


<p>सेंट्रल कोल्फील्ड्स लिमिटेड कोल इंडिया की अनुषांगी), एक मिनी रत्न कम्पनी((भारत सरकार का उपक्रम) असैनिक विभाग पंजीकृत कार्यालय : दरभंगा हाउस, राँची- झारखंड - 834029 फोन: 0651)- 8987784129 वेबसाइट: http://www.centralcoalfields.in CIN No: U10200JH1956GOI000581 ईमेल : gmcivilcclranchi@gmail.com : gmcivil.ccl@coalindia.in</p>		<p>CENTRAL COALFIELDS LIMITED (A Miniratna Subsidiary Company of Coal India Limited) (Govt. of India Undertaking) Civil Department Reg. Office: Darbhanga House, Ranchi Jharkhand -834029, Ph: 8987784129 Website http://www.centralcoalfields.in CIN No: U10200JH1956GOI000581 E-mail: gmcivilcclranchi@gmail.com : gmcivil.ccl@coalindia.in</p>
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पत्रांक सं: सी.सी.एल./महाप्रबंधक(असैनिक)/2024-25/ 238(H)

दिनांक: 10/07/2024

प्रति,

महाप्रबंधक - अरगड़ा/ बी&के/ बरका-सयाल/ सीआरएस, बरकाकाना/ दोरी/ गिरिडीह/ हजारीबाग/ कथारा/ कुजू/ मगध
संघमित्र /आम्रपाली चंद्रगुप्ता / एनके/ पिपरवार/ रजरप्पा/ राजहरा क्षेत्र
सी. सी. एल

विषय: Implementation of CCL Schedule of Rates (SOR) 2024 for Civil Works in all Areas of CCL

महाशय,

With reference to the subject matter, it is my pleasure to **circulate CCL Schedule of Rates (SOR) 2024 for Civil Works** which was approved in 19th meeting of ECFDs on 14.05.2024 and has subsequently been updated to its present form. This SOR includes:

1. Building SOR incld. water supply & sanitary works
2. Horticulture works
3. Electrification works
4. Road works

The rates provided in the subject SOR would be referred in the preparation of estimates/BoQ for Civil works in CCL. It is envisaged that the CCL SOR 2024 (Civil works) would prove to be useful to the Area officials and would improve the operational efficiency of Civil Dept. as a whole.

It may kindly be noted that for any other/new item(s) that needs to be included in the estimate (the rate of which is not included in this SOR), the analysis of rate for such item(s) should be prepared as per Cl. 4.18 of MCEW, 2023 and the same should be enclosed in the proposal for the sake of competent approval.

Since, this SOR needs to be updated for each year as per the provisions of MCEW, 2023, feedback/ suggestions from all users is solicited, so that any further modifications may be attempted in due course.

भवदीय,

महाप्रबंधक (असैनिक) विभागध्यक्ष
सी.सी.एल., राँची

प्रतिलिपि:

1. निदेशक (तकनीकी)/संचालन, निदेशक (तकनीकी)/योजना एवं परियोजना, निदेशक (वित्त), निदेशक (कार्मिक), सी. सी. एल., राँची।
2. TS/अध्यक्ष सह प्रबंधन निदेशक, सी. सी. एल., राँची
3. महाप्रबंधक (असैनिक), कोल इंडिया लिमिटेड, कोलकाता
4. महाप्रबंधक (सतर्कता), सी. सी. एल., राँची
5. महाप्रबंधक (वित्त), सी. सी. एल., राँची
6. महाप्रबंधक (विद्युत एवं यांत्रिकी)/डिविशन I & II, सी. सी. एल., राँची
7. महाप्रबंधक (असैनिक)/कल्याण एवं सेवाएँ, सी. सी. एल., राँची
8. महाप्रबंधक (असैनिक)/टेन्डर सेल, सी. सी. एल., राँची
9. महाप्रबंधक (असैनिक)/गुणवत्ता नियंत्रण प्रकोष्ठ, सी. सी. एल., राँची
10. महाप्रबंधक (असैनिक)/रोड एवं आई. सी. , सी. सी. एल., राँची
11. मुख्यप्रबंधक (वित्त)/योजना एवं परियोजना, सी. सी. एल., राँची
12. स्टाफ ऑफिसर (असैनिक) - अरगड़ा/ बी&के/ बरका-सयाल/ सीआरएस, बरकाकाना/ दोरी/ गिरिडीह/ हजारीबाग/ कथारा/ कुजू/ मगध संघमित्र /आम्रपाली चंद्रगुप्ता / एनके/ पिपरवार/ रजरप्पा/ राजहरा क्षेत्र



SCHEDULE OF RATES (SOR) 2024



(For all Areas)

**Civil Department,
Central Coalfields Limited,
Dharbhanga House, Ranchi
Jharkhand, 834029**



CCL

Fuelling Sustainable Growth

SCHEDULE OF RATES
(SOR)
2024

All Areas except Ranchi

Schedule of Rates

Central Coalfields Limited

Location: **All Areas except Ranchi**

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**Schedule of Rates (SOR)
2024
Central Coalfields Limited
Location: All Areas except Ranchi**

SOR for Building works

All Areas except Ranchi

Item Code	Description	Unit	Justified Rate
1	CARRIAGE OF MATERIALS		
1.1	By Mechanical Transport including loading,unloading and stacking		
1.1.1	Lime, moorum, building rubbish Lead - 5 km	cum	168.10
1.1.2	Earth Lead - 5 km	cum	210.10
1.1.3	Manure or sludge Lead - 5 km	cum	182.70
1.1.4	Excavated rock Lead - 5 km	cum	336.15
1.1.5	Sand, stone aggregate below 40 mm nominal size Lead - 5 km	cum	168.10
1.1.6	Stone aggregate 40 mm nominal size and above Lead - 5 km	cum	182.70
1.1.7	Soling stone Lead - 5 km	cum	197.75
1.1.8	Bricks Lead - 5 km	1000 Nos	448.20
1.1.9	Brick Tiles Lead - 5 km	1000 Nos	268.95
1.1.10	Cement, stone blocks, G.I.. C.I., A.C., & C.C. pipes below 100 mm dia and other heavy materials Lead - 5 km	tonne	149.40
1.1.11	Steel Lead - 5 km	tonne	149.40
1.1.12	Timber Lead - 5 km	cum	192.10
1.1.13	Tar Bitumen Lead - 5 km	tonne	168.10
1.1.14	Solvent, diesel Lead - 5 km	qtl	16.80
1.1.15	Steam coal Lead - 5 km	tonne	192.10
1.1.16	S.W. pipe		
1.1.16.1	100 mm dia Lead - 5 km	100 m	224.10
1.1.16.2	150 mm dia Lead - 5 km	100 m	448.20
1.1.16.3	200 mm dia Lead - 5 km	100 m	747.00
1.1.16.5	250 mm dia Lead - 5 km	100 m	1,280.60
1.1.16.6	300 mm dia Lead - 5 km	100 m	1,600.75
1.1.16.7	350 mm dia Lead - 5 km	100 m	2,241.05
1.1.16.8	400 mm dia Lead - 5 km	100 m	3,201.50
1.1.16.9	450 mm dia Lead - 5 km	100 m	4,074.65
1.1.16.10	500 mm dia Lead - 5 km	100 m	4,482.15
1.1.16.11	600 mm dia Lead - 5 km	100 m	5,602.65
1.1.17	R.C.C. pipe, A.C. pipes, steel cylinder, R.C. pipes, S.C.I. pipes, C.I. pipes and unreinforced cement pipes		
1.1.17.1	100 mm dia Lead - 5 km	100 m	367.40
1.1.17.2	125 mm dia Lead - 5 km	100 m	490.75
1.1.17.3	150 mm dia Lead - 5 km	100 m	612.30
1.1.17.4	200 mm dia Lead - 5 km	100 m	996.05
1.1.17.5	250 mm dia Lead - 5 km	100 m	1,415.40
1.1.17.6	300 mm dia Lead - 5 km	100 m	1,749.45
1.1.17.7	350 mm dia Lead - 5 km	100 m	2,449.25
1.1.17.8	400 mm dia Lead - 5 km	100 m	3,339.90

Item Code	Description	Unit	Justified Rate
1.1.17.9	450 mm & 500 mm dia Lead - 5 km	100 m	4,082.10
1.1.17.10	600, 700, 750 & 800 mm dia Lead - 5 km	100 m	6,123.15
1.1.17.11	900 mm dia Lead - 5 km	100 m	9,184.70
1.1.17.12	1000, 1100 & 1200 mm dia Lead - 5 km	100 m	12,246.25
1.1.18	Disposal of moorum/building rubbish/ malba/ similar unserviceable, dismantled or waste material by mechanical transport including loading, transporting, unloading to approved municipal dumping ground for lead upto 10 km for all lifts, complete as per directions of Engineer-in-charge.	cum	321.70
1.2	By Manual Labour including loading, unloading and stacking for lead less than 0.50 KM		
1.2.1	Lime, moorum, building rubbish Lead - 50 m	cum	131.55
1.2.2	Earth Lead - 50 m	cum	164.45
1.2.3	Manure or sludge Lead - 50 m	cum	143.00
1.2.4	Excavated rock Lead - 50 m	cum	263.10
1.2.5	Sand, stone aggregate below 40 mm nominal size Lead - 50 m	cum	164.45
1.2.6	Stone aggregate 40 mm nominal size and above Lead - 50 m	cum	177.75
1.2.7	Soling stone Lead - 50 m	cum	193.45
1.2.10	Steam Coal Lead - 50 m	tonne	153.50
1.2.11	Stone blocks,G.I.,C.I. Stainless Steel pipes below 100 mm dia and other heavy material Lead - 50 m	tonne	120.05
1.2.12	Cement Lead - 50 m	tonne	95.25
1.2.13	Steel Lead - 50 m	tonne	204.55
1.2.14	Timber Lead - 50 m	cum	131.50
1.2.15	Tar, bitumen etc. Lead - 50 m	tonne	120.05
1.2.16	S.W. pipe		
1.2.16.1	100 mm dia Lead - 50 m	100 m	240.35
1.2.16.2	150 mm dia Lead - 50 m	100 m	395.05
1.2.16.3	200 mm dia Lead - 50 m	100 m	552.85
1.2.16.5	250 mm dia Lead - 50 m	100 m	920.45
1.2.16.6	300 mm dia Lead - 50 m	100 m	1,314.95
1.2.16.7	350 mm dia Lead - 50 m	100 m	1,840.90
1.2.16.8	400 mm dia Lead - 50 m	100 m	2,301.15
1.2.16.9	450 mm dia Lead - 50 m	100 m	2,789.25
1.2.16.10	500 mm dia Lead - 50 m	100 m	3,409.10
1.2.16.11	600 mm dia Lead - 50 m	100 m	4,183.90
1.2.17	R.C.C. pipes, Steel cylinder, R.C. pipes, C.I. pipes, and unreinforced cement pipes Lead - 50 m	100 m	-
1.2.17.1	100 mm dia Lead - 50 m	100 m	324.50
1.2.17.2	125 mm dia Lead - 50 m	100 m	397.05
1.2.17.3	150 mm dia Lead - 50 m	100 m	457.20
1.2.17.4	200 mm dia Lead - 50 m	100 m	686.05
1.2.17.5	250 mm dia Lead - 50 m	100 m	1,205.85
1.2.17.6	300 mm dia Lead - 50 m	100 m	1,508.95
1.2.17.7	350 mm dia Lead - 50 m	100 m	2,157.35
1.2.17.8	400 mm dia Lead - 50 m	100 m	2,510.35
1.2.17.9	450 mm & 500 mm dia Lead - 50 m	100 m	3,347.15
1.2.17.10	600, 700, 750 & 800 mm dia Lead - 50 m	100 m	3,681.85
1.3	Loading in or unloading cement from the railway wagons at siding and carrying the same from or into godowns adjacent to the siding, including stacking the same properly in rows upto any height as per di-rection of Engineer-in-charge, sweeping the wagons and screening the swept cement and filling in bags complete.	tonne	98.15

Item Code	Description	Unit	Justified Rate
1.4	Loading in or unloading from the railway wagons as per direction of Engineer-in-charge :		
1.4.1	Steel	tonne	145.45
1.4.2	G.I., C.I., R.C.C. or C.C. pipes upto 500 mm dia and similar heavy materials	tonne	86.30
1.4.3	Heavy materials where each piece or bundle, crate or case weighs more than one tonne and R.C.C., C.I. and concrete pipes above 500 mm dia.	tonne	156.50
2	EARTHWORK		
2.1	Earth work in surface excavation not exceeding 30 cm in depth but exceeding 1.5 m in width as well as 10 sqm on plan including getting out and disposal of excavated earth upto 50 m and lift upto 1.5 m, as directed by Engineer-in-Charge:		
2.1.1	All kinds of soil	sqm	75.20
2.2	Earth work by mechanical I manual means in rough excavation, banking excavated earth in layers not exceeding 20cm in depth, breaking clods, watering, rolling each layer with Y: tonne roller or wooden or steel rammers, and rolling every 3rd and top-most layer with power roller of minimum 8 tonnes and dressing up in embankments for roads, flood banks, marginal banks and guide banks or filling up ground depressions, lead upto 50 m and for all lif:		
2.2.1	All kinds of soil	cum	283.40
2.3	Banking excavated earth by mechanical I manual means in layers not exceeding 20 cm in depth, breaking clods, watering, rolling each layer with 'A tonne roller, or wooden or steel rammers, and rolling every 3rd and top-most layer with power roller of minimum 8 tonnes and dressing up, in embankments for roads, food banks, marginal banks, and guide banks etc., lead upto 50 m and for all lift :		
2.3.1	All kinds of soil	cum	130.90
2.4	Deduct for not rolling with power roller of minimum 8 tonnes for banking excavated earth in layers not exceeding 20 cm in depth.	cum	3.70
2.5	Deduct for not watering the excavated earth for banking	cum	9.30
2.6	Earth work in excavation by mechanical means (Hydraulic excavator)/manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) including getting out and disposal of excavated earth lead upto 50 m and for all lift, as directed by Engineer-in-charge.		
2.6.1	All kinds of soil	cum	128.05
2.7	Earth work in excavation by mechanical means (Hydraulic excavator)/ manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) including getting out and disposal of excavated earth lead upto 50 m and lift upto 1.5 m, as directed by Engineer-in-charge.		
2.7.1	Ordinary rock	cum	305.65
2.7.2	Hard rock (requiring blasting)	cum	535.10
2.7.3	Hard rock (blasting prohibited)	cum	867.20
2.8	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, for all lift, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.		
2.8.1	All kinds of soil.	cum	188.45
2.9	Excavation work by mechanical means (Hydraulic excavator)/ manual means in foundation trenches or drains (not exceeding 1.5m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, lift upto 1.5 m, including getting out the excavated soil and disposal of surplus excavated soils as directed, within a lead of 50 m.		
2.9.1	Ordinary rock	cum	383.30

Item Code	Description	Unit	Justified Rate
2.9.2	Hard rock (requiring blasting)	cum	633.20
2.9.3	Hard rock (blasting prohibited)	cum	919.50
2.10	Excavating trenches of required width for pipes, cables, etc including excavation for sockets, and dressing of sides, by mechanical / manual means ramming of bottoms, for all depth, including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cm in depth, including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50 m:		
2.10.1	All kinds of soil		
2.10.1.1	Pipes, cables etc, not exceeding 80 mm dia.	metre	143.10
2.10.1.2	Pipes, cables etc, not exceeding 80 mm dia. But not exceeding 300mm dia	metre	233.70
2.10.1.3	Pipes, cables etc. exceeding 300 mm dia but not exceeding 600 mm	metre	364.90
2.13	Excavating trenches of required width for pipes, cables, etc, including excavation for sockets, depth upto 1.5 m, including getting out the excavated materials, returning the soil as required in layers not exceeding 20 cm in depth, including consolidating each deposited layers by ramming, watering etc., stacking serviceable material for measurements and disposal of unserviceable material as directed, within a lead of 50 m		
2.13.1	Ordinary rock:		
2.13.1.1	Pipes, cables etc. not exceeding 80 mm dia	metre	241.90
2.13.1.2	Pipes, cables etc. exceeding 80 mm dia but not exceeding 300 mm dia ,	metre	599.00
2.13.1.3	Pipes, cables exceeding 300 mm dia but not exceeding 600 mm dia	metre	689.20
2.13.2	Hard rock (requiring blasting)		
2.13.2.1	Pipes, cables etc. not exceeding 80 mm dia	metre	361.65
2.13.2.2	Pipes, cables etc. exceeding 80 mm dia but not exceeding 300 mm dia	metre	895.55
2.13.2.3	Pipes, cables etc exceeding 300 mm dia but not exceeding 600 mm dia	metre	1,030.40
2.13.3	Hard rock (blasting prohibited)		
2.13.3.1	Pipes, cables etc. not exceeding 80 mm dia	metre	496.95
2.13.3.2	Pipes, cables etc. exceeding 80 mm dia but not exceeding 300 mm dia	metre	1,230.50
2.13.3.3	Pipes, cables etc. exceeding 300 mm dia but not exceeding 600 mm dia	metre	1,415.95
2.14	Extra for excavating trenches for pipes, cables, etc. in ordinary hard rock exceeding 1.5 m in depth but not exceeding 3 m. (Rate is over corresponding basic item for depth upto 1.5 metre)		
2.14.1	Ordinary rock :		
2.14.1.1	Pipes, cables etc. exceeding 80 mm dia but not exceeding 300 mm dia	metre	437.70
2.14.1.2	Pipes, cables exceeding 300 mm dia but not exceeding 600 mm dia	metre	520.30
2.14.2	Hard rock (requiring blasting)		
2.14.2.1	Pipes, cables etc. exceeding 80 mm dia but not exceeding 300 mm dia	metre	654.40
2.14.2.2	Pipes, cables exceeding 300 mm dia but not exceeding 600 mm dia	metre	777.90
2.14.3	Hard rock (blasting prohibited)		
2.14.3.1	Pipes, cables etc. exceeding 80 mm dia but not exceeding 300 mm dia	metre	899.20
2.14.3.2	Pipes, cables exceeding 300 mm dia but not exceeding 600 mm dia	metre	1,068.70
2.15	Extra for excavating trenches for pipes, cables, etc. in ordinary/hard rock exceeding 3m in depth but not exceeding 4.5 m (Rate is over corresponding basic item for depth upto 1.5 metre)		
2.15.1	Ordinary rock :		
2.15.1.1	Pipes, cables exceeding 300 mm dia but not exceeding 600 mm dia	metre	1,417.35

Item Code	Description	Unit	Justified Rate
2.16	Close timbering in trenches including strutting, shoring and packing cavities (wherever required) complete. (Measurements to be taken of the face area timbered).		
2.16.1	Depth not exceeding 1.5 m	sqm	113.10
2.16.2	Depth exceeding 1.5 m but not exceeding 3 m	sqm	122.20
2.16.3	Depth exceeding 3 m but not exceeding 4.5 m	sqm	142.65
2.17	Close timbering in case of shafts, wells, cesspits, manholes and the like including strutting, shoring and packing cavities (wherever required) etc. complete. (Measurements to be taken of the face area timbered).		
2.17.1	Depth not exceeding 1.5 m	sqm	120.05
2.17.2	Depth exceeding 1.5 m but not exceeding 3 m	sqm	139.45
2.17.3	Depth exceeding 3 m but not exceeding 4.5 m	sqm	159.85
2.18	Close timbering over areas including strutting, shoring and packing cavities (wherever required) etc. complete. (Measurements to be taken of the face area timbered):		
2.18.1	Depth not exceeding 1.5 m	sqm	101.15
2.18.2	Depth exceeding 1.5 m but not exceeding 3 m	sqm	111.95
2.18.3	Depth exceeding 3 m but not exceeding 4.5 m	sqm	123.40
2.19	Extra for planking, strutting and packing materials for cavities (in close timbering) if required to be left permanently in position. (Face area of timber permanently left to be measured).	sqm	1,385.95
2.20	Open timbering in trenches including strutting and shoring complete (measurements to be taken of the face area timbered):		
2.20.1	Depth not exceeding 1.5 m	sqm	58.40
2.20.2	Depth exceeding 1.5 m but not exceeding 3 m	sqm	64.10
2.20.3	Depth exceeding 3 m but not exceeding 4.5 m	sqm	73.45
2.21	Open timbering in case of shafts, wells, cesspits, manholes and the like including strutting and shoring complete (Measurements to be taken of the face area timbered):		
2.21.1	Depth not exceeding 1.5 m	sqm	52.30
2.21.2	Depth exceeding 1.5 m but not exceeding 3 m	sqm	61.35
2.21.3	Depth exceeding 3 m but not exceeding 4.5 m	sqm	73.35
2.22	Open timbering over areas including strutting, shoring etc. complete. (Measurements to be taken of the face area timbered):		
2.22.1	Depth not exceeding 1.5 m	sqm	35.70
2.22.2	Depth exceeding 1.5 m but not exceeding 3 m	sqm	41.85
2.22.3	Depth exceeding 3 m but not exceeding 4.5 m	sqm	51.70
2.23	Extra for planking and strutting in open timbering if required to be left permanently in position. (Face area of the timber permanently left to be measured).	sqm	713.65
2.24	Extra rates for quantities of works, executed:		
2.24.1	In or under water and/or liquid mud, including pumping out water as required	metre depth	-
2.24.2	In or under foul position, including pumping out water as required	metre depth	-
2.25	Filling available excavated earth (excluding rock) in trenches, plinth. sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and for all lift	cum	114.40
2.25A	Excavating, supplying, stacking and filling of local earth (including royalty) by mechanical transport upto a lead of 5km also including ramming and watering of the earth in layers not exceeding 20 cm in foundation, trenches, plinth, sides of foundation etc. complete for all lift.	cum	437.70
2.26	Extra for every additional lift of 1.5 m or part thereof in excavation / banking excavated or stacked materials.		
2.26.1	All kinds of soil	cum	73.80
2.26.2	Ordinary or hard rock	cum	132.40

Item Code	Description	Unit	Justified Rate
2.27	Supplying and filling in plinth with sand under floors, including watering, ramming, consolidating and dressing complete.	cum	1,844.00
2.28	Surface dressing of the ground including removing vegetation and inequalities not exceeding 15 cm deep and disposal of rubbish, lead up to 50 m and lift up to 1.5 m.		
2.28.1	All kinds of soil	sqm	19.75
2.29	Ploughing the existing ground to a depth of 15 cm to 25 cm and watering the same.		
2.29.1	All kinds of soil	sqm	20.20
2.30	Excavating holes more than 0.10 cum & upto 0.5 cum including getting out the excavated soil, then returning the soil as required in layers not exceeding 20cm in depth, including consolidating each deposited layer by ramming, watering etc, disposing of surplus excavated soil, as directed within a lead of 50 in and lif upto 1.5m.		
2.30.1	All kinds of soil	each	59.85
2.30.2	Ordinary rock	each	118.30
2.30.3	Hard rock (requiring blasting)	each	193.30
2.30.4	Hard rock (blasting prohibited)	each	279.20
2.31	Clearing jungle including uprooting of rank vegetation, grass, brush wood, trees and saplings of girth up to 30 cm measured at a height of 1 m above ground level and removal of rubbish up to a distance of 50 m outside the periphery of the area cleared.	sqm	10.20
2.32	Clearing grass and removal of the rubbish up to a distance of 50 m outside the periphery of the area cleared.	sqm	5.20
2.33	felting trees of the girth (measured at a height of 1 m above ground level), including cutting of trunks and branches, removing the roots and stacking of serviceable material and disposal of unserviceable material.		
2.33.1	Beyond 30 cm girth upto and including 60 cm girth	each	309.90
2.33.2	Beyond 60 cm girth upto and including 120 cm girth	Each	1,377.65
2.33.3	Beyond 120 cm girth upto and including 240 cm girth	each	6,386.05
2.33.4	Above 240 cm girth	each	12,798.65
2.34	Supplying chemical emulsion in sealed containers including delivery as specified.		
2.34.1	Chlorpyriphos emulsifiable concentrate of 20%	litre	174.40
2.35	Diluting and injecting chemical emulsion for POST-CONSTRUCTION anti-termite treatment (excluding the cost of chemical emulsion) :		
2.35.1	Along external wall where the apron is not provided using chemical emulsion @ 7.5 litres / sqm of the vertical surface of the substructure to a depth of 300mm including excavation channel along the wall & rodding etc. complete:		
2.35.1.1	With Chlorpyriphos E.C. 20% with 1% concentration	metre	23.35
2.35.2	Along the external wall below concrete or masonry apron using chemical emulsion @ 2.25 litres per linear metre including drilling and plugging holes etc.:		
2.35.2.1	With Chlorpyriphos E.C. 20% with 1% concentration	metre	33.10
2.35.3	Treatment of soil under existing floors using chemical emulsion @ one litre per hole, 300 mm apart including drilling 12 mm diameter holes and plugging with cement mortar 1 :2 (1 cement : 2 Coarse sand) to match the existing floor:		
2.35.3.1	With Chlorpyriphos E.C. 20% with 1% concentration	sqm	183.90
2.35.4	Treatment of existing masonry using chemical emulsion @ one litre per hole at 300 mm interval including drilling holes at 45 degree and plugging them with cement mortar 1:2 (1 cement : 2 coarse sand) to the full depth of the hole :		
2.35.4.1	With Chlorpyriphos E.C. 20% with 1% concentration	metre	26.15
2.35.5	Treatment at points of contact of wood work by chemical emulsion Chlorpyriphos (in oil or kerosene based solution) @ 0.5 litres per hole by drilling 6 mm dia holes at downward angle of 45 degree at 150 mm centre to centre and sealing the same.	metre	218.30

