84
PL15	Beldar/mazdoor (unskilled)	day	16.00	410.97 / Day	6,575.52
PL17	Mazdoor/Beldar (Skilled)	day	5.00	462.47 / Day	2,312.35
Machine					
PMC002	Batch mix HMP 40-60 TPH	hours	6.00	15250.00 / hours	91,500.00
PMC012	Front end-loader 1 cum bucket capacity	hours	6.00	1000.00 / hours	6,000.00
PMC027	Three wheel 80-100 kN Static Roller	hours	3.90	520.00 / hours	2,028.00
PMC034	Vibratory roller 80-100 kN	hours	3.90	1400.00 / hours	5,460.00
PMC056	Paver Finisher Hydrostatic with sensor	hours	6.00	2450.00 / hours	14,700.00

PMC066	Smooth Wheeled Roller 8 tonne	hours	3.90	520.00 / hours	2,028.00
PMC068	Tipper 5.5 cum in tonne.km	hours	4,500.00	4.00 / MT.Km	18,000.00
	Cost of Carriage to Cover Cost of			18000.00 x 10%	1,800.00
PMC097	Generator 250 KVA	hours	6.00	1710.00 / hours	10,260.00
Material					
PM0012	Aggregate - Grading II (19 mm nominal	Cum	108.87	1990.70 / Cum	2,16,727.51
PM0041	Bitumen VG-10 (Bulk)	Tonne	20.250	40716.00 / MT	8,24,499.00
PM2282	Sharded waste plastic material	Tonne	1.215	37.00 / Kg.	44.96
PM0095	Lime	Tonne	8.62	7000.00 / MT	60,340.00
PM0181	Aggregates below 5.6 mm	Cum	114.60	1990.70 / Cum	2,28,134.22
PM0189	Aggregates 13.2 mm to 10 mm	Cum	57.30	1990.70 / Cum	1,14,067.11
				Total Resource Cost	**16,04,843.51**
	Contractor's Profit Including Over Head @12.5%			16,04,843.51 x 12.5 %	2,00,605.44
	Labour Cess @1%			18,05,448.95 x 1 %	18,054.49
		Cost For 195 Cum			18,23,503.44
		Rate per Cum			9,351.30
		Say Rs. Per Cum			**9,351.30**

8-5-2 Grading I - 13mm using Bitumen VG - 30 (bituminous binder @ 4.5 % of mix)

Unit = Cum
Taking output = 195 Cum

Code	Resource	Unit	Qty.	Rate	Amount
Labour					
PL14	Mate	day	0.84	436.72 / Day	366.84
PL15	Beldar/mazdoor (unskilled)	day	16.00	410.97 / Day	6,575.52
PL17	Mazdoor/Beldar (Skilled)	day	5.00	462.47 / Day	2,312.35
Machine					
PMC002	Batch mix HMP 40-60 TPH	hours	6.00	15250.00 / hours	91,500.00
PMC012	Front end-loader 1 cum bucket capacity	hours	6.00	1000.00 / hours	6,000.00
PMC027	Three wheel 80-100 kN Static Roller	hours	3.90	520.00 / hours	2,028.00
PMC034	Vibratory roller 80-100 kN	hours	3.90	1400.00 / hours	5,460.00
PMC056	Paver Finisher Hydrostatic with sensor	hours	6.00	2450.00 / hours	14,700.00
PMC066	Smooth Wheeled Roller 8 tonne	hours	3.90	520.00 / hours	2,028.00
PMC068	Tipper 5.5 cum in tonne.km	hours	4,500.00	4.00 / MT.Km	18,000.00
	Cost of Carriage to Cover Cost of			18000.00 x 10%	1,800.00
PMC097	Generator 250 KVA	hours	6.00	1710.00 / hours	10,260.00
Material					
PM0012	Aggregate - Grading II (19 mm nominal	Cum	108.87	1990.70 / Cum	2,16,727.51
PM0040	Bitumen VG-30 (Bulk)	Tonne	20.250	43016.00 / MT	8,71,074.00
PM2282	Sharded waste plastic material	Tonne	1.215	37.00 / Kg.	44.96
PM0095	Lime	Tonne	8.62	7000.00 / MT	60,340.00
PM0181	Aggregates below 5.6 mm	Cum	114.60	1990.70 / Cum	2,28,134.22
PM0189	Aggregates 13.2 mm to 10 mm	Cum	57.30	1990.70 / Cum	1,14,067.11
				Total Resource Cost	**16,51,418.51**
	Contractor's Profit Including Over Head @12.5%			16,51,418.51 x 12.5 %	2,06,427.31
	Labour Cess @1%			18,57,845.82 x 1 %	18,578.46
		Cost For 195 Cum			18,76,424.28
		Rate per Cum			9,622.69
		Say Rs. Per Cum			**9,622.70**