Item Code	Description	Unit	Justified Rate
2.36	Extra for levelling & neatly dressing of disposed soil completely as directed by Engineer-in-charge.	cum	54.15
2.37	Supply and stacking of Fly ash conforming to IRC- 58 at site, including carriage, loading , unloading & stacking up to any lead (measured stacks will be reduced by 20% for payment).	cum	203.20
2.38	Filling with available fly ash and earth (excluding rock) in trenches or embankment in layers (each layer should not exceed 15 cm), with intermediate layer of compacted earth (Soil density of 98%) after every four layers of compacted depth of fly ash, sides & top layer of filling shall be done with earth having total minimum compacted thickness 30 cm or as decided by Engineer -in-charge, including compacting each layer by rolling/ ramming and watering, all complete as per drawing and direction of Engineer -in - charge.	cum	179.90
3	MORTAR		
3.1	Cement mortar 1:1 (1 cement : 1 fine sand)	cum	7,475.30
3.2	Cement mortar 1:2 (1 cement : 2 fine sand).	cum	5,614.75
3.3	Cement mortar 1:3 (1 cement : 3 fine sand).	cum	4,685.65
3.4	Cement mortar 1:4 (1 cement : 4 fine sand).	cum	3,886.70
3.5	Cement mortar 1:5 (1 cement : 5 fine sand).	cum	3,456.50
3.6	Cement mortar 1:6 (1 cement : 6 fine sand).	cum	3,087.75
3.7	Cement mortar 1:2 (1 cement : 2 coarse sand).	cum	5,614.75
3.8	Cement mortar 1:3 (1 cement : 3 coarse sand).	cum	4,685.65
3.9	Cement mortar 1:4 (1 cement : 4 coarse sand).	cum	3,886.70
3.10	Cement mortar 1:5 (1 cement : 5 coarse sand).	cum	3,456.50
3.11	Cement mortar 1:6 (1 cement : 6 coarse sand).	cum	3,087.75
3.12	Cement mortar 1:2 (1 cement : 2 stone dust).	cum	5,899.75
3.13	Cement mortar 1:2 (1 cement : 2 marble dust).	cum	5,928.25
3.14	Cement mortar 1:5 (1 cement : 5 marble dust).	cum	3,809.60
3.15	White cement mortar 1:2 (1 white cement : 2 marble dust).	cum	9,464.25
3.16	White cement mortar 1:3 (1 white cement : 3 marble dust).	cum	7,690.75
3.17	White cement mortar 1:5 (1 white cement : 5 marble dust).	cum	5,421.60
3.18	Mud mortar	cum	712.90
3.19	Mortar in lime, surkhi (50% red and 50% light yellow) and marble dust 1:1.5:0.5	cum	2,983.00
4	CEMENT CONCRETE (CAST IN SITU)		
4.1	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :		
4.1.2	1:134:3 (1 Cement: VA coarse sand (zone-II) derived from natural sources . 3 graded stone aggregate 20 mm nominal size derived from natural sources)	CUM	6,944.80
4.1.2A	1:1.5:3 (1 Cement: 1.5 coarse sand (zone-III) including manufactured sand derived from Recycled Concrete Aggregate (RCA) upto 25% : 3 graded stone aggregate 20 mm nominal size including Recycled Concrete Aggregate (RCA) upto 25%).	cum	6,734.05
4.1.3	1:2:4 (1 cement : 2 coarse sand (zone-III) derived from natural sources : 4 graded stone aggregate 20 mm nominal size derived from natural sources)	cum	6,490.90
4.1.3A	1:2:4 (1 cement : 2 coarse sand (zone-III) including manufactured sand derived from Recycled Concrete Aggregate (RCA) upto 25% : 4 graded stone aggregate 20 mm nominal size including Recycled Concrete Aggregate (RCA) upto 25%)	CUM	6,269.10
4.1.4	1:2:4 (1 Cement : 2 coarse sand (zone-III) derived from natural sources : 4 graded stone aggregate 40 mm nominal size derived from natural sources)	cum	6,171.10
4.1.5	1:3:6 (1 Cement : 3 coarse sand (zone-III) derived from natural sources : 6 graded stone aggregate 20 mm nominal size derived from natural sources)	cum	5,916.00

Item Code	Description	Unit	Justified Rate
4.1.5A	1:3:6 (1 Cement : 3 manufactured sand derived from Recycled Concrete Aggregate (RCA) : 6 graded stone aggregate 70 mm nominal size Recycled Concrete Aggregate (RCA))	CUM	4,977.35
4.1.5B	1:3:6 (1 cement : 3 manufactured sand derived from Recycled concrete Aggregate (RCA) : 6 graded stone aggregate 20 mm nominal size Recycled Aggregate (RA))	cum	4,375.95
4.1.6	1:3:6 (1 Cement : 3 coarse sand (zone-III) derived from natural sources : 6 graded stone aggregate 40 mm nominal size derived from natural sources)	cum	5,524.65
4.1.6A	1:3:6 (1 Cement : 3 manufactured sand derived from Recycled Concrete Aggregate (RCA) : 6 graded stone aggregate 40 mm nominal size Recycled Aggregate (RA))	cum	4,321.75
4.1.8	1:4:8 (1 Cement : 4 coarse sand (zone-III) derived from natural sources : 8 graded stone aggregate 40 mm nominal size derived from natural sources)	CUM	5,167.75
4.1.8A	1:4:8 (1 cement : 4 manufactured sand derived from Recycled Concrete Aggregate (RCA) : 8 graded stone aggregate 40 mm nominal size Recycled Aggregate (RA))	cum	3,964.85
4.1.10	1:5:10 (1 cement : 5 coarse sand (zone-III) derived from natural sources : 10 graded stone aggregate 40 mm nominal size derived from natural sources)	cum	4,882.20
4.1.10A	1:5:10 (1 cement : 5 manufactured sand derived from Recycled Concrete Aggregate (RCA) . 10 graded stone aggregate 40 mm nominal size Recycled Aggregate (RA))	CUM	3,679.30
4.1.11	1:5:10 (1 cement : 5 fine sand derived from natural sources : 10 graded stone aggregate 40 mm nominal size derived from natural sources)	cum	4,871.00
4.1.12	1:2:3½:9 (1 ordinary portland cement : 2 Fly ash : 3½ coarse sand (zone-III) derived from natural sources : 9 graded stone aggregate 40 mm nominal size derived from natural sources)	cum	5,100.40
4.1.12A	1:2:3½:9 (1 ordinary portland cement : 2 Fly ash : 3½ manufactured sand derived from Recycled Concrete Aggregate (RCA) : 9 graded stone aggregate 40 mm nominal size Recycled Aggregate (RA))	cum	3,904.30
4.1.13	1:2½:4:11 (1 ordinary portland cement : 2½ fly ash : 4 coarse sand (zone-III) derived from natural sources : 11 graded stone aggregate 40 mm nominal size derived from natural sources)	cum	4,781.25
4.1.13A	1:2½:4:11 (1 ordinary portland cement : 2½ fly ash : 4 manufactured sand derived from Recycled Concrete Aggregate (RCA) :11 graded stone aggregate 40 mm nominal size Recycled Aggregate (RA))	cum	3,587.25
4.2	Providing and laying cement concrete in retaining walls, return walls, walls (any thickness) including attached pilasters, columns, piers, abutments, pillars, posts, struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchor blocks, plain window sills, fillets, sunken floor etc., up to floor five level, excluding the cost of centering, shuttering and finishing:		
4.2.2	1:1½:3 (1 cement : VA coarse sand (zone-III) derived from natural sources : 3 graded stone aggregate 20 mm nominal size derived from natural sources).	cum	8,181.90
4.2.2A	1:1½:3 (1 cement : 1½ coarse sand (zone-III) including manufactured sand derived from Recycled Concrete Aggregate (RCA) upto 25% : 3 graded stone aggregate 20 mm nominal size including Recycled Concrete Aggregate (RCA) upto 25%)).	cum	7,971.10
4.2.3	1:2:4 (1 Cement : 2 coarse sand (zone-III) derived from natural sources : 4 graded stone aggregate 20 mm nominal size derived from natural sources)	cum	7,727.95
4.2.3A	1:2:4 (1 Cement : 2 coarse sand (zone-III) including manufactured sand derived from Recycled Concrete Aggregate (RCA) upto 25% : 4 graded stone aggregate 20 mm nominal size including Recycled Concrete Aggregate (RCA) upto 25%).	cum	7,502.35
4.2.5	1:3:6 (1 cement : 3 coarse sand (zone-III) derived from natural sources : 6 graded stone aggregate 20 mm nominal size derived from natural sources)	cum	7,153.10
4.2.5A	1:3:6 (1 cement : 3 manufactured sand derived from Recycled Concrete Aggregate (RCA) : 6 graded stone aggregate 20 mm nominal size Recycled Concrete Aggregate (RCA))	cum	6,214.40

Item Code	Description	Unit	Justified Rate
4.2.5B	1:3:6 (1 cement : 3 manufactured sand derived from Recycled Concrete Aggregate (RCA) : 6 graded stone aggregate 20 mm nominal size Recycled Aggregate (RA))	cum	5,613.00
4.2.8	1:5:10 (1 cement : 5 coarse sand (zone-III) derived from natural sources : 10 graded stone aggregate 40 mm nominal size derived from natural sources).	cum	6,112.80
4.2.8A	1:5:10 (1 cement : 5 manufactured sand derived from Recycled Concrete Aggregate (RCA) : 10 graded stone aggregate 40 mm nominal size Recycled Aggregate (RA))	cum	4,909.90
4.3	Centering and shuttering including strutting, propping etc. and removal of form work for:		
4.3.1	Foundations, footings, bases for columns	sqm	262.55
4.3.2	Retaining walls, return walls, walls (any thickness) including attached pilasters, buttresses, plinth and string courses fillets, kerbs and steps etc.	sqm	538.75
4.3.3	Columns, piers, abutments, pillars, posts and struts	sqm	621.80
4.4	Providing and laying cement concrete in kerbs, steps and the like at or near ground level excluding the cost of centering, shuttering and finishing.		
4.4.1	1:1½:3 (1 Cement: 1½ coarse sand(zone-III) derived from natural sources : 3 graded stone aggregate 20 mm nominal size derived from natural sources)	cum	6,944.80
4.4.1A	1:1.5:3 (1 cement: 1.5 coarse sand (zone-III) including manufactured sand derived from Recycled Concrete Aggregate (RCA) upto 25% : 3 graded stone aggregate 20 mm nominal size including Recycled Concrete Aggregate (RCA) upto 25%).	cum	6,734.05
4.5	Providing and fixing up to floor five level precast cement concrete string or lacing courses, copings, bed plates, anchor blocks, plain window sills, shelves, louvers, steps, stair cases, etc., including hoisting and setting in position with cement mortar 1:3 (1 Cement : 3 coarse sand), cost of required Centering complete.		
4.5.1	1:1.5:3 (1 cement : 1.5 coarse sand(zone-III) derived from natural sources : 3 graded stone aggregate 20mm nominal size derived from natural sources)	cum	8,063.00
4.5.1A	1:1.5:3 (1 cement : 1.5 coarse sand (zone-III) including manufactured sand derived from Recycled Concrete Aggregate (RCA) upto 25% : 3 graded stone aggregate 20mm nominal size including Recycled Concrete Aggregate (RCA) upto 25%).	cum	7,852.25
4.6	Providing and fixing at or near ground level precast cement concrete in kerbs, edgings etc. as per approved pattern and setting in position with cement mortar 1:3 (1 Cement : 3 coarse sand), including the cost of required centering, shuttering complete.		
4.6.1	1:1½:3 (1 Cement: 1½ coarse sand(zone-III) derived from natural sources: 3 graded stone aggregate 20 mm nominal size derived from natural sources).	cum	7,233.70
4.6.1A	1:1.5:3 (1 Cement: 1.5 coarse sand (zone-III) including manufactured sand derived from Recycled Concrete Aggregate (RCA) upto 25% : 3 graded stone aggregate 20 mm nominal size including Recycled Concrete Aggregate (RCA) upto 25%).	cum	7,022.95
4.7	Providing and fixing up to floor five level precast cement concrete solid block, including hoisting and setting in position with cement mortar 1:3 (1 cement : 3 coarse sand), cost of required centering, shuttering complete :		
4.7.1	1:1½:3 (1 Cement: 1½ coarse sand(zone-III) derived from natural sources : 3 graded stone aggregate 20 mm nominal size derived from natural sources).	cum	12,743.40
4.7.1A	1:1.5:3 (1 Cement: 1.5 coarse sand (zone-III) including manufactured sand derived from Recycled Concrete Aggregate (RCA) upto 25% : 3 graded stone aggregate 20 mm nominal size including Recycled Concrete Aggregate (RCA) upto 25%).	cum	12,532.65
4.8	Providing and fixing up to floor five level precast cement concrete hollow block, including hoisting and setting in position with cement mortar 1:3 (1 cement : 3 coarse sand), cost of required centering, shuttering complete.		

Item Code	Description	Unit	Justified Rate
4.8.1	1:1½:3 (1 Cement: 1½ coarse sand (zone-III) derived from natural sources : 3 graded stone aggregate 20 mm nominal size derived from natural sources) .	cum	9,950.20
4.8.1A	1:1.5:3 {1 Cement 1.5 coarse sand (zone-III) ncluding manufactured sand derived from Recycled Concrete Aggregate (RCA) upto 25% : 3 graded stone aggregate 20 mm nominal size including (Recycled Concrete Aggregate (RCA) upto 25%)}. .	cum	9,853.20
4.9	Precasting and placing in position 125 mm dia Bollards 600 mm high of required shape including providing M.S. Pipe Sleeve 50 mm dia 300 mm long in the Bollard and M.S. Pipes 40 mm dia and 450mm long with 150x150x6mm M.S. plate welded at bottom and embedded 150mm in cement concrete 1:3:6 (1 Cement: 3 coarse sand (zone-III) derived from natural sources : 6 graded stone aggregate 20 mm nominal size derived from natural sources), including necessary excavation of size 250x250x450mm deep for the same in bitumen/concrete pavement at specified spacing.	each	662.35
4.9A	Precasting and placing in position 125 mm dia Bollards 600 mm high of required shape including providing M.S Pipe Sleeve 50 mm dia 300 mm long in the Bollard and M.S. Pipes 40 mm dia and 450mm long with 150x150x6mm M.S. plate welded at bottom and embedded 150mm in cement concrete 13:6 (1 Cement: 3 manufactured sand derived from Recycled Concrete Aggregate (RCA) : 6 graded stone aggregate 20 mm nominal size (Recycled Concrete Aggregate (RCA)), including necessary excavation of size 250x250x450mm deep for the same in bitumen/ concrete pavement at specified spacing	each	632.95
4.9B	Precasting and placing in position 125 mm dia Bollards 600 mm high of required shape including providing M.S. Pipe Sleeve 50 mm dia 300 mm long in the Bollard and M.S. Pipes 40 mm dia and 450mm long with 150x150x6mm M.S. plate welded at bottom and embedded 150mm in cement concrete 1:3:6 (1 Cement: 3 manufactured sand derived from Recycled Concrete Aggregate (RCA) : 6 graded stone aggregate 20 mm nominal size (Recycled Aggregate (RA), including necessary excavation of size 250x250x450mm deep for the same in bitumen/ concrete pavement at specified spacing	each	614.90
4.10	Providing and laying damp-proof course 40mm thick with cement concrete 1:2:4 (1 cement : 2 coarse sand (zone-III) derived from natural sources : 4 graded stone aggregate 12.5mm nominal size derived from natural sources)	sqm	318.65
4.10A	Providing and laying damp-proof course 40mm thick with cement concrete 1:2:4 (1 cement : 2 coarse sand (zone-III) including manufactured sand derived from Recycled Concrete Aggregate (RCA) upto 25% : 4 graded stone aggregate 12.5mm nominal size including (Recycled Concrete Aggregate (RCA) upto 25%))	sqm	310.75
4.11	Providing and laying damp-proof course 50mm thick with cement concrete 1:2:4 (1 cement : 2 coarse sand (zone-III) derived from natural sources : 4 graded stone aggregate 20mm nominal size derived from natural sources).	sqm	390.30
4.11A	Providing and laying damp-proof course 50mm thick with cement concrete 1:2:4 (1 cement : 2 coarse sand (zone-III) ncluding manufactured sand derived from Recycled Concrete Aggregate (RCA) upto 25% : 4 graded stone aggregate 20mm nominal size including (Recycled Concrete Aggregate (RCA) upto 25%))	sqm	379.25
4.12	Extra for providing and mixing water proofing material in cement concrete work in doses by weight of cement as per manufacturer's specification.	per bag of cement of 50 kg	13.05
4.13	Providing & applying a coat of residual petroleum bitumen of grade of VG-10 of approved quality using 1.7kg per square metre on damp proof course after cleaning the surface with brushes and finally with apiece of cloth lightly soaked in kerosene oil.	sqm	93.70
4.14	Extra for concrete work in superstructure above floor V level for each four floors or part thereof by mechanical means	cum	123.25

Item Code	Description	Unit	Justified Rate
4.15	Extra for laying concrete in or under water and/or liquid mud including cost of pumping or bailing out water and removing slush etc. complete. Note for item No. 4.15 :- The quantity will be calculated by multiplying the depth measured from the sub-soil water level up to centre of gravity of concrete under sub-soil water level with quantity of concrete in cum executed under sub-soil water. The depth of centre of gravity shall be reckoned correct to 0.1m. 0.05m or more shall be taken as 0.1m and less than 0.05m ignored.	cum per metre depth	650.05
4.16	Extra for laying concrete in or under foul positions.	cum	273.75
4.17	Making plinth protection 50mm thick of cement concrete 1:3:6 (1 cement : 3 coarse sand (zone-III) derived from natural sources : 6 graded stone aggregate 20 mm nominal size derived from natural sources) over 75mm thick bed of dry brick ballast 40 mm nominal size, well rammed and consolidated and grouted with fine sand, including necessary excavation, levelling & dressing & finishing the top smooth.	sqm	551.30
4.17A	Making plinth protection 50mm thick of cement concrete 1:3:6 (1 cement : 3 manufactured sand derived from Recycled Concrete Aggregate (RCA) : 6 graded stone aggregate 20 mm nominal size (Recycled Concrete Aggregate (RCA) over 75mm thick bed of dry brick ballast 40 mm nominal size, well rammed and consolidated and grouted with fine sand, including necessary excavation, levelling & dressing & finishing the top smooth	sqm	504.40
4.17B	Making plinth protection 50mm thick of cement concrete 1:3:6 (1 cement : 3 manufactured sand derived from Recycled Concrete Aggregate (RCA) : 6 graded stone aggregate 20 mm nominal size (Recycled Aggregate (RA) over 75mm thick bed of dry brick ballast 40 mm nominal size, well rammed and consolidated and grouted with fine sand, including necessary excavation, levelling & dressing & finishing the top smooth	sqm	474.30
4.18	Extra for addition of synthetic Polyester triangular fibre of length 12mm, effective diameter 10-40 microns and specific gravity of 1.34 to 1.40 in cement concrete ACC/Flooring/water retaining structures by using 125gms of synthetic Polyester triangular fibre for 50 Kg cement used as per directions of Engineer-in-Charge.	Per bag of 50k of cement	53.70
4.20	Providing and laying in position ready mixed or site batched design mix cement concrete for plain cement concrete work; using coarse aggregate and fine aggregate derived from natural sources, Portland Pozzolana/Ordinary Portland /Portland Slag cement, admixtures in recommended proportions as per IS: 9103 to accelerate / retard setting of concrete, to improve durability and workability without impairing strength; including pumping of concrete to site of laying, curing, carriage for all leads; but excluding the cost of centering, shuttering and finishing as per direction of the engineer-in-charge; for the following grades of concrete. Note: Extra cement up to 10% of the minimum specified cement content in design mix shall be payable separately. In case the cement content in design mix is more than 110% of the minimum specified cement content, the contractor shall have discretion to either re-design the mix or bear the cost of extra cement.		
4.20.1	All works upto plinth level :		
4.20.1.1	Concrete of M10 grade with minimum cement content of 220 kg /cum	cum	6,624.60
4.20.1.2	Concrete of M15 grade with minimum cement content of 240 kg /cum	cum	6,770.70
4.20.1.3	Concrete of M20 grade with minimum cement content of 270 kg/cum	cum	6,989.90
4.20.1.4	Concrete of M25 grade with minimum cement content of 300 kg /cum	cum	7,209.10
4.20.2	All works above plinth and upto floor V level		
4.20.2.1	Concrete of M10 grade with minimum cement content of 220 kg /cum	cum	6,868.50
4.20.2.2	Concrete of M15 grade with minimum cement content of 240 kg /cum	cum	7,014.60

Item Code	Description	Unit	Justified Rate
4.20.2.3	Concrete of M20 grade with minimum cement content of 270 kg /cum	cum	7,233.80
4.20.2.4	Concrete of M25 grade with minimum cement content of 300 kg /cum	cum	7,453.05
4.20A	Providing and laying in position ready mixed or site batched design mix cement concrete for plain cement concrete work; using coarse aggregate and fine aggregate derived from natural sources and using recycled concrete aggregate (RCA) as coarse aggregate and fine aggregate within the permissible utilization, Portland Pozzolana / Ordinary Portland/Portland Slag cement, admixtures in recommended proportions as per IS: 9103 to accelerate / retard setting of concrete to improve durability and workability without impairing strength; including pumping of concrete to site of laying, curing, carriage for all leads; but excluding the cost of centering, shuttering and finishing as per direction of the engMeer-in-charge; for the following grades of concrete. Note: Extra cement up to 10% of the minimum specified cement content in design mix shall be payable separately. In case the cement content in design mix is more than 110% of the minimum specified cement content, the contractor shall have discretion to either re-design the mix or bear the cost of extra cement.		
4.20A.1	All works upto plinth level		
4.20A.1.1	Concrete of M10 grade with minimum cement content of 220 kg/cum. (Note: The permissible utilization of Recycled Concrete Aggregate (RCA) as coarse aggregate and fine aggregate is 100% each).	cum	6,012.15
4.20A.1.2	Concrete of M15 grade with minimum cement content of 240 kg /cum. (Note: The permissible utilization of Recycled Concrete Aggregate (RCA) as coarse aggregate and fine aggregate is 25% each).	cum	6,836.55
4.20A.1.3	Concrete of M20 grade with minimum cement content of 270 kg /cum. (Note: The permissible utilization of Recycled Concrete Aggregate (RCA) as coarse aggregate and fine aggregate is 25% each).	cum	7,055.75
4.20A.1.4	Concrete of M25 grade with minimum cement content of 300 kg /cum. (Note: The permissible utilization of Recycled Concrete Aggregate (RCA) as coarse aggregate and fine aggregate is 25% each).	cum	7,274.95
4.20A.2	All works above plinth and upto floor V level		
4.20A.2.1	Concrete of M10 grade with minimum cement content of 220 kg /cum. (Note: The permissible utilization of Recycled Concrete Aggregate (RCA) as coarse aggregate and fine aggregate is 100% each).	cum	6,256.10
4.20A.2.2	Concrete of M15 grade with minimum cement content of 240 kg /cum. (Note: The permissible utilization of Recycled Concrete Aggregate (RCA) as coarse aggregate and fine aggregate is 25% each).	cum	7,080.45
4.20A.2.3	Concrete of M20 grade with minimum cement content of 270 kg /cum. (Note: The permissible utilization of Recycled Concrete Aggregate (RCA) as coarse aggregate and fine aggregate is 25% each).	cum	7,299.65
4.20A.2.4	Concrete of M25 grade with minimum cement content of 300 kg /cum. (Note: The permissible utilization of Recycled Concrete Aggregate (RCA) as coarse aggregate and fine aggregate is 25% each).	cum	7,518.85
5	REINFORCED CEMENT CONCRETE		
5.1	Providing and laying in position specified grade of reinforced cement concrete, excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level :		
5.1.2	1:1.5:3 (1 cement : 1.5 coarse sand (zone-III) derived from natural sources : 3 graded stone aggregate 20 mm nominal size de rived from natural sources)	cum	7,365.50

Item Code	Description	Unit	Justified Rate
5.1.2A	1:1.5:3 (1 cement : 1.5 coarse sand(zone-III) including manu- factured sand derived from Recycled Concrete Aggregate (RCA) upto 20% : 3 graded stone aggregate 20 mm nominal size of Recycled Concrete Aggregate (RCA) upto 20%.	cum	7,196.45
5.1.3	1:2:4 (1 cement : 2 coarse sand (zone-III) derived from natural sources : 4 graded stone aggregate 20 mm nominal size de rived from natural sources)	cum	6,911.55
5.1.3A	1:2:4 (1 cement : 2 coarse sand incuding manufactured sand derived from Recycled Concrete Aggregate (RCA) upto 20% : 4 graded stone aggregate 20 mm nominal size of Recycled Con crete Aggregate (RCA) upto 20%).	cum	6,733.70
5.2	Reinforced cement concrete work in walls (any thickness), including attached pilasters, buttresses, plinth and string courses, flets, columns, pillars, piers, abutments, posts and struts etc. above plinth level up to floor five level, excluding cost of centering, shuttering, finishing and reinforcement:		
5.2.2	1:1.5:3 (1 cement : 1.5 coarse sand(zone-III) derived from natural sources : 3 graded stone aggregate 20 mm nominal size derived from natural sources)	cum	8,441.35
5.2.2A	1:1.5:3 (1 cement : 1.5 coarse sand incuding manufactured sand derived from Recycled Concrete Aggregate (RCA) upto 20% : 3 graded stone aggregate 20 mm nominal size including Recycled Concrete Aggregate (RCA) upto 20%)	cum	8,272.30
5.3	Reinforced cement concrete work in beams, suspended foors, roofs having slope up to 15* landings, balconies, shelves, chajjas, lintels, bands, plain window sills, staircases and spiral stair cases above plinth level up to foor five level, excluding the cost of centering, shuttering, finishing and reinforcement with 1:1.5:3 (1 cement : 1.5 coarse sand(zone-III) derived from natural sources: 3 graded stone aggregate 20 mm nominal size derived from natural sources).	cum	8,797.65
5.3A	Reinforced cement concrete work in beams, suspended floors, roofs having slope ur to 15° landings, balconies, shelves, chajlas, lintels, bands, plain window sills, staircases and spiral staircases above plinth level up to floor five level excluding the cost of centering, shuttering, finishing and reinforcement, with 1:1.5:3 (1 cement : 1.5 coarse sand incuding manufactured sand derived from Recycled Concrete Aggregate (RCA) upto 20%: 3 graded stone aggregate 20 mm nominal size including Recycled Concrete Aggregate (RCA) upto 20%)	cum	8,628.65
5.4	Providing and laying reinforced cement concrete in kerbs, steps and the like at or near ground level excluding the cost of centering, shuttering, finishing and reinforcement with 1:1.5:3 (1 cement : 1.5 coarse sand(zone-III) derived from natural sources : 3 graded stone aggregate 20 mm nominal size derived from natural sources).	cum	7,237.90
5.4A	Providing and laying reinforced cement concrete in kerbs, steps and the like at or near ground level excluding the cost of centering, shuttering, finishing and reinforcement with 1:1.5:3 (1 cement : 1.5 coarse sand incuding manufactured sand derived from Recycled Concrete Aggregate (RCA) upto 20% : 3 graded stone aggregate 20 mm nominal size including Recycled Concrete Aggregate (RCA) upto 20%).	cum	7,237.90
5.5	Reinforced cement concrete work in arches, archribs, domes, vaults, shells, folded plate and roofs having slope more than 15° up to floor five level, excluding the cost of centering, shuttering, finishing and reinforcement with 1:1.5:3 (1 cement: 1.5 coarse sand (zone-III) derived from natural sources : 3 graded stone aggregate 20 mm nominal size derived from natural sources).	cum	9,233.70
5.5A	Reinforced cement concrete work in arches, archribs, domes, vaults, shells, folded plate and roofs having slope more than 15° up to foor five level excluding the cost of centering, shuttering, finishing and reinforcement with 1:1.5:3(1 cement: 1.5 coarse sand incuding manufactured sand derived from Recycled Concrete Aggregate (RCA) upto 20% : 3 graded stone aggregate 70 mm nominal size including Recycled Concrete Aggregate (RCA) upto 20%).	cum	9,064.70

Item Code	Description	Unit	Justified Rate
5.6	Reinforced cement concrete work in chimneys, shafts, up to floor five level, excluding the cost of centering, shuttering, finishing and reinforcement with 1:1.5:3 (1 cement - 1.5 coarse sand(zone-III) derived from natural sources : 3 graded stone aggregate 20 mm nominal size derived from natural sources).	cum	8,599.00
5.6A	Reinforced cement concrete work in chimneys, shafts, up to floor five level excluding te cost of centering, shuttering, finishing and reinforcement with 1:1.5:3 (1 cement: 1.5 coarse sand including manufactured sand derived from Recycled Concrete Aggregate (RCA) upto 20%: 3 graded stone aggregate 20 mm nominal size including Recycled Concrete Aggregate (RCA) upto 20%).	cum	8,429.95
5.7	Reinforced cement concrete work in well-steining, excluding the cost of centering, shuttering, finishing and reinforcement with 1:1,5:3 (1 cement : 1.5 coarse sand(zone-III) derived from natural sources ; 3 graded stone aggregate 20 mm nominal size derived from natural sources).	cum	6,993.30
5.7A	Reinforced cement concrete work in well-steining excluding the cost of centering, shuttering, finishing and reinforcement, with 1:1.5:3 (1 cement : 1.5 coarse sand including manufactured sand derived from Recycled Concrete Aggregate (RCA) upto 20% : 3 graded stone aggregate 20 mm nominal size Recycled Concrete Aggregate (RCA) upto 20%).	cum	6,993.30
5.8	Reinforced cement concrete work in vertical and horizontal fins individually or forming box louvers, facias and eaves boards above plinth level up to four fve level, excluding the cost of centering, shuttering, fnishing and reinforcement with 1:1.5:3. (1 cement : 1.5 coarse sand(zone-III) derived from natural sources : 3 graded stone aggregate 20mm nominal size derived from natural sources).	cum	8,798.35
5.8A	Reinforced cement concrete work in vertical and horizontal fins individually or forming box louvers, facias and eaves boards. above plinth level up to four fve level excluding the cost of centering, shuttering, fnishing and reinforcement, with 1:1.5:3. (1 cement : 1.5 coarse sand including manufactured sand derived from Recycled Concrete Aggregate (RCA) upto 20% : 3 graded stone aggregate 20 mm nominal size including Recycled Concrete Aggregate (RCA) upto 20%).	cum	8,640.70
5.9	Centering and shuttering including strutting, propping etc. and removal of form for		
5.9.1	Foundations, footings, bases of columns, etc. for mass concrete.	sqm	262.55
5.9.2	Walls any thickness) including attached pilasters, butteresses, plinth and string courses etc.	sqm	538.75
5.9.3	Suspended floors, roofs, landings, balconies and access platform	sqm	587.10
5.9.4	Shelves (Cast in situ)	sqm	587.10
5.9.5	Lintels, beams, plinth beams, girders, bressumers and cantilevers	sqm	470.70
5.9.6	Columns, Pillars, Piers, Abutments, Posts and Struts	sqm	621.80
5.9.7	Stairs, (excluding landings) except spiral-staircases	sqm	509.80
5.9.8	Spiral staircases (including landing)	sqm	515.95
5.9.9	Arches, domes, vaults up to 6 m span	sqm	1,399.00
5.9.10	Extra for arches, domes, vaults exceeding 6 m span	sqm	481.40
5.9.11	Chimneys and shafts	sqm	514.15
5.9.12	Well steining	sqm	213.90
5.9.13	Vertical and horizontal fins individually or forming box louvers band, facias and eaves boards	sqm	833.90
5.9.14	Extra for shuttering in circular work (20% of respective centering and shuttering items)	sqm	-
5.9.15	Small lintels not exceeding 1.5 m clear span, moulding as in cornices, window sills, string courses, bands, copings, bed plates, anchor blocks and the like	sqm	262.55
5.9.16	Edges of slabs and breaks in floors and walls		
5.9.16.1	Under 20 cm wide	metre	143.35

Item Code	Description	Unit	Justified Rate
5.9.16.2	Above 20 cm wide	sqm	613.30
5.9.17	Cornices and mouldings	sqm	626.35
5.9.18	Small surfaces such as cantilever ends, brackets and ends of steps, caps and bases to pilasters and columns and the like	sqm	634.50
5.9.19	Weather shade, Chajjas, corbels etc., including edges	sqm	637.65
5.9.20	Suspended floors, roofs, landings, balconies and access platform with water proof ply 12 mm thick	sqm	661.20
5.9.21	Lintels, beams, plinth beams, girders, bressumers and cantilevers with water proof ply 12 mm thick	sqm	546.50
5.10	Providing and fixing tie bolt, spring coil and plastic cone in wall shuttering complete as per the direction of Engineer-in-charge.		
5.10.1	12 mm dia. & 100 mm length	each set	117.85
5.10.2	12 mm dia. & 150 mm length	each set	129.45
5.10.3	20 mm dia. & 150 mm length	each set	139.90
5.10.4	20 mm dia.& 225 mm length	each set	151.50
5.11	Extra for additional height in centering, shuttering where ever required with adequate bracing, propping etc., including cost of de-shuttering and decentering at all levels, over a height of 3.5 m, for every additional height of 1 metre or part thereof (Plan area to be measured).		
5.11.1	Suspended floors, roofs, landing, beams and balconies (Plan area to be measured)	sqm	241.30
5.12	Providing, hoisting and fixing above plinth level up to floor five level precast reinforced cement concrete work in string courses, bands, copings, bed plates, anchor blocks, plain window sills and the like, including the cost of required centering, shuttering but , excluding cost of reinforcement with 1:1.5:3 (1 cement : 1.5 coarse sand (zone-III) derived from natural sources : 3 graded stone aggregate 20 mm nominal size derived from natural sources).	cum	8,356.10
5.12A	Providing, hoisting and fixing above plinth level up to floor five level precast reinforced cement concrete work in string courses, bands, copings, bed plates, anchor blocks, plain window sills and the like, including the cost of required centering, shuttering but excluding cost of reinforcement, with 1:1.5:3 (1 cement : 1.5 coarse sand including manufactured sand derived from Recycled Concrete Aggregate (RCA) upto 20% : 3 graded stone aggregate 20 mm nominal size Recycled Concrete Aggregate (RCA) upto 20%).	cum	8,063.00
5.13	Providing, hoisting and fixing up to floor five level precast reinforced cement concrete in small lintels not exceeding 1.5m, clear span up to floor five level, including the cost of required centering, shuttering but, excluding the cost of reinforcement. with 1:1.5:3 (1 cement: 1.5 coarse sand (zone-III) derived from natural sources : 3 graded stone aggregate 20 mm nominal size derived from natural sources).	cum	10,818.35
5.13A	Providing, hoisting and fixing up to floor five level precast reinforced cement concrete in small lintels not exceeding 1.5 m clear span up to floor five level, including the cost of required centering, shuttering but excluding the cost of reinforcement, with 1:1.5:3 (1 cement : 1.5 coarse sand including manufactured sand derived from Recycled Concrete Aggregate (RCA) upto 20% : 3 graded stone aggregate 20 mm nominal size including Recycled Concrete Aggregate (RCA) upto 20%).	cum	10,649.65
5.14	Providing, hoisting and fixing above plinth level up to floor five level precast reinforced cement concrete in mouldings as in cornices, windows sills etc, including setting in cement mortar 1:3 (1 cement : 3 coarse sand) cost of required centering, shuttering but, excluding the cost of reinforcement, with 1:1.5:3 (1 cement : 1.5 coarse sand(zone-III) derived from natural sources : 3 graded stone aggregate 20 mm nominal size derived from natural sources).	cum	13,289.30

Item Code	Description	Unit	Justified Rate
5.14A	Providing, hoisting and fixing above plinth level up to floor five level precast reinforced cement concrete in mouldings as in cornices, windows sills etc. including setting in cement mortar 1:3 (1 cement : 3 coarse sand) cost of required centering, shuttering but excluding the cost of reinforcement, with 11.5:3 (1 cement : 1.5 coarse sand including manufactured sand derived from Recycled Concrete Aggregate (RCA) upto 20% : 3 graded stone aggregate 20 mm nominal size including Recycled Concrete Aggregate (RCA) upto 20%).	cum	13,289.30
5.15	Providing, transporting, hoisting and fixing above plinth level up to floor five level precast reinforced cement concrete in lintels, beams and bressumers, including setting in cement mortar 1:3 (1 cement : 3 coarse sand), cost of required centering and shuttering but, excluding the cost of reinforcement, with 1:1.5:3 (1 cement: 1.5 coarse sand(zone-III) derived from natural sources : 3 graded stone aggregate 20 mm nominal size derived from natural sources)	cum	10,640.05
5.15A	Providing, transporting, hoisting and fixing above plinth level up to four five level precast reinforced cement concrete in lintels, beams and bressumers including setting in cement mortar 1:3 (1 cement : 3 coarse sand), cost of required centering and shuttering but excluding the cost of reinforcement with, 1:1.5:3 (1 cement : 1.5 coarse sand including manufactured sand derived from Recycled Concrete Aggregate (RCA) upto 20% : 3 graded stone aggregate 20 mm nominal size including Recycled Concrete Aggregate (RCA) upto 20%).	cum	10,640.05
5.16	Providing,transporting, hoisting and fixing above plinth level up to four five level precast reinforced cement concrete in shelves, including setting in cement mortar 1:3 (1cement : 3 coarse sand), cost of required centering, shuttering and finishing with neat cement punning on exposed surfaces but , excluding the cost of reinforcement, with 1:1.5:3 (1 cement : 1.5 coarse sand(zone-III) derived from natural sources : 3 graded stone aggregate 20 mm nominal size derived from natural sources).	cum	15,273.15
5.16A	Providing, transporting, hoisting and fixing above plinth level up to four five level precast reinforced cement concrete in shelves including setting in cement mortar 1:3 (1 cement : 3 coarse sand), cost of required centering, shuttering and finishing with neat cement punning on exposed surfaces but excluding the cost of reinforcement, with 1:1.5:3 (1 cement : 1.5 coarse sand including manufactured sand derived from Recycled Concrete Aggregate (RCA) upto 20% : 3 graded stone aggregate 20 mm nominal size including Recycled Concrete Aggregate (RCA) upto 20%).	cum	15,273.15
5.17	Providing, transporting, hoisting and fixing above plinth level up to floor five level precast reinforced cement concrete in vertical & horizontal fins, individually or forming box louvers, setting in cement mortar 1:2 (1 cement : 2 coarse sand), including the cost of required centering, shuttering but , excluding the cost of reinforcement, with 1:1.5:3 (1 cement : 1.5 coarse sand(zone-III) derived from natural sources : 3 graded stone aggregate 20 mm nominal size derived from natural sources).	cum	9,337.70
5.17A	Providing, transporting, hoisting and fixing above plinth level up to floor five level precast reinforced cement concrete in vertical & horizontal fins individually or forming box louvers setting in cement mortar 1:2 (1 cement : 2 coarse sand), including the cost of required centering, shuttering but excluding the cost of reinforcement, with 1:1.5:3 (1 cement : 1.5 coarse sand including manufactured sand derived from Recycled Concrete Aggregate (RCA) upto 20% : 3 graded stone aggregate 20 mm nominal size including Recycled Concrete Aggregate (RCA) upto 20%).	cum	9,337.70
5.18	Providing precast cement concrete Jali 1:2:4 (1 cement : 2 coarse sand(zone-III) : 4 graded stone aggregate 6mm nominal size), reinforced with 1.6 mm dia mild steel wire, including centering and shuttering, roughening cleaning, fixing and fnishing in cement mortar 1:3 (1 cement: 3 fine sand) etc. complete, excluding plastering of the jambs, sills and soffits.		

Item Code	Description	Unit	Justified Rate
5.18.1	50 mm thick	sqm	1,233.75
5.18.2	40 mm thick	sqm	1,112.65
5.18.3	25 mm thick	sqm	997.30
5.19	Encasing rolled steel sections, in beams and columns, with cement concrete 1:1.5:3 (1 cement : 1.5 coarse sand (zone-III) derived from natural sources : 3 graded stone aggregate 20 mm nominal size derived from natural sources) including centering and shuttering complete but, excluding cost of reinforcement.	cum	11,903.70
5.19A	Encasing rolled steel sections, in beams and columns, with cement concrete 1:1.5:3 (1 cement : 1.5 coarse sand including manufactured sand derived from Recycled Concrete Aggregate (RCA) upto 20%: 3 graded stone aggregate 20 mm nominal size Recycled Concrete Aggregate (RCA) upto 20%) including centering and shuttering complete but excluding cost of reinforcement.	cum	11,903.70
5.20	Encasing rolled steel section in grillages with cement concrete 1:1.5:3 (1 cement : 1.5 coarse sand (zone-III) derived from natural sources : 3 graded stone aggregate 20 mm nominal size derived from natural sources) including centering and shutter ng but, excluding cost of expanded metal and hangers.	cum	7,775.85
5.20A	Encasing rolled steel section in grillages with cement concrete 1:1.5:3 (1 cement : 1.5 coarse sand including manufactured sand derived from Recycled Concrete Aggregate (RCA) upto 20% : 3 graded stone aggregate 20 mm nominal size Recycled Concrete Aggregate (RCA) upto 20%), including centering and shuttering but excluding cost of expanded metal and hangers.	cum	7,775.85
5.21	Extra for providing and fixing expanded metal mesh of size 20x60 mm and strands 3.25 mm wide 1.6 mm thick weighing 3.64 kg per sqm for encasing of rolled steel sections in beams, columns and grillages, excluding cost of hangers.	sqm	384.60
5.22	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level.		
5.22.1	Mild steel and Medium Tensile steel bars	kg	75.20
5.22.2	Hard drawn steel wire	kg	73.95
5.22.3	Cold twisted bars	kg	75.85
5.22.4	Hot rolled deformed bars	kg	75.85
5.22.5	Hard drawn steel wire fabric	kg	79.35
5.22.6	Thermo-Mechanically Treated bars of grade Fe-500D or more.	kg	75.85
5.22A	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete above plinth level.		
5.22A.1	Mild steel and Medium Tensile steel bars	kg	75.20
5.22A.2	Hard drawn steel wire	kg	73.95
5.22A.3	Cold twisted bars	kg	75.85
5.22A.4	Hot rolled deformed bars	kg	75.85
5.22A.5	Hard drawn steel wire fabric	kg	79.35
5.22A.6	Thermo-Mechanically Treated bars of grade Fe-500D or more.	kg	75.85
5.22B	Steel reinforcement for R.C.C. work ready to use "cut and bend" rebars of approved make from factory/workshop to construction site including placing in position and binding all complete upto plinth level.		
5.22B.1	Thermo-Mechanically Treated bars of grade Fe-500D or more.	kg	71.00
5.22C	Steel reinforcement for R.C.C. work ready to use "cut and bend" rebars of approved make from factory/workshop to construction site including placing in position and binding all complete above plinth level.		
5.22C.1	Thermo-Mechanically Treated bars of grade Fe-500D or more.	kg	71.00
5.23	Smooth finishing of the exposed surface of R.C.C. work with 6 mm thick cement mortar 1:3 (1 Cement : 3 fine sand).	sqm	195.85

Item Code	Description	Unit	Justified Rate
5.24	Extra for rendering smooth the top of suspended floors, landings and staircases (treads and risers) with cement mortar 1:2 (1 cement : 2 coarse sand), including a floating coat of neat cement and protecting the surface with a layer of 7.5 cm of earth laid over 15 mm of fine sand in case of suspended floor and bricks laid in mud mortar in case of landings and steps, including subsequent removal and cleaning of the same.	sqm	109.55
5.25	Providing and fixing in position copper plate as per design for expansion joints.	kg	630.35
5.26	Providing and filling in position, blown bitumen in expansion joints.	cum	54,029.45
5.27	Providing and filling in position bitumen mix filler of proportion 80 kg. of hot bitumen, 1 kg. of cement and 0.25 cubic metre of coarse sand for expansion joints.	cum	17,375.55
5.28	Providing and fixing in position 12mm thick bitumen impregnated fiber board conforming to IS: 1838, including cost of primer, sealing compound Grade-A in expansion joints.	per cm depth per 100m	486.75
5.29	Providing and fixing sheet covering over expansion joints with iron screws as per design.		
5.29.1	Non-asbestos 6 mm thick fibre cement board, Type-A, Category-III as per IS: 14862:2000		
5.29.1.1	150mm wide	metre	121.10
5.29.1.2	200mm wide	metre	163.00
5.29.2	Aluminium fluted strips 3.15 mm thick.		
5.29.2.1	150mm wide	metre	430.10
5.29.2.2	200 mm wide	metre	571.30
5.29.3	Cement bonded wood particle board 6mm thick as per IS : 14276		
5.29.3.1	150mm wide	metre	156.50
5.29.3.2	200mm wide	metre	210.45
5.30	Add for plaster drip course/ groove in plastered surface or moulding to R.C.C. projections.	metre	48.45
5.31	Extra for laying reinforced cement concrete in or under water and/ or liquid mud, including cost of pumping or bailing out water and removing slush etc., complete. Note For Item No. 5.31:- The quantity will be calculated by multiplying the depth measured from the subsoil water level up to the centre of gravity of the R.C.C. under subsoil water with the quantity of R.C.C. in cubic metre executed under subsoil water. The depth of centre of gravity shall be reckoned correct to 0.1 m. 0.05 m or more shall be taken as conditions. 0.1 m and less than 0.05 m ignored. No extra payment shall be made for placing reinforcement or centering & shuttering under sub - soil water	cum	650.05
5.32	Extra for laying reinforced cement concrete in or under foul conditions.	cum	273.75
5.33	Providing and laying in position ready mixed or site batched design mix cement concrete for reinforced cement concrete work; using coarse aggregate and fine aggregate derived from natural sources, Portland Pozzolana / Ordinary Portland /Portland Slag cement, admixtures in recommended proportions as per IS: 9103 to accelerate / retard setting of concrete, to improve durability and workability without impairing strength; including pumping of concrete to site of laying, curing, carriage for all leads; but excluding the cost of centering, shuttering, finishing and reinforcement as per direction of the engineer-in-charge; for the following grades of concrete. Note: Extra cement up to 10% of the minimum specified cement content in design mix shall be payable separately. In case the cement content in design mix is more than 110% of the specified minimum cement content, the contractor shall have discretion to either re-design the mix or bear the cost of extra cement.		
5.33.1	All works upto plinth level		
5.33.1.1	Concrete of M25 grade with minimum cement content of 330 kg /cum	cum	7,561.65

Item Code	Description	Unit	Justified Rate
5.33.1.2	Concrete of M30 grade with minimum cement content of 350 kg /cum	cum	7,707.80
5.33.1.3	Concrete of M35 grade with minimum cement content of 370 kg /cum	cum	7,853.95
5.33.1.4	Concrete of M40 grade with minimum cement content of 390 kg/cum	cum	8,000.05
5.33.1.5	Concrete of M50 grade with minimum cement content of 410 kg/cum	cum	8,146.20
5.33.2	All works above plinth level upto floor V level		
5.33.2.1	Concrete of M25 grade with minimum cement content of 330 kg /cum	cum	7,806.35
5.33.2.2	Concrete of M30 grade with minimum cement content of 350 kg /cum	cum	7,951.70
5.33.2.3	Concrete of M35 grade with minimum cement content of 370 kg /cum	cum	8,097.85
5.33.2.4	Concrete of M40 grade with minimum cement content of 390 kg /cum	cum	8,243.95
5.33.2.5	Concrete of M50 grade with minimum cement content of 410 kg /cum	cum	8,390.10
5.33A	Providing and laying in position ready mixed or site batched design mix cement concrete for reinforced cement concrete work; using coarse aggregate and fine aggregate derived from natural sources and using recycled concrete aggregate (RCA) as coarse aggregate and fine aggregate within permissible utilization of 20% each, Portland Pozzolana/Ordinary Portland/Portland Slag cement, admixtures in recommended proportions as per IS: 9103 to accelerate / retard setting of concrete, to improve durability and workability without impairing strength; including pumping of concrete to site of laying, curing, carriage for all leads; but excluding the cost of centering, shuttering, finishing and reinforcement as per direction of the engineer-in-charge; for the following grades of concrete.		
5.33A.1	All works upto plinth level		
5.33A.1.1	Concrete of M25 grade with minimum cement content of 330 kg /cum	cum	7,392.65
5.33A.2	All works above plinth level up to floor V level		
5.33A.2.1	Concrete of M25 grade with minimum cement content of 330 kg /cum	cum	7,636.55
5.35	Add for using extra cement in the items of design mix over and above the specified cement content therein.	quintal	713.85
5.36	Providing and placing in position precast reinforced cement concrete waffle units, square or rectangular, as per design and shape for floors and roofs in 1:11:3 (1 Cement : 1'A coarse sand (zone-III) derived from natural sources : 3 graded stone aggregate 10 mm nominal size derived from natural sources), including flush or deep ruled pointing at joints in Cement mortar 1:2 (1 Cement: 2 Fine sand), making necessary holes of required sizes for carrying through service lines etc., providing steel hooks for lifting etc, form work in precasting, handling, hoisting, centering and erection complete for all floor levels but, excluding the cost of reinforcement.	cum	22,796.35
5.36A	Providing and placing in position precast reinforced cement concrete waffle units, square or rectangular as per design and shape for floors and roofs in 1:1.5:3 (1 cement : 1.5 coarse sand including manufactured sand derived from Recycled Concrete Aggregate (RCA) upto 20% : 3 graded stone aggregate 10 mm nominal size Recycled Concrete Aggregate (RCA) upto 20%), including flush or deep ruled pointing at joints in cement mortar 1:2 (1 cement : 2 Fine sand), making necessary holes of required sizes for carrying through service lines etc., providing steel hooks for lifting etc, form work in precasting, handling, hoisting, centering and erection complete for all floor levels but excluding the cost of reinforcement.	cum	22,627.30
5.38	Extra for R.C.C./ B.M.C/ R.M.C. work above floor V level for each four floors or part thereof.	cum	243.90

Item Code	Description	Unit	Justified Rate
5.41	Supplying and applying pre tested and approved water based concrete curing compound to concrete/ masonry surface, all as per manufacturer's specification and direction of Engineer-in-charge.		
5.41.1	Non pigmented wet curing compound	sqm	43.50
5.42	Providing and fixing parallel threaded couplers conforming to IS code on "Reinforcement Couplers for Mechanical Splices of Bars for Concrete Reinforcement - Specification", to reinforcement bars including threading, enlargement at connection by forging, protecting the prepared reinforcement bars and related operations as required to complete the works per direction of Engineer- in-Charge.		
5.42.1	Coupler for 16 mm diameter reinforcement bar	each	89.05
5.42.2	Coupler for 20 mm diameter reinforcement bar	each	124.15
5.42.3	Coupler for 25 mm diameter reinforcement bar	each	177.95
5.42.4	Coupler for 28 mm diameter reinforcement bar	each	208.20
5.42.5	Coupler for 32 mm diameter reinforcement bar	each	250.75
5.43	Providing and fixing in position Stainless steel Grade 304 plate-1.0 mm thick as per design for expansion joints.		
5.43.1	200 mm wide.	metre	631.05
5.43.2	300 mm wide.	metre	896.80
5.44	Providing and fixing of expansion joint system related with floor location as per drawings and direction of Engineer-In-Charge. The joints system will be of extruded aluminum base members, self aligning / self centering arrangement and support plates etc. as per ASTM B221-02. The system shall be such that it provides floor to floor /floor to wall expansion control system for various vertical localtion in load application areas that accommodates multi directional seismic movement without stress to it's components. System shall consist of metal profiles with a universal aluminum base member designed to accommodate various project conditions and finish floor treatments. The cover plate shall be designed of width and thickness required to satisfy projects movement and loading requirements and secured to base members by utilizing manufacturer's pre-engineered self- centering arrangement that freely rotates / moves in all directions. The Self - centering arrangement shall exhibit circular sphere ends that lock and slide inside the corresponding aluminum extrusion cavity to allow freedom of movement and flexure in all directions including vertical displacement. Provision of Moisture Barrier Membrane in the Joint System to have watertight joint is mandatory requirement all as per the manufactures design and as approved by Engineer -in- Charge. (Material shall confirm to ASTM 6063).		
5.44.1	Floor Joint of 100 mm gap	metre	5,005.10
5.44.2	Floor Joint of 150 mm gap	metre	6,127.15
5.44.3	Floor Joint of 200 mm gap	metre	7,847.30
5.45	Providing and fixing of expansion joint system related with wall joint (internal/external) location as per drawings and direction of Engineer-In-Charge. The joints shall be of extruded aluminum base members, self aligning / centering arrangement and support plates as per ASTM B221- 02. The material shall be such that it provides an Expansion Joints System suitable for vertical wall to wall/ wall to corner application, both new and existing construction in office Buildings & complexes with no slipping down tendency amongst the components of the Joint System. The Joint System shall utilize light weight aluminum profiles exhibiting minimal exposed aluminum surfaces mechanically snap locking the multicellular to facilitate movement. (Material shall confirm to ASTM 6063).		
5.45.1	Wall Joint of 100 mm gap	metre	4,167.70
5.45.2	Wall Joint of 150 mm gap	metre	4,691.50
5.45.3	Wall Joint of 200 mm gap	metre	5,415.15

Item Code	Description	Unit	Justified Rate
5.46	Providing and fixing of expansion joint system of approved make and manufactures for various roof locations as per approved drawings and direction of Engineer-In-Charge. The joints shall be of extruded aluminum base members with, self aligning and self centering arrangement support plates asper ASTM B221-02. The system shall be such that it provides watertight roof to roof/roof to corner joint cover expansion control system that is capable of accommodating multidirectional seismic movement without stress to its components. System shall consist of metal profile that incorporates a universal aluminum base member designed to accommodate various project conditions and roof treatments. The cover plate shall be designed of width and thickness required to satisfy movement and loading requirements and secured to base members by utilizing manufacturer's pre-engineered self-centering arrangement that freely rotates / moves in all directions. The Self centering arrangement shall exhibit circular sphere ends that lock and slide inside the corresponding aluminum extrusion cavity to allow freedom of movement and flexure in all directions including vertical displacement. The Joint System shall resists damage or deterioration from the impact of falling ice, exposure to UV, airborne contaminants and occasional foot traffic from maintenance personnel. Provision of Moisture Barrier Membrane in the Joint System to have water tight joint is mandatory requirement. (Material shall confirm to ASTM 6063).		
5.46.1	Roof Joint of 100 mm gap	metre	4,678.75
5.46.2	Roof Joint of 150 mm gap	metre	5,207.20
5.46.3	Roof Joint of 200 mm gap	metre	6,218.90
5.47	Providing and fixing in position factory made precast RCC M-40 door and window frame fixing with hold fast embedded in 1:3:6 concrete block, having excellent smooth finish as per IS: 6523 with reinforcement of 3 Nos, 6 mm dia main bars tied with 3 ram M.S stirrups placed @ 200 mm C/C and 6 numbers high strength polymer blocks of required size for fixing hinges including providing 6 no specially designed M.S. galvanised sleeves for accomodating 6 mm dia fully threaded bolts for fixing hold fast on vertical members, providing suitable arrangement for recieving sliding door bolts and tower bolt etc. all complete, as per the direction of Engineer-in-charge. The frame shall be measured in running metre correct to two places of decimal.		
5.47.1	Door frame 125 mm x 60 mm	rntr	555.80
5.47.2	Door frame 100 mmx 60 mm	metre	514.35
5.47.3	Door frame 85 mm x 60 mm	mtr	493.05
5.48	Providing and laying Reinforced cement concrete for construction of piers, abutments, portal frames, pier caps and bearing pedestals and seismic arresters over pier/ abutment caps at all locations with specified grade using Ordinary Portland Cement (conforming to strength requirement of IS:8112) including the cost of steel centering and shuttering etc. complete, including testing of materials etc. for casting pier & pier cap in one/two stage, necessary tools, plants, machinery and all related operations as required to complete the work as per drawings and Specifications with all leads, lifts and depths true to level and position but excluding the cost of providing reinforcement. Reinforcement shall be measured and paid separately. Note:- Cement content considered in this item is 480 Kg./ Cum. Excess/ less cement used as per design mix is payable/ recoverable separately.		
5.48.1	Reinforced Cement Concrete -M-50	cum	7,370.30
5.48.2	Reinforced Cement Concrete -M-60	cum	8,240.75

Item Code	Description	Unit	Justified Rate
5.49	Constructing cast-in situ RCC diaphragm wall by providing and laying machine batched, machine mixed, self compacting, ready mix reinforced cement concrete, trامية controlled, of M 30 grade using minimum 400 kg. cement per cum of concrete including providing and mixing required admixtures in recommended proportions as per IS : 9103, as approved by the Engineer-in-charge, for achieving 150- 200mm slump, for diaphragm wall having thickness as per approved structural design not exceeding 600 mm, in pannels of required depth and lengths as per approved drawing, including constructing necessary guide walls as required and as specified including boring in all kinds of soils and rocks, including working in or under water and / or liquid mud, in foul conditions and pumping or bailing out of water and removing slush, including disposal of earth/ rock / slush etc. for all leads and all lifts, including preparing, providing and re-circulating bentonite slurry in the trench as and when required for all depths, including agitating bentonite slurry during trenching etc., providing and fixing stop ends or form tubes, upto the required depth of diaphragm wall including extracting the same after casting, including chipping off the bentonite adulterated concrete or unsound concrete up to the cut off level for obtaining the sound concrete, dressing undulations on the exposed face of diaphragm wall after excavation by chipping / chiseling etc. including filling the depression/ cavities with sound concrete etc. complete and as directed by the Engineer-in-charge, including providing recess for bearing plates and fixing insert boxes for inclined rock anchors etc. complete as per the specifications and approved design and as directed by the Engineer-in-charge, but excluding the cost of reinforcement and inserts.	cum	15,731.10
6	MASONRY WORK		
6.1	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in foundation and plinth in:		
6.1.1	Cement mortar 1:4 (1 cement : 4 coarse sand)	cum	5,554.15
6.1.2	Cement mortar 1:6 (1 cement : 6 coarse sand)	cum	5,322.15
6.2	Brick work with common burnt clay modular bricks of class designation 7.5 in foundation and plinth in:		
6.2.1	Cement mortar 1:4 (1 cement : 4 coarse sand)	cum	4,645.60
6.2.2	Cement Mortar 1:6 (1 cement : 6 coarse sand).	cum	4,441.45
6.3	Brick work with common burnt clay machine moulded perforated bricks of class designation 12.5 conforming to IS: 2222 in superstructure above plinth level up to floor five level in cement mortar 1:6 (1 cement : 6 coarse sand) :		
6.3.1	With F.P.S.(non modular) bricks	cum	6,270.95
6.3.2	With Modular bricks	cum	6,165.00
6.4	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in superstructure above plinth level up to floor V level in all shapes and sizes in :		
6.4.1	Cement mortar 1:4 (1 cement : 4 coarse sand)	cum	6,726.75
6.4.2	Cement mortar 1:6(1 cement: 6 coarse sand)	cum	6,494.75
6.5	Extra for brick work / AAC block masonry / Tile brick masonry in superstructure above floor V level, for each four floors or part thereof by mechanical means.	cum	123.25
6.6	Extra for forming cavity 5 cm to 11.5 cm wide in cavity walls with necessary weep and vent holes including use of cores and cost of providing and fixing bitumastic coated M .S. ties 300 mm long of 25x3 mm section at not less than 3 ties per sqm as per approved design.	sqm	148.50
6.7	Providing half brick masonry with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in cement mortar 1:3 (1 Cement : 3 coarse sand) in superstructure for closing cavity 5 to 7.5 cm wide in cavity wall complete with 10cm / 11.4 cm wide bitumen felt type 3 grade 1.	metre	214.40

Item Code	Description	Unit	Justified Rate
6.8	Brick work 7 cm thick with common burnt clay F.P.S. (non modular) brick of class designation 7.5 in cement mortar 1:3 (1 cement : 3 coarse sand) in superstructure above plinth level and upto floor five level.	sqm	612.90
6.9	Brick work in plain arches in superstructure above plinth level and upto floor five level including centering and shuttering complete for span up to 6 metres with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in cement mortar 1:3 (1 cement : 3 coarse sand).	cum	10,488.60
6.10	Brick work in gauged arches in superstructure above plinth level and upto floor five level in cement mortar 1:3 (1 cement : 3 coarse sand) including centering and shuttering complete, for span up to 6 meters with common burnt clay F.P.S. (non modular) bricks of class designation 7.5.	cum	12,973.55
6.11	Extra for additional cost of centering for arches exceeding 6m span including all shuttering, bolting, wedging and removal (Area of the soffit to be measured).	sqm	481.40
6.12	Half brick masonry with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in foundations and plinth in :		
6.12.1	Cement mortar 1:3 (1 cement : 3 coarse sand)	sqm	699.45
6.12.2	cement mortar 1:4 (1 cement : 4 coarse sand)	sqm	673.45
6.13	Half brick masonry with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in superstructure above plinth level up to floor V level.		
6.13.1	Cement mortar 1:3 (1 cement :3 coarse sand)	sqm	828.35
6.13.2	Cement mortar 1:4 (1 cement :4 coarse sand)	sqm	802.35
6.14	Extra for half brick masonry in superstructure, above floor V level for every four floors or part thereof by mechanical means.	sqm	10.90
6.15	Extra for providing and placing in position 2 Nos 6mm dia. M.S. bars at every third course of half brick masonry.	sqm	75.05
6.16	Tile brick masonry with common burnt clay F.P.S. (non modular) tile bricks of class designation 10 in foundation and plinth in:		
6.16.1	Cement mortar 1:4 (1 cement : 4 coarse sand)	cum	8,373.25
6.16.2	Cement mortar 1:6 (1 cement : 6 coarse sand)	cum	8,002.05
6.17	Tile brick masonry with common burnt clay machine moulded tile bricks of class designation 12.5 conforming to IS : 2690 (Part I) in foundation and plinth in cement mortar 1:6 (1 cement : 6 coarse sand).	cum	8,002.05
6.18	Tile brick masonry with common burnt clay F.P.S. (non modular) tile bricks of class designation 10 in superstructure above plinth level up to floor V level in cement mortar 1:6 (1 cement : 6 coarse sand).	cum	9,240.25
6.20	Tile brick masonry with common burnt clay F.P.S. (non modular) tile bricks of class designation 10 in plain arch work in superstructure above plinth and upto floor five level in cement mortar 1:4 (1 cement : 4 coarse sand) including centering and shuttering complete.	cum	13,182.10
6.21	Tile brick masonry with common burnt clay F.P.S. (non modular) tile bricks of class designation 10 in gauged arch work in superstructure above plinth and upto floor five level in cement mortar 1:4 (1 cement : 4 coarse sand) including centering and shuttering complete.	cum	15,654.85
6.22	Tile brick masonry work 5 cm thick with common burnt clay F.P.S. (non modular) tile bricks of class designation 10 in cement mortar 1:3 (1 cement : 3 coarse sand) in superstructure above plinth and upto floor five level.	sqm	615.20
6.23	Honey-comb brick work 10 / 11.4 cm thick with common burnt clay bricks of class designation 7.5 in super structure above plinth level upto floor V level with cement mortar 1:4 (1 cement : 4 coarse sand).	sqm	515.05

Item Code	Description	Unit	Justified Rate
6.24	Extra for laying brick work in or under water and/or liquid mud including cost of pumping or bailing out water and removing slush etc. complete. NOTE :- The quantity will be calculated by multiplying the depth measured from sub - soil water level up to the centre of gravity of brick work under sub - soil water with the quantity of brick work in cum. executed under the sub - soil water. The depth of centre of gravity shall be reckoned correct to 0.1 m, 0.05 m or more shall be taken as 0.1 m and less than 0.05 m ignored.	cum per metre depth	650.05
6.25	Extra for laying brick work in or under foul position.	cum	273.75
6.26	Brick work with common burnt clay selected F.P.S. (non modular) bricks of class designation 7.5 in exposed brick work including making horizontal and vertical grooves 10 mm wide 12 mm deep complete in cement mortar 1:6 (1 cement : 6 coarse sand)		
6.26.1	From ground level upto plinth level	cum	5,461.40
6.26.2	Above plinth level upto floor V level	cum	6,694.65
6.27	Brick work with common burnt clay modular bricks of class designation 7.5 in exposed brick work including making horizontal and vertical grooves 10mm wide 12 mm deep complete in cement mortar 1:6 (1 cement : 6 coarse sand).		
6.27.1	From ground level upto plinth level	cum	4,475.10
6.27.2	Above plinth level upto floor V level	cum	5,647.70
6.28	Brick work with common burnt clay machine moulded modular bricks of class designation 12.5 in exposed brick work including making horizontal and vertical grooves 10 mm wide 12 mm deep complete in cement mortar 1:6(1 cement :6 coarse sand).		
6.28.1	From ground level upto plinth level	cum	5,267.00
6.28.2	Above plinth level upto floor V level	cum	6,439.60
6.29	Brick work with common burnt clay machine moulded F.P.S. (non modular) bricks of class designation 12.5 in exposed brick work including making horizontal and vertical grooves 10 mm wide 12 mm deep complete in cement mortar 1:6 (1 cement : 6 coarse sand).		
6.29.1	From ground level upto plinth level	cum	5,418.85
6.29.2	Above plinth level upto floor V level	cum	6,544.65
6.30	Brick work with common burnt clay machine moulded perforated F.P.S. (non modular) bricks of class designation 12.5 conforming IS : 2222 in exposed brick work including making horizontal and vertical grooves 10mm wide 12 mm deep complete in cement mortar 1:6 (1 cement : 6 coarse sand).		
6.30.1	From ground level upto plinth level	cum	5,131.95
6.30.2	Above plinth level upto floor V level	cum	6,304.60
6.31	Brick work with common burnt clay machine moulded perforated modular bricks of class designation 12.5 conforming to IS : 2222 in exposed brick work including making horizontal and vertical grooves 10 mm wide 12mm deep complete in cement mortar 1:6 (1 cement : 6 coarse sand).		
6.31.1	From ground level upto plinth level	CUM	5,040.75
6.31.2	Above plinth level upto floor V level	cum	6,213.35
6.32	Brick work with clay flyash F.P.S. (non modular) brick of class designation 7.5 in superstructure above plinth level up to floor five level in :		
6.32.1	Cement mortar 1:4 (1 cement : 4 coarse sand)	cum	6,642.15
6.32.2	Cement mortar 1:6 (1 cement : 6 coarse sand)	cum	6,410.15
6.34	Brick work with non modular fly ash bricks conforming to IS:12894, class designation 10 average compressive strength in super structure above plinth level up to floor V level in :		
6.34.1	Cement mortar 1:4 (1 cement : 4 coarse sand)	cum	6,188.40
6.34.2	Cement mortar 1:6 (1 cement : 6 Coarse sand)	cum	5,984.25

Item Code	Description	Unit	Justified Rate
6.35	Brick work with modular calcium silicate bricks machine moulded conforming to IS:4139, class designation 10 average compressive strength in super structure above plinth level up to floor V level in :		
6.35.1	Cement mortar 1:4 (1 cement : 4 coarse sand)	cum	6,810.60
6.35.2	Cement mortar 1:6 (1 cement : 6 Coarse sand)	cum	6,606.45
6.36	Brick work with modular extruded brunt fly ash clay sewer bricks (Conforming to IS: 4885) in cement mortar 1:4 (1 cement : 4 coarse sand) in foundation and plinth :		
6.36.1	Cement Mortar 1:4 (1 cement : 4 coarse sand)	cum	5,324.40
6.37	Brick work with modular extruded brunt fly ash clay sewer bricks (conforming to IS : 4885) in arches in foundation and plinth in cement mortar 1:3 (1 cement : 3 fine sand).	cum	9,515.65
6.38	Providing and laying Autoclaved Aerated Concrete (AAC) blocks masonry 100 mm / 125mm thick with Grade 1 AAC blocks of density 551 to 650 kg/cum conforming to IS: 2185 (Part 3) in super structure above plinth level up to floor V level in cement mortar 1:4 (1 cement : 4 coarse sand). The rate includes providing and placing in position 2 Nos 6 mm dia M.S. bars at every third course of masonry work.	cum	7,164.35
6.40	Providing and laying Gypsum panel partitions 100 mm thick with water proof Gypsum panels of size 666x500x100 mm, made of calcite phosphor Gypsum fixed with tongue and groove, jointed with bonding plaster as per manufacturer's specifications in superstructure above plinth level up to floor V level. Gypsum blocks will have a minimum compressive strength of 9.3 kg/cm2	sqm	738.15
6.41	Extra for Gypsum panel Partitions in superstructure above floor V level for every four floors or part thereof.	sqm	104.90
6.44	Brick edging 7cm wide 11.4 cm deep to plinth protection with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 including grouting with cement mortar 1:4 (1 cement : 4 fine sand).	metre	45.95
6.45	Half brick masonry with non modular fly ash bricks of class designation 10, conforming to IS :12894, in super structure above plinth and upto floor V level.		
6.45.1	Cement mortar 1 : 3 (1 cement : 3 coarse sand)	sqm	786.35
6.45.2	Cement mortar 1 : 4 (1 cement : 4 coarse sand)	sqm	760.35
6.47	Providing and laying Autoclaved Aerated concrete blocks (AAC) masonry 150mm/230mm/300 mm thick AAC with Grade-1 blocks of density 551-650 kg/cum conforming to IS:2185 (Part 3) in super structure above plinth level up to floor V level with RCC band at sill level and lintel level with approved block laying polymer modified adhesive mortar all complete as per direction of Engineer-in-Charge. (The payment of RCC band and reinforcement shall be made for separately).	cum	5,840.70
7	STONE WORK		
7.1	Random rubble masonry with hard stone in foundation and plinth including levelling up with cement concrete 1:6:12 (1 cement : 6 coarse sand : 12 graded stone aggregate 20 mm nominal size) upto plinth level with :		
7.1.1	Cement mortar 1:6 (1 cement : 6 coarse sand)	cum	5,152.20
7.2	Random rubble masonry with hard stone in superstructure above plinth level and upto floor five level, including leveling up with cement concrete 1:6:12 (1 cement : 6 coarse sand : 12 graded stone aggregate 20 mm nominal size) at window sills, ceiling level and the like.		
7.2.1	Cement mortar 1:6 (1 cement : 6 coarse sand)	cum	6,312.20
7.4	Extra for random rubble masonry with hard stone in :		
7.4.1	Square or rectangular pillars	cum	574.65
7.4.2	Circular pillars	cum	1,653.80
7.5	Extra for random rubble masonry with hard stone curved on plan for a mean radius not exceeding 6 m.	cum	662.80
7.6	Coursed rubble masonry (first sort) with hard stone in foundation and plinth with :		

Item Code	Description	Unit	Justified Rate
7.6.1	Cement mortar 1:6 (1 cement : 6 coarse sand)	cum	6,116.70
7.7	Coursed rubble masonry (second sort) with hard stone in foundation & plinth with :		
7.7.1	Cement mortar 1:6 (1 cement : 6 coarse sand)	cum	5,696.45
7.8	Coursed rubble masonry with hard stone (first or second sort) in superstructure above plinth level and upto floor five level.		
7.8.1	Masonry work (first sort), in cement mortar 1:6 (1 cement : 6 coarse sand)	cum	7,257.80
7.8.2	Masonry work (second sort), in cement mortar 1:6 (1 cement: 6 coarse sand)	cum	6,837.55
7.10	Extra for coursed rubble masonry with hard stone (first or second sort) in:		
7.10.1	Square or rectangular pillars	cum	638.40
7.10.2	Circular pillars	cum	1,875.95
7.11	Extra for coursed rubble masonry with hard stone (first or second sort) curved on plan for a mean radius not exceeding 6 m.	cum	720.35
7.12	Stone work in plain ashlar in super structure upto floor five level in cement mortar 1:6 (1 cement : 6 coarse sand) including pointing with cement mortar 1:2 (1 white cement : 2 stone dust) with an admixture of pigment matching the stone shade :		
7.12.1	One face dressed		
7.12.1.1	Red sand stone	cum	39,756.00
7.12.1.2	White sand stone	cum	59,110.00
7.12.2	Both face dressed		
7.12.2.1	Red sand stone	cum	53,623.00
7.12.2.2	White sand stone	cum	72,977.00
7.13	Stone work plain ashlar in arches in super structure upto floor V Level in cement mortar 1:3 (1 cement : 3 coarse sand) including centering, shuttering and pointing with white cement mortar 1:2 (1 white cement : 2 stone dust) with an admixture of pigment matching the stone shade.		
7.13.1	One face dressed		
7.13.1.1	Red sand stone	cum	45,070.00
7.13.1.2	White sand stone	cum	64,424.00
7.13.2	Both face dressed		
7.13.2.1	Red sand stone	cum	58,936.00
7.13.2.2	White sand stone	cum	78,291.00
7.14	Stone work plain ashlar in domes, in super structure upto floor V level in cement mortar 1:3 (1 cement : 3 coarse sand) including centering, shuttering and pointing with white cement mortar 1:2 (1 white cement : 2 stone dust) with an admixture of pigment matching the stone shade.		
7.14.1	One face dressed		
7.14.1.1	Red sand stone	cum	71,144.00
7.14.1.2	White sand stone	cum	90,497.00
7.14.2	Both face dressed		
7.14.2.1	Red sand stone	cum	1,06,251.00
7.14.2.2	White sand stone	cum	1,25,604.00
7.15	Stone work ashlar punched (ordinary) in superstructure upto floor five level in cement mortar 1:6 (1 white cement : 6 coarse sand) including pointing with white cement mortar 1:2 (1 white cement : 2 stone dust) with an admixture of pigment matching the stone shade.		
7.15.1	One face dressed		
7.15.1.1	Red sand stone	cum	37,702.00
7.15.1.2	White sand stone	cum	57,055.00
7.15.2	Both faced punched		

Item Code	Description	Unit	Justified Rate
7.15.2.1	Red sand stone	cum	49,513.00
7.15.2.2	White sand stone	cum	68,868.00
7.16	Extra for stone work, random rubble 1 coursed rubble masonry / ashlar masonry above floor V level for every four floors or part thereof by mechanical means.	cum	123.25
7.17	Extra for plain ashlar or ashlar punched in:		
7.17.1	Square or rectangular pillars	cum	2,209.00
7.18	Extra for stone work; plain ashlar or ashlar punched curved on plan with a mean radius not exceeding 6 m.	cum	1,536.00
7.19	Extra for additional cost of centering for arches exceeding 6m span including all strutting, bolting, wedging etc. and removal (area of soffit to be measured).	sqm	481.40
7.20	Stone work ashlar sunk or moulded or sunk and moulded upto floor five level in cement mortar 1:6 (1 cement : 6 coarse sand) including pointing with white cement mortar 1:2)1 white cement: 2 stone dust) with an admixture of pigment matching the stone shade :		
7.20.1	Red sand stone	cum	56,123.00
7.20.2	White sand stone	cum	75,478.00
7.21	Extra for stone work ashlar sunk or moulded or sunk and moulded or carved in :		
7.21.1	Triangular or Square or rectangular pillars	cum	2,881.00
7.21.2	Circular or polygonal pillars	cum	8,163.00
7.22	Extra for stone work ashlar sunk or moulded in cornices.	per metre per cm girth (60cm deep)	179.80
7.24	Extra for stone work (veneer work) curved on plan with a mean radius riot exceeding 6 m.	cum	2,209.00
7.26	Providing and fixing stone dowels 10x5x2.50 cm cut to double wedge shape as per design in cement mortar 1:2 (1 cement : 2 coarse sand), including making the necessary chases.	each	42.05
7.28	Providing and fixing sloping chajja of stone 40 mm thick and upto 80 cm wide beyond the wall as measured along the slope in cement mortar 1:4 (1 cement : 4 coarse sand) with 12 mm diameter anchoring steel bar, 45 cm long, fixed in each stone and supported on and including with bricks cove in cement mortar 1:4 (1 cement : 4 coarse sand), including pointing in cement mortar 1:2 (1 white cement : 2 stone dust) with an admixture of pigment matching the stone shade :		
7.28.1	Red sand stone :		
7.28.1.1	With common burnt clay F.P.S.(non modular) bricks of class designation 7.5	sqm	1,794.15
7.28.2	White sand stone :		
7.28.2.1	With common burnt clay F.P.S.(non modular) bricks of class designation 7.5	sqm	1,826.10
7.29	Providing and fixing horizontal chajja of stone 40 mm thick and upto 80 cm projection in cement mortar 1:4 (1 cement : 4 coarse sand), including pointing in white cement mortar 1:2 (1 white cement : 2 stone dust) with an admixture of pigment matching the stone shade :		
7.29.1	Red sand stone	sqm	1,128.50
7.29.2	White sand stone	sqm	1,156.35
7.30	30 mm red sand stone sun-shade (chisel-dressed) supported on red sand stone brackets, fixed in walls with cement mortar 1:4 (1 cement : 4 coarse sand), including finishing complete.	sqm	1,321.90
7.31	Providing and fixing red sand stone brackets 55x22.5x45 cm sunk and moulded including providing and fixing with 4 Nos gun metal cramp 25x6 mm 30 cm long	each	4,193.75

Item Code	Description	Unit	Justified Rate
7.32	Stone work, plain in copings, cornices, string courses and plinth courses, upto 75 mm thick in Cement mortar 1:6 (1 cement : 6 coarse sand), including pointing with white cement mortar 1:2 (1 white cement : 2 stone dust) with an admixture of pigment matching the stone shade.		
7.32.1	Red sand stone	cum	55,335.55
7.32.2	White sand stone	cum	74,689.55
7.33	Providing and fixing stone jali 40 mm thick throughout in cement mortar 1:3 (1 cement : 3 coarse sand), including pointing in white cement mortar 1:2 (1 white cement : 2 stone dust) with an admixture of pigment, matching the stone shade, jali slab without any chamfers etc.		
7.33.1	Red sand stone	sqm	8,982.60
7.33.2	White sand stone	sqm	9,008.15
7.34	Extra for laying stone work in or under water and/or liquid mud including cost of pumping or bailing out water and removing slush etc. complete. NOTE :- The quantity will be calculated by multiplying the depth measured from sub-soil water level up to the centre of gravity of stone work under sub - water with the quantity of stone work in cum executed under the sub-soil water. The depth of centre of gravity shall be reckoned correct to 0.1 m, 0.05 m or more shall be taken as 0.1 m and less than 0.05 m ignored.	cum per metre depth	650.05
7.35	Extra for laying stone work in or under foul condition.	cum	273.75
7.38	Stone tile work for wall lining upto 10 m height with special adhesive over 12 mm thick bed of cement mortar 1:3 (1 cement : 3 coarse sand), including pointing in white cement with an admixture of pigment to match the stone shade.		
7.38.1	8mm thick (mirror polished and machine cut edge)		
7.38.1.1	Granite stone of any colour and shade	sqm	2,166.45
7.38.1.2	Raj Nagar plain white marble/ Udaipur green marble/ Zebra black marble	sqm	1,880.70
8	CLADDING WORK		
8.1	Marble work gang saw cut (polished and machine cut) of thickness 18 mm for wall lining (veneer work), backing filled with a grout of average 12 mm thick cement mortar 1:3 (1 cement : 3 coarse sand), including pointing with white cement mortar 1:2 (1 white cement : 2 marble dust) with an admixture of pigment to match the marble shade (To be secured to the backing by means of cramps, which shall be paid for separately).		
8.1.1	Raj Nagar Plain white marble/ Udaipur green marble/ Zebra black marble.		
8.1.1.1	Area of slab upto 0.50 sqm	sqm	3,736.50
8.1.1.2	Area of slab over 0.50 sqm	sqm	3,885.30
8.2	Providing and fixing 18 mm thick gang saw cut, mirror polished, premoulded and prepolished, machine cut for kitchen platforms, vanity counters, window sills, facias and similar locations of required size, approved shade, colour and texture laid over 20 mm thick base cement mortar 1:4 (1 cement : 4 coarse sand), joints treated with white cement, mixed with matching pigment, epoxy touch ups, including rubbing, curing, moulding and polishing of edges to give high gloss finish etc. complete at all levels.		
8.2.1	Raj Nagar Plain white marble/ Udaipur green marble/ Zebra black marble		
8.2.1.1	Area of slab upto 0.50 sqm	sqm	2,340.05
8.2.1.2	Area of slab over 0.50 sqm	sqm	2,150.80
8.2.2	Granite stone slab of colour black, Cherry/Ruby red		
8.2.2.1	Area of slab upto 0.50 sqm	sqm	3,879.15
8.2.2.2	Area of slab over 0.50 sqm	sqm	3,701.15
8.2.3	Granite stone slab of all colour and texture except black, Cherry/Ruby red		
8.2.3.1	Area of slab upto 0.50 sqm	sqm	2,903.50

Item Code	Description	Unit	Justified Rate
8.2.3.2	Area of slab over 0.50 sqm	sqm	2,725.50
8.3	Providing edge moulding to 18 mm thick marble stone counters, Vanities etc., including machine polishing to edge to give high gloss finish etc. complete as per design approved by Engineer-in-Charge.		
8.3.1	Marble work	metre	184.00
8.3.2	Granite work	metre	313.60
8.4	Extra for fixing marble /granite stone, over and above corresponding basic item, in facia and drops of width upto 150 mm with epoxy resin based adhesive, including cleaning etc. complete.	metre	370.85
8.5	Extra for providing opening of required size & shape for wash basin/ kitchen sink in kitchen platform, vanity counter and similar location in marble/ Granite/ stone work, including necessary holes for pillar taps etc. including moulding, rubbing and polishing of cut edges etc. complete.	each	621.20
8.6	Mirror polishing on marble work/Granite work/stone work where ever required to give high gloss finish complete.	sqm	308.70
8.7	Providing and fixing cramps of required size & shape in RCC/ CC / Brick masonry backing with cement mortar 1:2 (1 cement :2 coarse sand), including drilling necessary hole in stones and embedding the cramp in the hole (fastener to be paid separately).		
8.7.1	Gunmetal cramps	kg	554.70
8.7.2	Stainless steel cramps	kg	542.40
8.8	Providing and fixing expansion hold fasteners on C.C. /R.C.C./Brick masonry surface backing including drilling necessary holes and the cost of bolt etc complete.		
8.8.1	Wedge expansion type		
8.8.1.1	Fastener with threaded dia 6 mm	each	25.00
8.8.1.2	Fastener with threaded dia 10 mm	each	27.65
8.8.1.3	Fastener with threaded dia 12 mm	each	44.20
8.9	Stone tile (polished) work for wall lining over 12 mm thick bed of cement mortar 1:3 (1 cement : 3 coarse sand) and cement slurry @ 3.3 kg/sqm including pointing in white cement complete.		
8.9.1	8mm thick		
8.9.1.1	Raj nagar plain white marble/ Udaipur green marble/ Zebra black marble	sqm	2,148.10
8.9.1.2	Granite of any colour and shade	sqm	2,493.35
8.10	Providing and fixing 75 mm high, 50 mm deep and 18 mm thick stone slab table rubbed, edges rounded and polished, fixed in urinal partitions by cutting a chase of appropriate width with chase cutter and embedding the stone in the chase with epoxy grout or with cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 6 mm nominal size) as per direction of Engineer-in-charge and finished smooth.		
8.10.1	White Agaria Marble Stone	sqm	2,657.50
8.10.2	Granite Stone of approved shade	sqm	3,075.65
8.11	Providing and fixing machine cut, mirror/ eggshell polished , Marble stone work for wall lining (veneer work) including dado, skirting, risers of steps etc., in required design and pattern (if required with marble stone slab pieces of different shapes, sizes & texture but of even thickness) on 12 mm (average) thick cement mortar 1:3 (1 cement : 3 coarse sand) laid and jointed with white cement slurry @ 3.3 kg/sqm including pointing with white cement slurry admixed with pigment of matching shade, including rubbing, curing, polishing etc. all complete as per Architectural drawings, and as directed by the Engineer-in-Charge.		
8.11.1	18 mm thick Italian Marble stone slab,Perlato, Rosso verona, Fire Red or Dark Emperadore etc.	sqm	7,601.25

Item Code	Description	Unit	Justified Rate
8.14	Stone work (machine Cut edges) for wall lining etc. (vener work) upto 10 metre height, backing filled with a grout of average 12 mm thick cement mortar 1:2 (1 cement : 3 coarse sand) including pointing in white cement mortar 1:2 (1 white cement : 2 stone dust) with an admixture of pigment matching the stone shade: (To be secured to the backing and the sides by means of cramps and pins which shall be paid for separately) :		
8.14.1	Red sand stone - exposed face fine dressed with rough backing.		
8.14.1.1	70 mm thick	sqm	3,710.10
8.14.1.2	60 mm thick	sqm	3,581.00
8.14.1.3	50 mm thick	sqm	3,452.20
8.14.1.4	40 mm thick	sqm	3,322.85
8.14.1.5	30 mm thick	sqm	3,193.70
8.14.2	Red sand stone - Exposed face machine cut and table rubbed with rough backing.		
8.14.2.1	70 mm thick	sqm	5,056.35
8.14.2.2	60 mm thick	sqm	4,927.20
8.14.2.3	50 mm thick	sqm	4,798.40
8.14.2.4	40 mm thick	sqm	4,669.10
8.14.2.5	30 mm thick	sqm	4,539.90
8.14.3	White sand stone - exposed face fine dressed with rough backing.		
8.14.3.1	70 mm thick	sqm	5,065.15
8.14.3.2	60 mm thick	sqm	4,742.50
8.14.3.3	50 mm thick	sqm	4,420.60
8.14.3.4	40 mm thick	sqm	4,096.45
8.14.3.5	30 mm thick	sqm	3,774.30
8.14.4	White sand stone - Exposed face machine cut and table rubbed with rough backing.		
8.14.4.1	70 mm thick	sqm	6,411.40
8.14.4.2	60 mm thick	sqm	6,088.70
8.14.4.3	50 mm thick	sqm	5,766.80
8.14.4.4	40 mm thick	sqm	5,442.65
8.14.4.5	30 mm thick	sqm	5,120.50
8.14.5	Gang saw cut stone		
8.14.5.1	30mm thick White sand stone	sqm	2,155.45
8.14.5.2	30mm thick Red sand stone	sqm	2,053.00
8.15	Providing and fixing stainless steel cramps of required size and shape for anchoring stone wall lining to the backing or securing adjacent stones in stone wall lining in cement mortar 1:2 (1 cement : 2 coarse sand), including making the necessary chases in stone and holes in walls wherever required.	kg	542.40
8.16	Providing and fixing copper pins 7.5 cm long 6 mm diameter for securing adjacent stones in stone wall lining in cement mortar 1:2 (1 cement : 2 coarse sand), including making the necessary chases.	each	32.55
8.17	Wall lining butch work upto 10m height with Dholpur stone 40 mm thick rough facing on the exposed surface with stone strips of minimum length 300 mm and required width, including embedding every tenth layer and bottom most layer in masonry or concrete after making necessary chases of size 75x75 mm and by providing layer of 75 mm thick strips i/c 12 mm thick bed of cement mortar 1:3 (1 Cement : 3 coarse sand) i/c ruled pointing in white cement mortar 1:2 (1 white cement : 2 stone dust) with an admixture of pigment to match the shade of stone complete as per direction of Engineer-in-charge.	sqm	2,056.05

Item Code	Description	Unit	Justified Rate
8.18	Stone work (machine cut edges Veneer work) for wall lining upto 10 m height, backing filled with a grout of 12 mm thick cement mortar 1:3 (1 Cement : 3 coarse sand) and jointed with Cement mortar 1:2 (1 cement : 2 stone dust), including rubbing and polishing complete. (To be secured to the backing and the sides by means of cramps and pins which shall be paid for separately).		
8.18.1	Kota stone slabs exposed face dressed and rubbed.		
8.18.1.1	25 mm thick	sqm	1,721.65
8.19	Extra for stone work for wall lining on exterior walls of height more than 10 m from ground level for every additional height of 3 m or part there of.	sqm	114.45
8.20	Providing and fixing dry cladding upto 10 metre heights with 30mm thick gang saw cut stone with machine cut edges of uniform colour and size upto 1mx1m, fixed to structural steel frame work and/ or with the help of cramps, pins etc. and sealing the joints with approved weather sealant as per Architectural drawing and direction of Engineer-in-charge. (The steel frame work, stainless steel cramps and pins etc. shall be paid for separately).		
8.20.1	Red sand stone - 30mm thick_gang saw cut stone	sqm	1,944.60
8.20.2	White sand stone - 30mm thick gang saw cut stone	sqm	2,047.05
8.21	Providing and fixing structural steel frame (for dry cladding with 30 mm thick gang saw cut with machine cut edges sand stone) on walls at all heights using M.S. square/ rectangular tube in the required pattern as per architectural drawing, including cost of cutting, bending, welding etc. The frame work shall be fixed to the wall with the help of M.S. brackets/ lugs of angle iron/ flats etc. which shall be welded to the frame and embedded in brick wall with cement concrete block 1:2:4 (1 cement :2 coarse sand :4 graded stone aggregate 20 mm nominal size) of size 300x230x300 mm, including cost of necessary centring and shuttering and with approved expansion hold fasteners on CC/RCC surface, including drilling necessary holes. Approved cramps/ pins etc. shall be welded to the frame work to support stone cladding, the steel work will be given a priming coat of Zinc primer as approved by Engineer- in-charge and painted with two or more coats of epoxy paint (Shop drawings shall be submitted by the contractor to the Engineer-in-charge for approval before execution). The frame work shall be fixed in true horizontal & vertical lines/planes. (Only structural steel frame work shall be measured for the purpose of payment, stainless steel cramps shall be paid for separately and nothing extra shall be paid).	kg	178.25
8.22	Providing and fixing adjustable stainless steel cramps of approved quality, required shape and size, adjustable with stainless steel nuts, bolts and washer (total weight not less than 260 gms), for dry stone cladding fixed on frame work at suitable location, including making necessary recesses in stone slab, drilling required holes etc complete as per direction of the Engineer-in-charge.	each	288.45
8.23	Providing 50x50x50 mm 2nd class teak wood plugs including cutting brick work and fixing in cement mortar 1:3 (1 cement : 3 fine sand) and making good the walls etc.	each	27.95
8.24	Providing and fixing expandable fasteners of specified size with necessary plastic sleeves and galvanised M.S. screws including drilling holes in masonry work /CC/ R.C.C. and making good etc. complete.		
8.24.1	25 mm long	each	16.75
8.24.2	32 mm long	each	18.00
8.24.3	40 mm long	each	21.50
8.24.4	50 mm long	each	22.65
8.25	Providing and fixing 2nd class teak wood plain lining tongued and grooved, including wooden plugs complete with necessary screws and priming coat on unexposed surface.		
8.25.1	40 mm thick	sqm	5,313.90

Item Code	Description	Unit	Justified Rate
8.25.2	25 mm thick	sqm	3,506.90
8.25.3	20 mm thick	sqm	2,837.30
8.25.4	12 mm thick	sqm	1,873.55
8.26	Providing and fixing in wall lining flat pressed three layer (medium density) particle board or graded wood Pre-laminated one side decorative lamination and other side balancing lamination Grade I, Type II, IS : 12823 marked, including priming coat on unexposed arrangement and screws etc. complete :		
8.26.1	12 mm thick	sqm	1,013.45
8.26.2	18 mm thick	sqm	1,090.10
8.26.3	25 mm thick	sqm	1,460.65
8.27	Providing and fixing specified wood frame work consisting of battens 50x25mm fixed with rawl plug and drilling necessary holes for rawl plug etc. including priming coat complete.		
8.27.1	Kiln seasoned and chemically treated hollock wood	cum	1,38,418.45
8.28	Providing and fixing plywood 4 mm thick, one side decorative veneer conforming to IS: 1328 (type-1), for plain lining / cladding with necessary screws, including priming coat on unexposed surface with :		
8.28.1	Decorative veneer facings of approved manufacture	sqm	1,315.10
8.29	Providing and fixing 4mm thick coir veneer board, ISI marked IS : 14842, plain lining with necessary screws, priming coat on unexposed surface etc., complete.	sqm	1,231.50
8.30	Providing and fixing skirting with Pre-laminated (one side decorative and other side balancing lamination) flat pressed 3 layer or graded particle board (medium density) Grade I, Type II, IS :12823 marked, with necessary fixing arrangements and screws, including drilling necessary holes for rawl plugs etc. and priming coat on unexposed surface complete :		
8.30.1	18 mm thick	sqm	1,453.25
8.30.2	25 mm thick	sqm	1,823.75
8.31	Providing and fixing Ist quality ceramic glazed wall tiles conforming to IS: 15622 (thickness to be specified by the manufacturer), of approved make, in all colours, shades except burgundy, bottle green, black of any size as approved by Engineer-in-Charge, in skirting, risers of steps and dados, over 12 mm thick bed of cement mortar 1:3 (1 cement : 3 coarse sand) and jointing with grey cement slurry @ 3.3kg per sqm, including pointing in white cement mixed with pigment of matching shade complete.	sqm	871.30

Item Code	Description	Unit	Justified Rate
8.32	(a) Designing, fabricating, testing, installing and fixing in position Curtain Wall with Aluminium Composite Panel Cladding, with open grooves for linear as well as curvilinear portions of the building , for all heights and all levels etc. including: Structural analysis & design and preparation of shop drawings for pressure equalisation or rain screen principle as required, proper drainage of water to make it watertight including checking of all the structural and functional design. (b) Providing, fabricating and supplying and fixing panels of aluminium (c) composite panel cladding in pan shape in metallic colour of approved shades made out of 4mm thick aluminium composite panel material consisting of 3mm thick FR grade mineral core sandwiched between two Aluminium sheets (each 0.5mm thick). The aluminium composite panel cladding sheet shall be coil coated, with Kynar 500 based PVDF / Lumiflon based fluoropolymer resin coating of approved colour and shade on face # 1 and polymer (Service) coating on face # 2 as specified using stainless steel screws, nuts, bolts, washers, cleats, weather silicone sealant, backer rods etc. The fastening brackets of Aluminium alloy 6005 T5 / MS with Hot Dip Galvanised with serrations and serrated washers to arrest the wind load movement, fasteners, SS 316 Pins and anchor bolts of approved make in SS 316, Nylon separators to prevent bi-metallic contacts all complete required to perform as per specification and drawing The item includes cost of all material & labour component, the cost of all mock ups at site, cost of all samples of the individual components for testing in an approved laboratory, field tests on the assembled working curtain wall with aluminium composite panel cladding, cleaning and protection of the curtain wall with aluminium composite panel cladding till the handing over of the building for occupation. Base frame work for ACP cladding is payable under the relevant aluminium item.s The Contractor shall provide curtain wall with aluminium composite panel cladding, having all the performance characteristics all complete , as per the Architectural drawings, as per item description, as specified, as per the approved shop drawings and as directed by the Engineer-in-Charge. However, for the purpose of payment, only the actual area on the external face of the curtain wall with Aluminum Composite Panel Cladding (including width of groove) shall be measured in sqm. up to two decimal places.	sqm	3,884.15
9	WOOD AND P. V. C. WORK		
9.1	Providing wood work in frames of doors, windows, clerestory windows and other frames, wrought framed and fixed in position with hold fast lugs or with dash fasteners of required dia & length (hold fast lugs or dash fastener shall be paid for separately).		
9.1.1	Second class teak wood	cum	1,12,158.90
9.1.2	Sal wood	cum	90,581.10
9.1.3	Kiln seasoned and chemically treated hollock wood	cum	62,348.60
9.2	Providing laminated veneer lumber conforming to IS:14616 and TAD -15: 2001 (Part B) in factory made frames of doors, windows, clerestory windows and other frames, wrought framed and fixing in position with hold fast lugs or with dash fasteners of required. dia & length (hold fast lugs or dash fastener shall be paid for separately).	cum	98,092.50
9.3	Providing wood work in frames of false ceiling, partitions etc. sawn and fixed in position with necessary stainless steel screws etc.		
9.3.1	Sal wood	cum	82,607.65
9.3.2	Kiln seasoned and chemically treated hollock wood	cum	54,179.75
9.4	Extra for additional labour for circular works, such as in frames of fan light		
9.4.1	Second class teak wood	cum	11,215.90
9.4.2	Sal wood	cum	9,058.10
9.4.3	Kiln seasoned and chemically treated hollock wood	cum	6,235.10

Item Code	Description	Unit	Justified Rate
9.5	Providing and fixing panelled or panelled and glazed shutters for doors, windows and clerestory windows, fixing with butt hinges of required size with necessary screws, excluding panelling which will be paid for separately, all complete as per direction of Engineer-in-charge. (Note:- Butt hinges and necessary screws shall be paid separately)		
9.5.1	Second class teak wood		
9.5.1.1	35 mm thick shutters	sqm	3,089.90
9.5.1.2	30 mm thick shutters	sqm	2,791.45
9.5.2	Kiln seasoned and chemically treated hollock wood		
9.5.2.1	35 mm thick shutters	sqm	2,054.65
9.5.2.2	30 mm thick shutters	sqm	1,899.75
9.5.3	Kiln seasoned selected planks of sheesham wood		
9.5.3.1	35 mm thick shutters	sqm	2,703.25
9.5.3.2	30 mm thick shutters	sqm	2,457.85
9.6	Providing and fixing 35 mm thick factory made laminated veneer lumber door shutter conforming to IS : 14616 and TADS 15:2001 (Part 8), fixing with butt hinges of required size with necessary screws, all complete as per directions of Engineer- in-charge and panelling with panels of: (Note:- Butt hinges and necessary screws shall be paid separately)		
9.6.1	12 mm thick plain grade -1, medium density flat pressed three layer particle board FPT - I or graded wood particle board FPT- I, IS : 3087 marked, bonded with BWP type synthetic resin adhesive as per IS : 848 :	sqm	2,272.80
9.6.2	12 mm thick pre-laminated particle board (decorative lamination on both sides) grade -1, medium density flat pressed, three layer particle board FPT- I or graded wood particle board FPT- I, conforming to IS : 3087, bonded with BWP type synthetic resin adhesive as per IS : 848 and pre- laminated conforming to IS : 12823, Grade 1, Type - II marked :	sqm	2,388.95
9.6.3	12 mm thick one side Pre-laminated particle board (decorative lamination on one side and other sides balancing lamination) grade -1, medium density flat pressed, three layer particle board FPT - 1 or graded wood particle board rpi-i conforming to IS : 3087 bonded with BWP type synthetic resin adhesive as per IS : 848 and pre-laminated conforming to IS : 12823, Grade -1, Type II marked :	sqm	2,609.65
9.7	Providing and fixing panelling or panelling and glazing in panelled or panelled and glazed shutters for doors, windows and clerestory windows (Area of opening for panel inserts excluding portion inside grooves or rebates to be measured). Panelling for panelled ur panelled and glazed shutters 25 mm to 40 mm thick:		
9.7.1	Second class teak wood	sqm	2,552.75
9.7.2	Kiln seasoned and chemically treated hollock wood	sqm	1,720.65
9.7.3	Ply wood 5 ply, 9 mm thick		
9.7.3.1	Decorative plywood both side decorative veneer (Type - I) conforming to IS 1328 BWR type	sqm	2,004.15
9.7.3.2	Decorative plywood one side decorative veneer and commercial veneer on other face (Type 1) conforming to IS 1328 BWR Type	sqm	2,033.70
9.7.4	Ply wood 7 ply, 9 mm thick		
9.7.4.1	Decorative plywood one side decorative veneer and commercial veneer on other face (Type 1) conforming to IS 1328 BWR Type	sqm	2,181.55
9.7.5	Particle Board 12 mm thick		
9.7.5.1	Plain particle board flat pressed, 3 layer or graded wood particle board medium density Grade I, IS : 3087 marked	sqm	1,165.05
9.7.5.2	Veneered flat pressed three layer or graded wood particle board with commercial veneering on both sides conforming to IS:3097, grade I	sqm	1,435.35
9.7.5.3	Pre-laminated particle board with decorative lamination on one side and balancing lamination on other side, Grade I, Type II IS: 12823 marked	sqm	1,463.50

Item Code	Description	Unit	Justified Rate
9.7.5.4	Pre-laminated particle board with decorative lamination on both sides, Grade I, Type II, IS:12823 marked	sqm	1,449.45
9.7.6	Coir Veneer Board (conforming to IS 14842)		
9.7.6.1	12 mm thick	sqm	1,639.50
9.7.7	Float glass panes		
9.7.7.1	4 mm thick glass pane (weight not less than 10kg/sqm).	sqm	1,509.75
9.7.7.2	5.0 mm thick glass panes (weight not less than 12.50 kg/sqm).	sqm	1,799.80
9.7.8	Fly proof stainless steel grade 304 wire gauge with 0.5 mm dia. wire and 1.4mm wide aperture with matching wood beading	sqm	1,216.65
9.9	Providing and fixing glazed shutters for doors, windows and clerestory windows using 4 mm thick float glass panes, (weight not less than 10 kg per sqm) fixing with ISI marked M.S. pressed butt hinges bright finished of required size with necessary screws.		
9.9.1	Second class teak wood		
9.9.1.1	35 mm thick	sqm	3,730.90
9.9.1.2	30 mm thick	sqm	3,389.80
9.9.2	Kiln seasoned and chemically treated hollock wood		
9.9.2.1	35 mm thick	sqm	2,552.10
9.9.2.2	30 mm thick	sqm	2,375.05
9.9.3	Kiln seasoned selected planks of sheesham wood		
9.9.3.1	35 mm thick	sqm	3,291.15
9.9.3.2	30 mm thick	sqm	3,010.70
9.10	Providing and fixing factory made laminated veneer lumber glazed shutter conforming to IS: 14616 and TADS 15:2001 (Part B), using 4 mm thick float glass panes for doors, windows and clerestory windows, fixing with butt hinges of required size with necessary screws, all as per directions of Engineer-in-charge (Note:- Butt hinges and necessary screws shall be paid separately)		
9.10.1	30 mm thick shutters	sqm	2,272.80
9.11	Extra for providing heavy sheet float glass panes instead of ordinary float glass in glazed doors, windows and clerestory window shutters. (Area of opening for glass panes excluding portion inside rebate shall be measured)		
9.11.1	5.0 mm thick (weight not less than 12.50 kg per sqm) instead of 4 mm thick. (weight not less than 10 kg per sqm)	sqm	239.25
9.12	Extra for providing frosted glass panes 4 mm thick (weight not less than 10 kg per sqm) instead of ordinary float glass panes 4 mm thick (weight not less than 10 kg per sqm) in doors, windows and clerestory window shutters. (Area of opening for glass panes excluding portion inside rebate shall be measured).	sqm	128.95
9.13	Deduct for providing pin headed glass panes instead of ordinary float glass panes weighing 4 mm thick (weight not less than 10 kg per sqm) in doors, windows and clerestory windows shutters (Area of opening for glass panes excluding portion inside rebate shall be measured).	sqm	41.80
9.14	Extra for providing 151 marked Stainless Steel butt hinges instead of M.S. pressed butt hinges bright finished of required size with necessary screws. (Shutter area to be measured).	sqm	127.75
9.15	Deduct for not providing hinges in doors, windows or clerestory window shutters with :		
9.15.1	ISI marked Stainless steel butt hinges with stainless steel screws :		
9.15.1.1	For 2nd class teak wood and other class of wood shutters	sqm	175.85
9.15.2	ISI marked M.S. pressed butt hinges bright finished of required size with necessary screws.		
9.15.2.1	For 2nd class teak wood and other class of wood shutters	sqm	48.05
9.16	Providing and fixing 25 mm thick shutters for cup board etc. :		
9.16.1	Panelled or panelled & glazed shutters :		
9.16.1.1	Second class teak wood including ISI marked anodised aluminium butt hinges with necessary screws	sqm	3,276.55

Item Code	Description	Unit	Justified Rate
9.16.1.2	Second class teak wood including ISI marked nickel plated bright finished M.S. piano hinges with necessary screws	sqm	3,400.10
9.16.2	Glazed shutters :		
9.16.2.1	Second class teak wood including ISI marked anodized aluminium butt hinges with necessary screws	sqm	3,116.85
9.16.2.2	Second class teak wood including ISI marked nickel plated bright finished M.S. piano hinges with necessary screws	sqm	3,151.70
9.17	Providing and fixing flat pressed 3 layer particle board medium density exterior grade (Grade I) or graded wood particle board IS : 3087 marked, to frame, backing or studding with screws etc. complete (Frames, backing or studding to be paid separately):		
9.17.1	12 mm thick	sqm	543.15
9.17.2	18 mm thick	sqm	718.55
9.18	Providing and fixing Pre-laminated flat pressed 3 layer (medium density) particle board or graded wood particle board IS : 3087 marked, with one side decorative and other side balancing lamination Grade I, Type 11 exterior grade IS : 12823 marked, in shelves with screws and fittings wherever required, edges to be painted with polyurethane primer (fittings to be paid separately).		
9.18.1	18 mm thick	sqm	909.25
9.18.2	25 mm thick	sqm	1,266.65
9.20	Providing and fixing ISI marked flush door shutters conforming to IS : 2202 (Part I) decorative type, core of block board construction with frame of 1st class hard wood and well matched teak 3 ply veneering with vertical grains or cross bands and face veneers on both faces of shutters.		
9.20.1	35 mm thick including ISI marked Stainless Steel butt hinges with necessary screws	sqm	2,621.05
9.20.2	30 mm thick including ISI marked Stainless Steel butt hinges with necessary screws	sqm	2,388.75
9.20.3	25 mm thick (for cupboard) including ISI marked nickel plated bright finished M.S. Piano hinges IS : 3818 marked with necessary screws	sqm	2,123.00
9.21	Providing and fixing ISI marked flush door shutters conforming to IS : 2202 (Part I) non-decorative type, core of block board construction with frame of 1st class hard wood and well matched commercial 3 ply veneering with vertical grains or cross bands and face veneers on both faces of shutters:		
9.21.1	35 mm thick including ISI marked Stainless Steel butt hinges with necessary screws	sqm	1,691.85
9.21.2	30 mm thick including ISI marked Stainless Steel butt hinges with necessary screws	sqm	1,575.70
9.21.3	25 mm thick (for cupboard) including ISI marked nickel plated bright finished M.S. piano hinges with necessary screws	sqm	1,530.60
9.22	Extra for Providing and fixing flush doors with decorative veneering instead of non decorative ISI marked flush door shutters conforming to IS: 2202 (Part I)		
9.22.1	On one side only	sqm	354.25
9.23	Extra for providing lipping with 2nd class teak wood battens 25 mm minimum depth on all edges of flush door shutters (over all area of door shutter to be measured).	sqm	348.45
9.24	Extra for providing vision panel not exceeding 0.1 sqm in all type of flush doors (cost of glass excluded) (overall area of door shutter to be measured):		
9.24.1	Rectangular or square	sqm	151.00
9.24.2	Circular	sqm	156.80
9.25	Extra if louvers (not exceeding 0.2 sqm) are provided in flush door shutters (overall area of door shutters to be measured).		
9.25.1	Decorative type door	sqm	307.80
9.26	Extra for cutting rebate in flush door shutters (Total area of the shutter to be measured).	sqm	81.30

Item Code	Description	Unit	Justified Rate
9.27	Providing and fixing wire gauge shutters using galvanized M.S. wire gauge of average width of aperture 1.4 mm in both directions with wire of dia 0.63 mm, for doors, windows and clerestory windows with hinges and necessary screws :		
9.27.1	35 mm thick shutters		
9.27.1.1	with ISI marked M.S. pressed butt hinges bright finished of required size		
9.27.1.1.1	Second class teak wood	sqm	3,612.10
9.27.1.1.2	Kiln seasoned and chemically treated hollock wood	sqm	2,568.50
9.27.1.1.3	Kiln seasoned selected class of sheesham wood	sqm	3,222.40
9.27.1.2	With ISI marked stainless steel butt hinges of required size		
9.27.1.2.1	Second class teak wood	sqm	3,739.85
9.27.1.2.2	Kiln seasoned and chemically treated hollock wood	sqm	2,696.25
9.27.1.2.3	Kiln seasoned selected class of sheesham wood	sqm	3,350.15
9.27.2	30 mm thick shutters		
9.27.2.1	with ISI marked M.S. pressed butt hinges bright finished of required size		
9.27.2.1.1	Second class teak wood	sqm	3,208.30
9.27.2.1.2	Kiln seasoned and chemically treated hollock wood	sqm	2,314.95
9.27.2.1.3	Kiln seasoned selected class of sheesham wood	sqm	2,874.70
9.27.2.2	With 151 marked stainless steel butt hinges of required size		
9.27.2.2.1	Second class teak wood	sqm	3,336.10
9.27.2.2.2	Kiln seasoned and chemically treated hollock wood	sqm	2,442.75
9.27.2.2.3	Kiln seasoned selected class of sheesham wood	sqm	3,002.50
9.31	Providing and fixing wire gauge laminated veneer lumber shutters conforming to IS : 14616, and as per TADS 15 :2001 (Part B) using galvanised wire gauge with average width of aperture 1.4 mm in both directions with wire of dia 0.63 mm as per IS :1568, for doors, windows and clerestory windows, fixing with butt hinges of required size with necessary screws, as per directions of Engineer-in-charge: (Note:- Butt hinges and necessary screws shall be paid separately)		
9.31.1	35 mm thick shutters	sqm	2,272.80
9.31.2	30 mm thick shutters	sqm	2,052.10
9.40	Providing and fixing wooden moulded beading to door and window frames with iron screws, plugs and priming coat on unexposed surface etc. complete :		
9.40.1	2nd class teak wood		
9.40.1.1	50x12 mm	metre	159.65
9.40.1.2	50 x 20 mm	metre	200.90
9.40.2	Kiln seasoned and chemically treated hollock wood		
9.40.2.1	50x12 mm	metre	130.40
9.40.2.2	50x20 mm	metre	152.20
9.41	Providing and fixing plain jaffri of 35x10 mm laths placed 35 mm apart (frames to be paid separately), including fixing 50x12 mm beading complete with :		
9.41.1	Second class teak wood	sqm	2,166.60
9.42	Providing and fixing 18 mm thick, 150 mm wide pelmet of flat pressed three layer or graded plain wood particle board medium density grade i, ISI marked and conforming to IS 1 3087 marked, including top cover of 6 mm commercial ply wood conforming to IS: 303 BWR grade, nickel plated M.S. pipe 20 mm dia (heavy type) curtain rod with nickel plated brackets, including fixing with 25x3 mm MS. flat 10 cm long fixed to pelmet with hollock wood cleats of size 100 mm x 40 mm x 40 mm on both inner side of pelmet and rawl plugs 75 mm long etc. all complete.	sqm	417.20

Item Code	Description	Unit	Justified Rate
9.43	Providing and fixing 18 mm thick, 150 mm wide pelmet of coir veneer board ISI marked IS : 14842, including top cover of 6 mm coir veneer board, nickle plated M.S. Pipe 20 mm dia. (heavy type) curtain rod with nickel plated brackets, including fixing with 25x3 mm M.S. Flat 10 cm long fixed to pelmet with hollock wood cleats of size 100 mm x 40 mm x 40 mm on both inner side of pelmet and rawl plugs 75 mm long etc. all complete.	metre	517.00
9.44	Extra for using veneered particle board conforming to IS 3097 Grade I, in item of pelmet 18mm thick 150mm wide.		
9.44.1	Non decorative veneer on both sides	metre	28.80
9.44.2	Particle board with decorative veneering on both sides	metre	92.90
9.45	Providing and fixing teak wood lipping of size 25x3 mm in pelmet.	metre	46.80
9.46	Providing and fixing chromium plated brass curtain rod having wall thickness of 1.25mm with two chromium plated brass brackets fixed with C.P. brass screws and PVC sleeves etc., wherever necessary complete :		
9.46.1	12 mm dia	metre	238.65
9.46.2	20 mm dia	metre	325.75
9.46.3	25 mm dia	metre	418.70
9.47	Providing and fixing nickel plated M.S. pipe curtain rods with nickel plated brackets :		
9.47.1	20 mm dia (heavy type)	metre	132.50
9.47.2	25 mm dia (heavy type)	metre	138.30
9.48	Providing and fixing M.S. grills of required pattern in frames of windows etc. with M.S. flats, square or round bars etc. including priming coat with approved steel primer all complete.		
9.48.1	Fixed to steel windows by welding	kg	145.60
9.48.2	Fixed to openings /wooden frames with rawl plugs screws etc.	kg	160.05
9.49	Providing and fixing expanded metal 20x60 mm strands 3.25 mm wide and 1.6mm thick for windows etc. including 62 x19 mm beading of second class teak wood and priming coat with approved steel primer all complete.	sqm	1,053.75
9.50	Providing and fixing hard drawn steel wire fabric 75x25 mm mesh of weight not less than 7.75 Kg per sqm to window frames etc. including 62x19 mm beading of second class teak wood and priming coat with approved steel primer all complete.	sqm	1,233.50
9.51	Providing and fixing fly proof galvanized M.S. wire gauge to windows and clerestory windows using wire gauge with average width of aperture 1.4 mm in both directions with wire of dia 0.63 mm all complete.		
9.51.1	With second class teak wood beading 62X19 mm	sqm	962.20
9.51.2	With 12 mm mild steel U beading	sqm	656.20
9.52	Deduct for fixing 75x25 mm hard drawn steel wire fabric of weight not less than 7.75 Kg per sqm in panelled and glazed door and window shutter instead of glass sheet 4 mm thick (weight not less than 10 kg per sqm).	sqm	140.55
9.53	Providing 40x5 mm flat iron hold fast 400 mm long including fixing to frame with 10 mm diameter bolts, nuts and wooden plugs and embedding in cement concrete block 300x100x150 mm 1:3:6 mix (1 cement : 3 coarse sand : 6 graded stone aggregate 20mm nominal size).	each	156.45
9.54	Providing beams including hoisting, fixing in position and applying wood preservative for the unexposed surfaces, etc. complete with		
9.54.1	Sal wood	cum	80,961.30
9.54.2	Hollock wood	cum	52,166.65
9.55	Providing and fixing ISI marked IS : 1341 M.S. pressed butt hinges bright finished with necessary screws etc. complete :		
9.55.1	125x65x2.12 mm	each	38.70
9.55.2	100x58x1.90 mm	each	30.90
9.55.3	75x47x1.70 mm	each	25.45

Item Code	Description	Unit	Justified Rate
9.55.4	50x37x1.50 mm	each	13.20
9.56	Providing and fixing ISI marked, IS : 1341, M.S. heavy weight bright finished butt hinges with necessary screws etc. complete :		
9.56.1	125x90x4.00 mm	each	49.75
9.56.2	100x75x3.50 mm	each	42.55
9.56.3	75x60x3.10 mm	each	31.75
9.56.4	50x40x2.50 mm	each	17.95
9.57	Providing and fixing ISI marked IS : 1341 oxidised M.S. pressed butt hinges with necessary screws etc. complete. (copper oxidized as per IS: 1378)		
9.57.1	125x65x2.12 mm	each	37.85
9.57.2	100x58x1.90 mm	each	32.25
9.57.3	75x47x1.70 mm	each	26.80
9.57.4	50x37x1.50 mm	each	13.75
9.58	Providing and fixing ISI marked IS : 1341 oxidised M.S. pressed Parliamentary hinges with necessary screws etc. complete : (copper oxidized as per IS: 1378)		
9.58.1	150x125x27x2.80 mm	each	63.75
9.58.2	125x125x27x2.80 mm	each	59.70
9.58.3	100x125x27x2.80 mm	each	52.15
9.58.4	75x100x20x2.24 mm	each	45.70
9.59	Providing and fixing ISI marked oxidised M.S. single acting spring hinges with necessary screws etc. complete : (copper oxidized as per IS: 1378)		
9.59.1	150 mm	each	210.80
9.59.2	125 mm	each	187.60
9.59.3	100 mm	each	163.05
9.60	Providing and fixing ISI marked IS: 453 oxidised M.S. double acting spring hinges with necessary screws etc. complete. (copper oxidized as per IS: 1378)		
9.60.1	150 mm	each	234.05
9.60.2	125 mm	each	210.80
9.60.3	100 mm	each	186.30
9.61	Providing M.S. Piano hinges ISI marked IS: 3818 finished with nickel chromium plating grade I as per IS: 1068 and fixing with necessary screws etc., complete.		
9.61.1	Overall width 35 mm	metre	215.85
9.61.2	Overall width 50 mm	metre	215.85
9.61.3	Overall width 65 mm	metre	229.80
9.62	Providing and fixing ISI marked oxidised M.S. sliding door bolts with nuts and screws etc. complete : (copper oxidized as per IS: 1378)		
9.62.1	300x16 mm	each	153.75
9.62.2	250x16 mm	each	141.00
9.63	Providing and fixing ISI marked oxidised M.S. tower bolt black finish, (Barrel type) with necessary screws etc. complete : (copper oxidized as per IS: 1378)		
9.63.1	250x10 mm	each	63.60
9.63.2	200x10 mm	each	51.80
9.63.3	150x10 mm	each	44.85
9.63.4	100x10 mm	each	33.00
9.64	Providing and fixing ISI marked 85x42 mm oxidised M.S. pull bolt lock conforming to IS : 7534 with necessary screws bolts, nut and washers etc. complete. (copper oxidized as per IS: 1378)	each	91.30
9.65	Providing and fixing ISI marked oxidised M.S. door latches conforming to IS:5930 with screws etc. complete : (copper oxidized as per IS: 1378)		

Item Code	Description	Unit	Justified Rate
9.65.1	300x20x6 mm	each	70.10
9.65.2	250x20x6 mm	each	58.45
9.66	Providing and fixing ISI marked oxidised M.S. handles conforming to IS:4992 with necessary screws etc. complete : (copper oxidized as per IS: 1378)		
9.66.1	125 mm	each	29.85
9.66.2	100 mm	each	23.80
9.66.3	75 mm	each	20.30
9.67	Providing and fixing oxidised M.S. hasp and staple (safety type) conforming to IS : 363 with necessary screws etc. complete : (copper oxidized as per IS: 1378)		
9.67.1	150 mm	each	24.35
9.67.2	115 mm	each	21.60
9.67.3	90 mm	each	18.20
9.68	Providing and fixing oxidised M.S. casement stays (straight peg type) with necessary screws etc. complete. (copper oxidized as per IS: 1378)		
9.68.1	300 mm weighing not less than 330 grams	each	50.25
9.68.2	250 mm weighing not less than 280 grams	each	43.85
9.68.3	200 mm weighing not less than 240 grams	each	38.00
9.69	Providing and fixing oxidised M.S. Safety chain with necessary fixtures for doors, (weighting not less than 450 gms) and copper oxidized as per IS: 1378	each	76.00
9.70	Providing and fixing IS : 12817 marked stainless steel butt hinges with stainless steel screws etc. complete :		
9.70.1	125x64x1.90 mm	each	79.95
9.70.2	100X58X1.90 mm	each	71.80
9.70.3	75x47x1.80 mm	each	52.75
9.70.4	50x37x1.50 mm	each	30.30
9.71	Providing and fixing IS : 12817 marked stainless steel butt hinges (heavy weight) with stainless steel screws etc. complete :		
9.71.1	125x64x2.50 mm	each	87.50
9.71.2	100x60x2.50 mm	each	71.20
9.71.3	75x50x2.50 mm	each	58.55
9.72	Providing and fixing bright finished brass butt hinges with necessary screws etc. complete :		
9.72.1	125x85x5.5 mm (heavy type)	each	196.50
9.72.2	125x70x4 mm (ordinary type)	each	134.45
9.72.3	100x85x5.5 mm (heavy type)	each	150.25
9.72.4	100x70x4 mm (ordinary type)	each	107.05
9.72.5	75x65x4 mm (heavy type)	each	125.75
9.72.6	75x40x2.5 mm (ordinary type)	each	72.55
9.72.7	50x40x2.5 mm (ordinary type)	each	29.70
9.73	Providing and fixing bright finished brass parliamentary hinges with necessary screws etc. complete :		
9.73.1	150x125x27x5 mm	each	340.05
9.73.2	125x125x27x5 mm	each	304.05
9.73.3	100x125x27x5 mm	each	279.65
9.73.4	75x100x20x3.2 mm	each	248.05
9.74	Providing and fixing bright finished brass tower bolts (barrel type) with necessary screws etc. complete :		
9.74.1	250x10 mm	each	324.40
9.74.2	200x10 mm	each	260.30
9.74.3	150x10 mm	each	201.10
9.74.4	100x10 mm	each	138.60

Item Code	Description	Unit	Justified Rate
9.75	Providing and fixing bright finished brass door latch with necessary screws etc. complete :		
9.75.1	300x16x5 mm	each	236.45
9.75.2	250x16x5 mm	each	224.85
9.76	Providing and fixing bright finished brass 100 mm mortice latch and lock with 6 levers and a pair of lever handles of approved quality with necessary screws etc. complete.	each	618.50
9.77	Providing and fixing bright finished brass 100 mm mortice latch with one dead bolt and a pair of lever handles of approved quality with necessary screws etc. complete.	each	513.95
9.78	Providing and fixing bright finished brass night latch of approved quality including necessary screws etc. complete.	each	862.40
9.79	Providing and fixing special quality bright finished brass cupboard or ward robe locks with four levers of approved quality including necessary screws etc. complete.		
9.79.1	40 mm	each	220.10
9.79.2	50 mm	each	256.10
9.79.3	65 mm	each	261.90
9.79.4	75 mm	each	279.35
9.80	Providing and fixing 50 mm bright finished brass cup board or wardrobe knob of approved quality with necessary screws.	each	54.40
9.81	Providing and fixing bright finished brass handles with screws etc. complete:		
9.81.1	125 mm	each	177.70
9.81.2	100 mm	each	164.45
9.81.3	75 mm	each	129.60
9.82	Providing and fixing bright finished brass hanging type floor door stopper with necessary screws, etc. complete.	each	95.00
9.83	Providing and fixing aluminium die cast body tubular type universal hydraulic door closer (having brand logo with ISI, IS : 3564, embossed on the body, door weight upto 35 kg and door width upto 700 mm), with necessary accessories and screws etc. complete.	each	878.30
9.84	Providing and fixing aluminium extruded section body tubular type universal hydraulic door closer (having brand logo with ISI, IS : 3564, embossed on the body, door weight upto 36 kg to 80 kg and door width from 701 mm to 1000 mm), with double speed adjustment with necessary accessories and screws etc. complete.	each	731.30
9.85	Providing and fixing bright finished brass casement window fastener with necessary screws etc. complete.	each	65.65
9.86	Providing and fixing bright finished brass casement stays (straight peg type) with necessary screws etc. complete :		
9.86.1	300 mm weighing not less than 330 gms	each	161.60
9.86.2	250 mm weighing not less than 280 gms	each	129.55
9.86.3	200 mm weighing not less than 240 gms	each	123.75
9.87	Providing and fixing bright finished brass hasp and staple (safety type) with necessary screws etc. complete :		
9.87.1	150 mm	each	102.50
9.87.2	115 mm	each	92.80
9.87.3	90 mm	each	81.80
9.88	Providing and fixing chromium plated brass 100 mm mortice latch and lock with 6 levers and a pair of lever handles of approved quality with necessary screws etc. complete.	each	699.80
9.89	Providing and fixing chromium plated brass night latch of approved quality including necessary screws etc. complete.	each	734.65
9.90	Providing and fixing special quality chromium plated brass cupboard locks with six levers of approved quality including necessary screws etc. complete.		
9.90.1	Size 40 mm	each	227.10
9.90.2	Size 50 mm	each	238.70
9.90.3	Size 65 mm	each	268.90

Item Code	Description	Unit	Justified Rate
9.90.4	Size 75 mm	each	299.10
9.91	Providing and fixing chromium plated brass 50 mm cupboard or wardrobe knobs with nuts complete.	each	105.55
9.92	Providing and fixing chromium plated brass handles with necessary screws etc. complete:		
9.92.1	125 mm	each	196.25
9.92.2	100 mm	each	172.60
9.92.3	75 mm	each	155.15
9.93	Providing and fixing chromium plated brass casement window fastener with necessary screws etc. complete.	each	121.65
9.94	Providing and fixing chromium plated brass casement stays (straight peg type) with necessary screws etc. complete :		
9.94.1	300 mm weighing not less than 330 gms	each	179.70
9.94.2	250 mm weighing not less than 280 gms	each	156.50
9.94.3	200 mm weighing not less than 240 gms	each	133.25
9.95	Providing and fixing ISI marked aluminium butt hinges anodised (anodic coating not less than grade AC 10 as per IS: 1868) transparent or dyed to required colour or shade with necessary screws etc. complete:		
9.95.1	125x75x4 mm	each	118.20
9.95.2	125x63x4 mm	each	98.80
9.95.3	100x75x4 mm	each	90.65
9.95.4	100x63x4 mm	each	82.65
9.95.5	100x63x3.2 mm	each	76.35
9.95.6	75x63x4 mm	each	66.50
9.95.7	75x63x3.2 mm	each	60.80
9.95.8	75x45x3.2 mm	each	57.35
9.96	Providing and fixing aluminium sliding door bolts, ISI marked anodised (anodic coating not less than grade AC 10 as per IS : 1868), transparent or dyed to required colour or shade, with nuts and screws etc. complete :		
9.96.1	300x16 mm	each	223.10
9.96.2	250x16 mm	each	201.00
9.97	Providing and fixing aluminium tower bolts, ISI marked, anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade, with necessary screws etc. complete :		
9.97.1	300x10 mm	each	101.40
9.97.2	250x10 mm	each	89.90
9.97.3	200x10 mm	each	78.10
9.97.4	150x10 mm	each	65.10
9.97.5	100x10 mm	each	50.45
9.98	Providing and fixing aluminium pull bolt lock, ISI marked, anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour and shade, with necessary screws bolts, nut and washers etc. complete.	each	75.05
9.99	Providing and fixing 50 cm long aluminium kicking plate of size 100x3.15 mm, anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade, with necessary screws etc. complete.	each	183.65
9.100	Providing and fixing aluminium handles, ISI marked, anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade, with necessary screws etc. complete :		
9.100.1	125 mm	each	51.80
9.100.2	100 mm	each	45.85
9.100.3	75 mm	each	39.85

Item Code	Description	Unit	Justified Rate
9.101	Providing and fixing aluminium hanging floor door stopper, ISI marked, anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour and shade, with necessary screws etc. complete.		
9.101.1	Single rubber stopper	each	30.65
9.101.2	Twin rubber stopper	each	53.85
9.102	Providing and fixing aluminium casement stays, ISI marked, anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour and shade, with necessary screws etc. complete.	each	55.45
9.103	Providing and fixing bright finished brass 100 mm mortice latch and lock, ISI marked, with six levers and a pair of anodised (anodic coating not less than grade AC 10 as per IS : 1868) aluminium lever handles of approved quality with necessary screws etc. complete.	each	632.35
9.104	Providing and fixing aluminium tee channels (heavy duty) with rollers & stop end in pelmets as curtain rod.	metre	121.30
9.105	Providing and fixing partition upto ceiling height consisting of G.I. frame and required board, including providing and fixing of frame work made of special section power pressed/ roll form G.I. sheet with zinc coating of 120 gms/sqm(both side inclusive), consisting of floor and ceiling channel 50mm wide having equal flanges of 32 mm and 0.50 mm thick, fixed to the floor and ceiling at the spacing of 610 mm centre to centre with dash fastener of 12.5 mm dia meter 50 mm length or suitable anchor fastener or metal screws with nylon plugs and the studs 48 mm wide having one flange of 34 mm and other flange 36 mm and 0.50 mm thick fixed vertically within flanges of floor and ceiling channel and placed at a spacing of 610 mm centre to centre by 6 mm dia bolts and nuts, including fixing of studs along both ends of partition fixed flush to wall with suitable anchor fastener or metal screws with nylon plugs at spacing of 450 mm centre to centre, and fixing of boards to both side of frame work by 25 mm long dry wall screws on studs, floor and ceiling channels at the spacing of 300 mm centre to centre. The boards are to be fixed to the frame work with joints staggered to avoid through cracks, M.S. fixing channel of 99 mm width (0.9 mm thick having two flanges of 9.5 mm each) to be provided at the horizontal joints of two boards, fixed to the studs using metal to metal flat head screws, including jointing and finishing to a flush finish with recommended jointing compound, jointing tape, angle beads at corners (25 mm x 25 mm x 0.5 mm), joint finisher and two coats of primer suitable for board as per manufacture's specification and direction of engineer in charge all complete.		
9.105.1	75 mm overall thickness partition with 12.5 mm thick double skin fire rated Glass Reinforced Gypsum (GRG) plaster board conforming to IS: 2095: part 3 (Board with BIS certification marks)	sqm	1,471.40
9.105.2	75mm overall thickness partition with 12.5 mm thick double skin tapered edged plain Gypsum plaster board conforming to IS: 2095: (part I): 2011 (Board with BIS certification marks)	sqm	1,239.10
9.105.3	66mm overall thickness Partition with 8mm thick double skin Calcium Silicate Board made with Calcareous & Siliceous materials reinforced with cellulose fiber manufactured through autoclaving process with Compressive Strength 225 kg/sq.cm, Bending Strength 100 kg./ sq.cm	sqm	1,541.10
9.105.4	66mm overall thickness partition using 8mm thick, double skin multipurpose cement board, Type-B, Category-III as per IS : 14862:2000 reinforced with cellulose fibre manufactured through autoclaving process (High pressure steam cured) with suitable fibre cement screws	sqm	1,425.30
9.105.5	66 mm overall thickness partition using 8 mm thick double skin multipurpose cement bonded wood particle board manufactured as per IS: 14276 with suitable cement bonded board screws	sqm	1,413.30
9.106	Providing and fixing PTMT handles with necessary screws etc. complete.		
9.106.1	125x34x24 mm weighing not less than 23 gms	each	30.00

Item Code	Description	Unit	Justified Rate
9.106.2	150x34x24 mm weighing not less than 26 gms	each	30.00
9.107	Providing and fixing PTMT Butt hinges with necessary screws etc. complete.		
9.107.1	75x60x10 mm fitted with 5.5 mm dia M.S. Bright Bar Rod weighing not less than 34 gms	each	52.65
9.107.2	100x75x10 mm fitted with 5.5 mm dia MS Bright Bar Rod weighing not less than 53 gms	each	63.45
9.108	Providing and fixing PTMT Tower Bolts with 12 mm one piece rod inside and necessary screws etc., complete.		
9.108.1	152x42x18 mm weighing not less than 60 gms	each	50.15
9.108.2	202x42x18 mm weighing not less than 78 gms	each	79.30
9.109	Providing and fixing PTMT door catcher of length 72 mm and dia. of 42 mm with suitable washers weighing not less than 33 gms	each	29.70
9.110	Providing and fixing Bamboo jaffery/ fencing consisting of superior quality 25mm dia (Average) half cut bamboo placed vertically and fixed together with three numbers horizontal running members of hollock wood in scantling of section 50X25 mm, fixed with nails and G.} wire on existing support complete as per direction of Engineer-in-charge.	sqm	489.65
9.111	Providing and fixing wooden moulded corner beading of triangular shape to the junction of panelling etc. with iron screws, plugs and priming coat on unexposed surface etc. complete 2nd class teak wood.		
9.111.1	50x50 mm (base and height)	metre	260.10
9.112	Providing and fixing 2nd class teak wood lipping/ moulded beading or taj beading of size 18X5 mm fixed with wooden adhesive of approved quality and screws/nails on the edges of the Pre-laminated particle board as per direction of Engineer-in-charge.	metre	67.70
9.113	Providing and fixing bright finished 100 mm mortice lock with 6 levers without pair of handles of approved quality for aluminium door, with necessary screws etc complete as per direction of Engineer- in-charge.	each	619.00
9.114	Providing and fixing magnetic catcher of approved quality in cupboard / ward robe shutters, including fixing with necessary screws etc. complete.		
9.114.1	Triple strip vertical type	each	38.95
9.114.2	Double strip (horizontal type)	each	29.65
9.115	Providing and fixing powder coated telescopic drawer channels 300 mm long with necessary screws etc. complete as per directions of Engineer- in-charge.	one set	308.20
9.116	Providing and fixing sliding arrangement in racks/ cupboards/cabinets shutter by with stainless steel rollers to run inside C or E aluminium channel section (The payment of C or E channel shall be made separately)	each	15.35
9.117	Providing and fixing factory made uPVC door frame made of uPVC extruded sections having an overall dimension as below (tolerance ± 1 mm), with wall thickness 2.0 mm (± 0.2 mm), corners of the door frame to be Jointed with galvanized brackets and stainless steel screws, joints mitred and Plastic welded. The hinge side vertical of the frames reinforced by galvanized M.S. tube of size 19 X 19 mm and 1mm (± 0.1 mm) wall thickness and 3 nos. stainless steel hinges fixed to the frame complete as per manufacturer's specification and direction of Engineer-in-charge		
9.117.1	Extruded section profile size 48x40 mm	metre	194.90
9.117.2	Extruded section profile size 42x50 mm	metre	236.70
9.118	Providing and fixing to existing door frames.		

Item Code	Description	Unit	Justified Rate
9.118.1	24 mm thick factory made PVC door shutters made of styles and rails of a uPVC hollow section of size 59x24 mm and wall thickness 2 mm (± 0.2 mm) with inbuilt edging on both sides. The styles and rails mitred and joint at the corners by means of M.S. galvanised/ plastic brackets of size 75x220 mm having wall thickness 1.0 mm and stainless steel screws. The styles of the shutter reinforced by inserting galvanised M.S. tube of size 20x20 mm and 1 mm (± 0.1 mm) wall thickness. The lock rail made up of 'H' section, a uPVC hollow section of size 100x24 mm and 2 mm (± 0.2 mm) wall thickness, fixed to the shutter styles by means of plastic/galvanised M.S. 'U' cleats. The shutter frame filled with a uPVC multi-chambered single panel of size not less than 620 mm, having over all thickness of 20 mm and 1 mm (± 0.1 mm) wall thickness. The panels filled vertically and tie bar at two places by inserting horizontally 6 mm galvanised M.S. rod and fastened with nuts and washers, complete as per manufacturer's specification and direction of Engineer-in-charge. (For W.C. and bathroom door shutter).	sqm	1,515.45
9.118.2	30 mm thick factory made Polyvinyl Chloride (PVC) door shutter made of styles and rails of a uPVC hollow section of size 60x30 mm and wall thickness 2 mm (± 0.2 mm), with inbuilt decorative moulding edging on one side. The styles and rails mitred and joint at the corners by means of M.S. galvanised/ plastic brackets of size 75x220 mm having wall thickness 1.0 mm and stainless steel screws. The styles of the shutter reinforced by inserting galvanised M.S. tube of size 25x20 mm and 1 mm (± 0.1 mm) wall thickness. The lock rail made up of 'H' section, a uPVC hollow section of size 100x30 mm and 2 mm (± 0.2 mm) wall thickness fixed to the shutter styles by means of plastic/ galvanised M.S. 'U' cleats. The shutter frame filled with a uPVC multi-chambered single panel of size not less than 620 mm, having over all thickness of 20 mm and 1 mm (± 0.1 mm) wall thickness. The panels filled vertically and tie bar at two places by inserting horizontally 6 mm galvanised M.S. rod and fastened with nuts and washers, complete as per manufacturer's specification and direction of Engineer-in-charge.	sqm	1,704.65
9.118.3	25 mm thick PVC flush door shutters made out of a one piece Multi chamber extruded PVC section of the size of 762 mm X 25 mm or less as per requirement with an average wall thickness of 1 mm (± 0.3 mm). PVC foam end cap of size 23x10 mm are provided on both vertical edges to ensure the overall thickness of 25 mm. M.S. tube having dimensions 19 mm x 19 mm and 1.0 mm (± 0.1 mm) is inserted along the hinge side of the door. Core of the door shutter should be filled with High Density Polyurethane foam. The Top & Bottom edges of the shutter are covered with an end-cap of the size 25 mm X 11 mm. Door shutter shall be reinforced with special polymeric reinforcements as per manufacturer's specification and direction of Engineer-in-charge to take up necessary hardware and fixtures. Stickers indicating the locations of hardware will be pasted at appropriate places	sqm	2,228.70
9.119	Providing and fixing factory made P.V.C. door frame of size 50x47 mm with awall thickness of 5 mm, made out of extruded 5mm rigid PVC foam sheet, mitred at corners and joined with 2 Nos of 150 mm long brackets of 15x15 mm M.S. square tube, the vertical door frame profiles to be reinforced with 19x19 mm M.S. square tube of 19 gauge, EPDM rubber gasket weather seal to be provided through out the frame. The door frame to be fixed to the wall using M.S. screws of 65/100 mm size, complete as per manufacturer's specification and direction of Engineer- in-Charge.	metre	347.45

Item Code	Description	Unit	Justified Rate
9.120	Providing and fixing factory made panel PVC door shutter consisting of frame made out of M.S. tubes of 19 gauge thickness and size of 19 mm x 19 mm for styles and 15x15 mm for top & bottom rails. M.S. frame shall have a coat of steel primers of approved make and manufacture. M.S. frame covered with 5 mm thick heat moulded PVC 'C' channel of size 30 mm thickness, 70 mm width out of which 50 mm shall be flat and 20 mm shall be tapered in 45 degree angle on both side forming styles and 5 mm thick, 95 mm wide PVC sheet out of which 75mm shall be flat and 20 mm shall be tapered in 45 degree on the inner side to form top and bottom rail and 115 mm wide PVC sheet out of which 75 mm shall be flat and 20 mm shall be tapered on both sides to form lock rail. Top, bottom and lock rails shall be provided both side of the panel. 10 mm (5 mm x 2) thick, 20 mm wide cross PVC sheet be provided as gap insert for top rail & bottom rail, paneling of 5 mm thick both side PVC sheet to be fitted in the M.S. frame welded/ sealed to the styles & rails with 7 mm (5 mm+2 mm) thick x 15 mm wide PVC sheet beading on inner side, and joined together with solvent cement adhesive. An additional 5 mm thick PVC strip of 20 mm width is to be stuck on the interior side of the 'C' Channel using PVC solvent adhesive etc. complete as per direction of Engineer-in-charge, manufacturer's specification & drawing.		
9.120.1	30 mm thick plain PVC door shutters	sqm	2,092.30
9.120.2	30 mm thick pre laminated PVC door shutters	sqm	2,092.30
9.121	Providing and fixing Fiber Glass Reinforced plastic (FRP) Door Frames of cross-section 90 mm x 45 mm having single rebate of 32 mm x 15 mm to receive shutter of 30 mm thickness. The laminate shall be moulded with fire resistant grade unsaturated polyester resin and chopped mat. Door frame laminate shall be 2mm thick and shall be filled with suitable wooden block in all the three legs. The frame shall be covered with fiber glass from all sides. M.S. stay shall be provided at the bottom to steady the frame.	metre	602.95
9.122	Providing and fixing to existing door frames.		
9.122.1	30 mm thick Glass Fibre Reinforced Plastic (FRP) panelled door shutter of required colour and approved brand and manufacture, made with fire - retardant grade unsaturated polyester resin, moulded to 3 mm thick FRP laminate for forming hollow rails and styles, with wooden frame and suitable blocks of seasoned wood inside at required places for fixing of fittings, cast monolithically with 5 mm thick FRP laminate for panels conforming to IS: 14856, including fixing to frames.	sqm	2,996.60
9.122.2	30 mm thick Fiberglass Reinforced Plastic (F.R.P.) flush door shutter in different plain and wood finish made with fire retardant grade unsaturated polyester resin, moulded to 3 mm thick FRP laminate all around, with suitable wooden blocks inside at required places for fixing of fittings and polyurethane foam (PUF)/Polystyrene foam to be used as filler material throughout the hollow panel, casted monolithically with testing parameters of F.R.P. laminate conforming to table - 3 of IS: 14856, complete as per direction of Engineer-in-charge.	sqm	3,401.95

Item Code	Description	Unit	Justified Rate
9.123	Providing and fixing factory made door frame (single rebate) made out of solid foam PVC extruded profile of minimum 60mm width and minimum 30 mm thickness, having homogenous fine cellular structure and integral smooth outer skin. The frame's vertical and horizontal members to be mitered cut and joined together with PVC solvent adhesive / cement and both corners strengthened with fully threaded steel screws (of required size) fixed diagonally. The door frame is to be fixed to door jambs using 6 Nos. SS 304 grade minimum 8 mm dia CSK Phillips stainless steel self tapping screws/fasteners with PA6 grade polyamide sleeves both of required size, and gap if any between the door frame and the jamb must be filled with clear silicon, complete as per direction of the Engineer-in-Charge.	metre	484.20
9.123A	Providing PVC molding / architrave for door frame made up of extruded solid foam PVC profile having homogenous fine cellular structure with smooth outer integral skin, minimum 30 mm width and minimum 12mm thick suitable for fixing to frame. The molding shall be snap fitted in the groove provided in the frame & fixed with PVC solvent adhesive / cement and self tapping screws (of required size) complete as per direction of Engineer-in-Charge.	Metre	18.80
9.124	Providing and fixing factory made PVC door shutter made of solid foam PVC profiles of thickness 5mm and 15mm at edges integrally extruded for vertical style and horizontal (top/ bottom/ lock) rails of minimum cross section of 70mmx 28mm, of shape and design as per manufacturer's specifications having homogenous fine cellular structure and smooth integral outer skin, inserted with G.I. 'C' section/ rectangular tube profile of minimum 0.30mm thickness with 120 gsm coating as stiffeners as per manufacturer's specifications Mitred cut joints for styles and rails provided with telescopic polymeric 'L' corners are jointed together using solvent adhesive and strengthened with fully threaded stainless steel screws (of required size) through reinforced stiffener with paneling of specified solid foam PVC board/ high pressure laminate of required thickness and of approved design and shade (matching the styles and rails), secured within styles and rails with specially designed solid foam PVC moulded beadings of required size using PVC solvent adhesive/ cement. The finished door shutter including SS hardware, 1 no. ss sliding bolt 200 x 10mm, 1 no. SS tower bolt 200 x 10mm and 2 nos. SS handles 125mm, shall be fixed to frame with 3 nos. stainless steel hinges of minimum size 100x58x1.9mm and stainless steel screws of required size complete as per direction of the Engineer-in-Charge. (Cost of above hardware is inclusive in rates)		
9.124.1	5mm thick solid foam PVC panel of required size with moulded/ extruded beading of appropriate design shape and size as per manufacturer's specifications (to secure the panel insert tight in place within the style and rails of shutter) matching the color and shade of shutter frame. Non decorative type.	sqm	2,800.45
9.124.2	5mm thick solid foam PVC panel of required size with moulded/ extruded beading of appropriate design shape and size as per manufacturer's specifications (to secure the panel insert tight in place within the style and rails of shutter) matching the color and shade of shutter frame. Decorative type.	sqm	2,916.60
9.124.3	3mm thick high pressure laminate. (decorative type) with moulded/ extruded beading of appropriate design shape and size as per manufacturers specifications (to secure the panel insert tight in place within the style and rails of shutter) matching the color and shade of shutter frame Non decorative type	sqm	477.45

Item Code	Description	Unit	Justified Rate
9.125	Providing and fixing PVC rigid foam sheet 1 mm thick on existing door shutters (bathroom and W.C. doors) using synthetic rubber based adhesive.	sqm	1,030.65
9.126	Providing and fixing 12 mm thick panelling or panelling and glazing in panelled or panelled and glazed shutters for doors, windows and clerestory windows (area of opening for panel inserts excluding portion inside grooves or rebates to be measured). Panelling for panelled or panelled and glazed shutters 25 mm to 40 mm thick.		
9.126.1	Marine plywood conforming to IS: 710	sqm	1,773.25
9.126.2	Fire retardant plywood conforming to IS: 5509	sqm	1,980.20
9.127	Providing & Fixing decorative high pressure laminated sheet of plain / wood grain in gloss / matt/ suede finish with high density protective surface layer and reverse side of adhesive bonding quality conforming to IS : 2046 Type S, including cost of adhesive of approved quality.		
9.127.1	1.5 mm thick	sqm	753.05
9.127.2	1.0 mm thick	sqm	643.15
9.128	Providing and fixing factory made Fiberglass Reinforced plastics (F.R.P.) chajja 4 mm thick of required colour, size and design made by Resin Transfer Moulding (RTM) Machine Technology, resulting in void free compact laminate in single piece, having smooth gradual slope curvature for easy drainage of water and duly reinforced by 2 nos vertically and 1 nos horizontally 50x2 mm thick M.S. flat with 12 mm in built hole for grouting on the existing wall along with the 50 mm flanges duly inserted and sealed in the wall complete in one single piece casted monolithically, including all necessary fittings . The FRP Chajja should be manufactured using unsaturated Polyester resin as per IS: 6746, duly reinforced with fibre glass chopped strand mat (CSM) as per IS: 11551 complete with protective Gel coat U/V coating on Top for complete resistance from the extreme of temperature, weather & sunlight (Only plan area of chajjas shall be measured for making payment).	sqm	4,255.15
9.129	Providing and fixing cup board shutters 25 mm thick, with Pre-laminated flat pressed three layer particle board or graded wood particle board IS: 12823 marked, exterior grade (Grade I Type II), having one side decorative lamination and other side balancing lamination, including IInd class teak wood lipping of 25 mm wide x12 mm thick with necessary screws and bright finished stainless steel piano hinges, complete as per direction of the Engineer-in-Charge	sqm	1,673.70
9.130	Providing and fixing cup board shutters with 25 mm thick veneered particle board IS : 3097 marked, exterior grade (Grade I), of approved make, including IInd class teak wood lipping of 25 mm wide x 12 mm thick with necessary screws and bright finished stainless steel piano hinges, complete as per direction of Engineer-in-Charge.		
9.130.1	With decorative veneering on one side and commercial veneering on other side	sqm	1,400.75
9.130.2	With non decorative veneering on both sides	sqm	1,313.65
9.131	Providing and fixing factory made shutters of Pre-laminated particle board flat pressed three layer or graded wood particle board with one side decorative finish and other side balancing lamination conforming to IS: 12823 Grade I Type II, of approved design, and edges sealed with water resistant paint and lipped with aluminium 'U' type edge beading all- round the shutter, including fixing with angle cleat, grip strip, cadmium plated steel screws, including fixing of aluminium hinges 100x63x4 mm etc. complete as per architectural drawing and direction of Engineer-in- Charge (Cost of 'U' beading and hinges will be paid for separately).		
9.131.1	25 mm thick	sqm	1,317.50
9.132	Providing and fixing aluminum U beading of required size to Pre-laminated/ flush door shutter, including fixing etc. complete as per direction of Engineer-in-charge.	kg	460.35

Item Code	Description	Unit	Justified Rate
9.133	Providing and fixing, in position concealed G I. section for wall paneling using board of required thickness fixed on the 'W' profile (0.55 mm thick) having a knurled web of 51.55 mm and two flanges of 26 mm each with lips of 10.55 mm, placed @ 610 mm C/C in perimeter channel having one flange of 20 mm and another flange of 30 mm with thickness of 0.55 mm and web of length 27 mm. Perimeter channel is fixed on the floor and the ceiling with the nylon sleeves @ 610 mm C/C with fully threaded self-tapping dry wall screws. Board is fixed to the 'W' profile with 25 mm countersunk ribbed head screws @ 200 mm C/C., all complete as per the drawing & directions of engineer-in-charge, the joints of the boards are finished with specially formulated jointing compound and 48mm wide jointing tape to provide seamless finish,		
9.133.1	Tapered edge calcium silicate board made with calcareous & siliceous materials reinforced with cellulose fiber manufactured through autoclaving process to give stable crystalline structure with compressive strength 225 kg/sq.cm, Bending strength 100 kg./sq.cm.		
9.133.1.1	10mm thick	sqm	1,226.60
9.133.2	Multipurpose cement board reinforced with suitable fibre cement screw.		
9.133.2.1	8 mm thick cement fibre board, Type- B, Category- III as per IS : 14862:2000	sqm	971.00
9.133.2.2	8 mm thick Cement bonded wood particle board as per IS:14276	sqm	964.60
9.133.3	Plain Gypsum plaster board conforming to IS: 2095 Part - 1:2011 (Board with BIS certification marks)		
9.133.3.1	12.5 mm thick	sqm	868.75
9.134	Providing and fixing wire gauge shutters using stainless steel grade 304 wire gauge with wire of dia 0.5 mm and average width of aperture 1.4 mm in both directions for doors, windows and clerestory windows with necessary screws		
9.134.1	35 mm thick shutters		
9.134.1.1	with ISI marked M.S. pressed butt hinges bright finished of required size		
9.134.1.1.1	Second class teak wood	sqm	3,735.70
9.134.1.1.2	Kiln seasoned and chemically treated hollock wood	sqm	2,692.10
9.134.1.1.3	Kiln seasoned selected class of sheesham wood	sqm	3,345.95
9.134.1.2	With ISI marked stainless steel butt hinges of required size		
9.134.1.2.1	Second class teak wood	sqm	3,863.45
9.134.1.2.2	Kiln seasoned and chemically treated hollock wood	sqm	2,819.85
9.134.1.2.3	Kiln seasoned selected class of sheesham wood	sqm	3,473.75
9.134.2	30 mm thick shutters		
9.134.2.1	with ISI marked M.S. pressed butt hinges bright finished of required size		
9.134.2.1.1	Second class teak wood	sqm	3,331.90
9.134.2.1.2	Kiln seasoned and chemically treated hollock wood	sqm	2,438.55
9.134.2.1.3	Kiln seasoned selected class of sheesham wood	sqm	2,998.30
9.134.2.2	With ISI marked stainless steel butt hinges of required size		
9.134.2.2.1	Second class teak wood	sqm	3,459.70
9.134.2.2.2	Kiln seasoned and chemically treated hollock wood	sqm	2,566.30
9.134.2.2.3	Kiln seasoned selected class of sheesham wood	sqm	3,126.05
9.135	Providing and fixing fly proof stainless steel grade 304 wire gauge, to windows and clerestory windows using wire gauge with average width of aperture 1.4 mm in both directions with wire of dia. 0.50 mm all complete.		
9.135.1	With 2nd class teak wood beading 62X19 mm	sqm	1,169.95
9.135.2	With 12 mm mild steel U beading	sqm	864.00

Item Code	Description	Unit	Justified Rate
9.136	Providing and fixing fire resistant door frame of section 143 x 57 mm having built in rebate made out of 16 SWG G.I. sheet (zinc coating not less than 120 gm/sqm) duly filled with vermiculite based concrete mix, suitable for mounting 60 minutes fire rated door shutters. The frame is fitted with intumescent fire seal strip of size 10x4 mm (minimum) around the frame and fixing with dash fastener of approved size and make, including applying a coat of approved brand fire resistant primer etc. complete as per direction of Engineer-in-charge (Dash fastener to be paid for separately).	metre	1,269.85
9.137	Providing and fixing 50 mm thick glazed fire resistant door shutters of 60 minutes fire rating conforming to IS:3614 (Part-II), tested and certified as per laboratory approved by Engineer-in-charge, with suitable mounting on door frame, consisting of vertical styles, lock rail, top rail 100 mm wide, bottom rail 200 mm wide, made out of 16 SWG G.I.sheet (zinc coating not less than 120 gm/m ²) duly filled FR insulation material and fixing with necessary stainless steel ball bearing hinges of approved make, including applying a coat of approved fire resistant primer etc. all complete as per direction of Engineer-in-charge (panneling to be paid for separately).	sqm	5,595.05
9.138	Providing and fixing glazing in fire resistant door shutters, fixed panels & partitions etc., with G.I. beading made out of 1.6 mm thick G.I. sheet (zinc coating not less than 120 gm/m ²) of size 20 x 33 mm screwed with M4 x 38 mm SS screws at distance 75 mm from the edges and 150 mm c/c , including applying a coat of approved fire resistant primer/ powder coating of not less than 30 micron on G.I. beading, & special ceramic tape of 5 x 20 mm size etc complete in all respect as per NBC 2016, IS 16231 (Part 3):2016 and as per direction of Engineer-in-charge with glass of required thickness having 60 minutes of fire resistance both integrity & radiation control (EW60) and minimum 20 minutes of insulation (EI20). The manufacturer have to give test report/certification of fire glass and the glass should have the stamp showing the value of E, EW & EI. The glass shall be tested in approved NABL accredited lab or by any other accreditation body which operates in accordance with ISO/IEC 17011 and accredits labs as per ISO/IEC 17025 for testing and calibration scopes shall be eligible. The maximum glazing size shall not be more than 1100x2200 mm (w x h) or 2.42 sqm.	sqm	31,236.95
9.139	Providing and fixing panic bar / latch (Double point) fitted with a single body, Trim Latch & Lock on back side of the Panic Latch of reputed brand and manufacture to be approved by the Engineer- in- charge, all complete.	each	6,193.70
9.140	Providing and fixing plain lining with necessary screws/nuts & bolts/ nails, including a coat of approved primer on one face, and fixed on wooden /steel frame work, complete as per direction of Engineer-in- charge (Frame work shall be paid for separately).		
9.140.1	12mm thick commercial ply conforming to IS : 1328 BWR type	sqm	903.10
9.141	Providing and fixing PVC Door Frame of size 50x47 mm with a wall thickness of 5 mm (\pm 0.2 mm), made out of single piece extruded PVC profile, with mitred cut joints and joint with 2 nos of PVC bracket of size 190 mm x 100 mm long arms of cross section size 35 x 15 mm & self driven self tapping screws, the vertical door profiles to be reinforced with 40x20 mm M.S. rectangular tube of 0.8 mm , including providing EPDM rubber gasket weather seal throughout the frame, including jointing 5 mm PVC frame strip with PVC solvent cement on the back of the profile. The door frame to be fixed to the wall using 8 x100 mm long anchor fasteners complete, all as per manufacturer's specification and direction of Engineer -in- charge.	metre	394.35

Item Code	Description	Unit	Justified Rate
9.142	35 mm thick factory made Solid panel PVC Door shutter, made out of single piece extruded solid PVC profiles, 5 mm (± 0.2 mm) thick, having styles & rails (except lock rail) of size 95 mm x 35 mm x 5 mm, out of which 75 mm shall be flat and 20 mm shall be tapered (on both side), having one side thickness of 15 mm integrally extruded on the hinge side of the profile for better screw holding power, including reinforcing with MS tube of size 40 mm X 20 mm x 1 mm, joints of styles & rails to be mitred cut & joint with the help of PVC solvent cement, self driven self tapping screws & M.S. rectangular pipes bracket of size 190 mm X 100 mm of cross section size 35 mm x 17 mm x 1 mm at each corner. Single piece extruded 5 mm thick solid PVC Lock rail of size 115 mm x 35 mm, out of which 75 mm to be flat and 20 mm to be tapered at both ends, having 15 mm solid core in middle of rail section integrally extruded, fixing the styles & rails with the help of solvent and self driven self tapping screws of 125 mm x 11 mm, including providing 5 mm Single piece solid PVC extruded sheet inserted in the door as panel, all complete as per manufacturer's specification and direction of Engineer-in-charge.		
9.142.1	Non decorative finish (matt finish)	sqm	2,970.90
9.142.2	Decorative finish (wood grained finish)	sqm	3,449.45
9.143	Providing and Fixing factory made uPVC door frame, made of uPVC extruded sections, of size 65 mm x 55 mm with wall thickness 2.0 mm (± 0.2 mm), corners of the door frame to be mitred cut and jointed with plastic brackets and stainless steel screws, reinforcing hinge side vertical of the frames with PVC profile of Size 28 mm x 30 mm having wall thickness 2 mm (± 0.2 mm), including providing & fixing 3 nos of 125 mm long stainless steel hinges to the frame, fixing the frame with jamb with required number & size of anchor dash fasteners, all complete as per manufacturer's specification and direction of Engineer-in-charge.	metre	466.70
9.144	Providing and fixing 37 mm thick factory made PVC door shutter, styles and rails made of PVC hollow section of size 100 mm x 37 mm with wall thickness 2 mm (± 0.2 mm), with inbuilt bead on one side, styles and rails mitred cut and joint at the corners by means of 2 nos of plastic brackets of size 75 mm x 220 mm at each corner and stainless steel screws, reinforcing the hinge side of style by inserting PVC profile of size 28 mm x 30 mm, with wall thickness 2 mm (± 0.2 mm). Lockrail of size 100 mm x 37 mm, wall thickness 2 mm (± 0.2 mm) will be fixed to the vertical styles. Providing with PVC snapfit beads and panel of size 100 mm x 20 mm, and inserting 2 nos tie bar of 6 mm dia and fastening with nuts and washers complete, all as per manufacturer's specification and direction of Engineer-in-charge.	sqm	3,133.50
9.145	Providing and Fixing factory made PVC door frame made of PVC extruded sections of size 75 mm x 53 mm, having wall thickness 2.0 mm (± 0.2 mm). Both vertical sides of the frame reinforced with PVC profile of cross section size 28 mm x 30 mm x 2 mm thickness (± 0.2 mm) and 75 mm x 200 mm long, including reinforcing both ends of the top frame with PVC profile. PVC Door Frame and PVC reinforcement profile to be mitred cut, jointed and fusion welded together, including providing and fixing 3 nos of 125 mm long stainless steel hinges to frame, fixing the frame with jamb with required nos & sizes of anchor dash fastener, all complete as per manufacturer's specification and direction of engineer-in-charge.	metre	523.60

Item Code	Description	Unit	Justified Rate
9.146	Providing and fixing 37 mm thick factory made PVC Door shutter, styles and rails made of PVC hollow extruded printed and laminated section having overall dimension 115 mm x 37 mm with wall thickness 2 mm (\pm 0.2 mm) with inbuilt beading on one side, the styles and rails mitred cut and joint at corners by inserting 2 nos PVC profile reinforcement of size 75 mm x 200 mm long with cross section size of 28 mm x 30 mm having wall thickness 2 mm (\pm 0.2 mm). Styles, rails and reinforcements to be fusion welded together. Only hinge side vertical style to be reinforced with PVC profile reinforcement in full length. Printed and laminated PVC lock rail of size 110 mm x 37 mm having wall thickness 2 mm (\pm 0.2 mm) to be welded horizontally with the vertical styles after inserting PVC profile reinforcement as in styles and rails, providing with PVC snap fit beading, panels of 100 x 20 mm printed & laminated and inserting 2 nos 6 mm dia bright steel rod horizontally with both side threaded and tightened with check nuts and washers complete, all as per manufacturer's specification and direction of engineer-in-charge.	sqm	3,393.70
9.147	Providing and fixing factory made uPVC glazed/ wire mesh windows/ doors comprising of lead free uPVC multi-chambered frame, sash and mullion/ coupler (wherever required) extruded profiles having minimum wall thickness of 1.70 mm for Series R1 and R2 profiles and 2.10 mm for Series R3 and R4 profiles conforming to EN: 12608 in any shape, colour and design duly reinforced with galvanized mild steel section made of required shape & size as per CPWD Specification, uPVC extruded glazing beads, interlocks and Inline sash adaptor (wherever required) of appropriate dimension, EPDM gasket, hardware, SS 304 grade fasteners of minimum 8 mm dia. with countersunk head, comprising of matching polyamide PA6 grade sleeve for fixing frame to finished wall as per IS 1367 : Part 1 to 14, plastic packers, plastic caps and necessary stainless steel screws etc. Profile of frame, sash & mullion (if required) shall be mitred cut and fusion welded/ mechanically jointed duly sealed at all corners, including drilling of holes for fixing hardware and drainage of water etc. After fixing frame the gap between frame and adjacent finished wall shall be filled with weather proof silicon sealant over backer rod of approved size and quality, all complete as per approved drawing conforming to CPWD specification & direction of Engineer in-Charge. Section of steel reinforcement and cross sections of uPVC profiles to be as per design approved by Engineer-in-Charge. Wire mesh/ Glazing of plain/ toughened/ laminated/ double glass unit with/ without high performance coatings as per design requirements and conforming to IS: 3548 & IS: 16231 shall be paid separately. Note:- Structural design proof checked from a Government Engineering Institute, to be provided by the manufacturer for : (iii) Sites with basic wind speed > 45 m/sec as per IS 875 Part 3 (iv) Sites with structure height more than 20m for all wind speeds.		
9.147.A1	Two track two panels sliding window with Aluminium channel for roller track, wool pile, nylon rollers with SS 304 body.		
9.147.A1.1	Using R2 series with frame (40mm & above) x (40mm & above) & sash (25mm & above) x (50mm & above) with zinc alloy (zamak) powder coated touch locks with hook (Height upto 1.2 meter).	sqm	6,526.30
9.147.A1.2	Using R3 series with frame (55mm & above) x (40mm & above) & sash (30mm & above) x (55mm & above) with zinc alloy (zamak) powder coated handle on every panel along with multi-point locking system (Height upto 1.8m).	sqm	4,343.90
9.147.A1.3	Using R4 series with frame (64mm & above) x (45mm & above) & sash (44mm & above) x (55mm & above) with zinc alloy (zamak) powder coated handle on every panel along with multi-point locking system (Height above 1.8m).	sqm	7,545.60
9.147.B1	Two track two panels sliding door with Aluminium channel for roller track, wool pile, zinc alloy (zamak) powder coated handle on every panel along with multi-point locking system, adjustable nylon rollers with SS 304 body.		

Item Code	Description	Unit	Justified Rate
9.147.B1.1	Using R3 series with frame (55mm & above) x (40mm & above) & sash (30mm & above) x (74mm & above). (Height upto 2.5 meter).	sqm	3,549.65
9.147.B1.2	Using R4 series with frame (64mm & above) x (45mm & above) & sash (44mm & above) x (85mm & above). (Height above 2.5 meter).	sqm	5,621.25
9.147.C1	Fixed window/ ventilator without mullion/ transom.		
9.147.C1.1	Using R1 series with frame (33mm & above) x (35mm & above). (Height upto 0.90 meter)	sqm	4,401.05
9.147.C1.2	Using R2 series with frame (39mm & above) x (39mm & above). (Height upto 1.2 meter)	sqm	6,326.05
9.147.C1.3	Using R3 series with frame (55mm & above) x (45mm & above). (Height upto 2.5 meter)	sqm	3,405.65
9.147.C1.4	Using R4 series with frame (64mm & above) x (50mm & above). (Height above 2.5 meter)	sqm	4,408.25
9.147.D1	Ventilator Casement window single panel with or without fixed panel with S.S. 304 friction hinges as per size and weight of sash, single point locking zinc alloy (zamak) powder coated handles.		
9.147.D1.1	Using R1 series with frame (33mm & above) x (35mm & above) & sash /mullion (33mm & above) x (50 mm & above). (Height upto 0.90 meter).	sqm	6,364.45
9.147.D1.2	Using R2 series with frame (39mm & above) x (39mm & above) & sash/ mullion (39mm & above) x (60mm & above). (Height upto 1.2 meter)	sqm	9,881.35
9.147.D1.3	Using R3 series with frame (55mm & above) x (45mm & above) & sash /mullion (55mm & above) x (65mm & above). (Height above 1.2 meter)	sqm	4,683.70
9.147.E1	Casement window single panel with S.S. 304 friction hinges as per size and weight of sash, multi-point locking system, zinc alloy (zamak) powder coated handles.		
9.147.E1.1	Using R2 series with frame (39mm & above) x (39mm & above) & sash (39mm & above) x (60mm & above). (Height upto 1.2 meter)	sqm	11,898.40
9.147.E1.2	Using R3 series with frame (55mm & above) x (45mm & above) & sash (55mm & above) x (65mm & above). (Height upto 1.8 meter)	sqm	6,377.90
9.147.E1.3	Using R4 series with frame (64mm & above) x (50mm & above) & sash (64mm & above) x (70mm & above). (Height above 1.8 meter)	sqm	10,932.05
9.147.F1	Casement door single panel with zinc alloy (zamak) 3D hinges, multi-point locking system with cylinder, zinc alloy (zamak) powder coated handles on both sides.		
9.147.F1.1	Using R3 series with frame (55mm & above) x (50mm & above) & sash (55mm & above) x (85mm & above) (Height upto 2.5 meter).	sqm	5,692.10
9.147.F1.2	Using R4 series with frame (64mm & above) x (55mm & above) & sash (64mm & above) x (100mm & above). (Height above 2.5 meter).	sqm	9,024.40
9.147.A2	Two track four panels sliding windows with Aluminium channel for roller track, wool pile, zinc alloy (zamak) powder coated handle on three panels along with multi-point locking system, nylon rollers with SS 304 body.		
9.147.A2.1	Using R3 series with frame (55mm & above) x (40mm & above) & sash (30mm & above) x (55mm & above) (Height upto 1.8m).	sqm	3,759.30
9.147.A2.2	Using R4 series with frame (64mm & above) x (45mm & above) & sash (44mm & above) x (55mm & above) (Height above 1.8m).	sqm	6,687.65
9.147.B2	Two track four panels sliding door with Aluminium channel for roller track, wool pile, zinc alloy (zamak) powder coated handle on three panels along with multi-point locking system, adjustable nylon rollers with SS 304 body.		
9.147.B2.1	Using R3 series with frame (55mm & above) x (40mm & above) & sash (30mm & above) x (74mm & above). (Height upto 2.5 meter).	sqm	3,202.95
9.147.B2.2	Using R4 series with frame (64mm & above) x (45mm & above) & sash (44mm & above) x (85mm & above). (Height above 2.5 meter).	sqm	5,225.10
9.147.C2	Fixed window/ ventilator with mullion/ transom.		
9.147.C2.1	Using R1 series with frame (33mm & above) x (35mm & above) & mullion (33mm & above) x (50mm & above). (Height upto 0.90 meter)	sqm	4,558.70

Item Code	Description	Unit	Justified Rate
9.147.C2.2	Using R2 series with frame (39mm & above) x (39mm & above) & mullion (39mm & above) x (60mm & above). (Height upto 1.2 meter)	sqm	6,903.75
9.147.C2.3	Using R3 series with frame (55mm & above) x (45mm & above) & mullion (55mm & above) x (65mm & above). (Height upto 2.5 meter)	sqm	3,503.35
9.147.C2.4	Using R4 series with frame (64mm & above) x (50mm & above) & mullion (64mm & above) x (70mm & above). (Height above 2.5 meter)	sqm	4,766.25
9.147.E2	Casement window double panels with fixed mullion with S.S. 304 friction hinges as per size and weight of sash, multi- point locking system, zinc alloy (zamak) powder coated handles.		
9.147.E2.1	Using R2 series with frame (39mm & above) x (39mm & above) & sash (39mm & above) x (60mm & above) & mullion (39mm & above) x (60mm & above). (Height upto	sqm	10,800.05
9.147.E2.2	Using R3 series with frame (55mm & above) x (45mm & above) & sash (55mm & above) x (65mm & above) & mullion (55mm & above) x (65mm & above). (Height upto 1.8 meter).	sqm	5,770.00
9.147.E2.3	Using R4 series with frame (64mm & above) x (50mm & above) & sash (64mm & above) x (70mm & above) & mullion (64mm & above) x (70mm & above). (Height above 1.8 meter).	sqm	10,088.85
9.147.F2	Casement door double panel with French (False) Mullion with zinc alloy (zamak) 3D hinges, multi-point locking system with cylinder, zinc alloy (zamak) powder coated handles on both sides.		
9.147.F2.1	Using R3 series with frame (55mm & above) x (50mm & above) & sash (55mm & above) x (85mm & above) & French (False) mullion (55mm & above) x (60mm & above). (Height upto 2.5 meter).	sqm	5,376.65
9.147.F2.2	Using R4 series with frame (64mm & above) x (55mm & above) & sash (64mm & above) x (100mm & above) & French (False) mullion (64mm & above) x (60mm & above). (Height above 2.5 meter).	sqm	8,256.80
9.147.A3	Two and half track three panels sliding window with two glazed & one wire mesh panels with Aluminium channel for roller track, wool pile, nylon rollers with SS 304 body.		
9.147.A3.1	Using R2 series with frame (65mm & above) x (40mm & above) & glazed sash (25mm & above) x (50mm & above) & fly screen sash (18mm & above) x (40mm & above) with zinc alloy (zamak) powder coated touch locks with hook (Height upto 1.2 meter).	sqm	6,090.45
9.147.A3.2	Using R3 series with frame (85mm & above) x (40mm & above) & glazed sash (30mm & above) x (55mm & above) & fly screen sash (20mm & above) x (50mm & above) with zinc alloy (zamak) powder coated handle on every glazed	sqm	4,859.25
9.147.B3	Three track three panels sliding door with two glazed & one wire mesh panels with Aluminium channel for roller track, wool pile, zinc alloy (zamak) powder coated handle on two panels along with multi-point locking system, adjustable nylon rollers with SS 304 body.		
9.147.B3.1	Using R3 series with frame (98mm & above) x (40mm & above) & both glazed and fly screen sash (30mm & above) x (74mm & above). (Height upto 2.5 meter).	sqm	4,047.55
9.147.B3.2	Using R4 series with frame (115mm & above) x (45mm & above) & both glazed and fly screen sash (44mm & above) x (85mm & above). (Height above 2.5 meter).	sqm	7,170.20
9.147.E3	Casement window double panels with French (False) Mullion with S.S. 304 friction hinges as per size and weight of sash, multi-point locking system, zinc alloy (zamak) powder coated handles.		
9.147.E3.1	Using R2 series with frame (39mm & above) x (39mm & above) & sash (39mm & above) x (60mm & above) & French (False) mullion (39mm & above) x (60mm & above). (Height upto 1.2 meter).	sqm	9,226.35
9.147.E3.2	Using R3 series with frame (55mm & above) x (45mm & above) & sash (55mm & above) x (65mm & above) & French (False) mullion (55mm & above) x (60mm & above). (Height upto 1.8 meter).	sqm	4,895.95

Item Code	Description	Unit	Justified Rate
9.147.E3.3	Using R4 series with frame (64mm & above) x (50mm & above) & sash (64mm & above) x (70mm & above) & French (False) mullion (64mm & above) x (60mm & above). (Height above 1.8 meter).	sqm	8,820.15
9.147.F3	Casement Door with Double Rebate Frame with one Side Hung Glazed Panel and one Side Hung wire mesh Panel with zinc alloy (zamak) 3D hinges, multi-point locking system with cylinder, zinc alloy (zamak) powder coated handles on both sides of glazed panel and zinc alloy (Zamak) powder coated handle along with multi-point locking system on one side of fly screen panel.		
9.147.F3.1	Using R3 series with frame (110mm & above) x (45mm & above) & glazed sash (55mm & above) x (85mm & above) & fly screen sash (55mm & above) x (65mm & above). (Height upto 2.5 meter).	sqm	8,211.85
9.147.A4	Three track three panels sliding window with two glazed & one wire mesh panels with Aluminium channel for roller track, wool pile, nylon rollers with SS 304 body.		
9.147.A4.1	Using R2 series with frame (70mm & above) x (40mm & above) & both glazed and fly screen sash (25mm & above) x (50mm & above) with zinc alloy (zamak) powder coated touch locks with hook. (Height upto 1.2 meter).	sqm	8,429.30
9.147.A4.2	Using R3 series with frame (98mm & above) x (40mm & above) & both glazed and fly screen sash (30mm & above) x (55mm & above) with zinc alloy (zamak) powder coated handle on every glazed panel along with multi-point locking system. (Height upto 1.8m).	sqm	4,908.25
9.147.A4.3	Using R4 series with frame (115mm & above) x (45mm & above) & both glazed and fly screen sash (44mm & above) x (55mm & above) with zinc alloy (zamak) powder coated handle on every glazed panel along with multi-point locking system. (Height above 1.8m)	sqm	9,596.85
9.147.B4	Three track three panels sliding door with Aluminium channel for roller track, wool pile, zinc alloy (zamak) powder coated handle on two panels along with multi-point locking system, adjustable nylon rollers with SS 304 body.		
9.147.B4.1	Using R3 series with frame (98mm & above) x (40mm & above) & sash (30mm & above) x (74mm & above). (Height upto 2.5 meter).	sqm	3,471.05
9.147.B4.2	Using R4 series with frame (115mm & above) x (45mm & above) & sash (44mm & above) x (85mm & above). (Height above 2.5 meter).	sqm	5,758.25
9.147.E4	Casement cum fixed panel window having one single casement panel & one fixed panel with S.S 304 friction hinges as per size and weight of sash, multi-point locking system, zinc alloy (zamak) powder coated handles.		
9.147.E4.1	Using R2 series with frame (39mm & above) x (39mm & above) & sash (39mm & above) x (60mm & above) & mullion (39mm & above) x (60mm & above). (Height upto 1.2 meter; each openable shutter upto 0.8m width)	sqm	8,002.50
9.147.E4.2	Using R3 series with frame (55mm & above) x (45mm & above) & sash (55mm & above) x (65mm & above) & mullion (55mm & above) x (65mm & above). (Height upto 1.8 meter; each openable shutter upto 0.8m width)	sqm	4,282.10
9.147.E4.3	Using R4 series with frame (64mm & above) x (50mm & above) & sash (64mm & above) x (70mm & above) & mullion (64mm & above) x (70mm & above). (Height above 1.8 meter; each openable shutter upto 0.8m width)	sqm	7,577.85
9.147.A5	Three track three panels sliding window with Aluminium channel for roller track, wool pile, nylon rollers with SS 304 body.		
9.147.A5.1	Using R2 series with frame (70mm & above) x (40mm & above) & sash (25mm & above) x (50mm & above) with zinc alloy (zamak) powder coated touch locks with hook. (Height upto 1.2 meter).	sqm	6,670.15
9.147.A5.2	Using R3 series with frame (98mm & above) x (40mm & above) & sash (30mm & above) x (55mm & above) with zinc alloy (zamak) powder coated handle on two end panels along with multi-point locking system (Height upto 1.8 meter).	sqm	3,954.50

Item Code	Description	Unit	Justified Rate
9.147.A5.3	Using R4 series with frame (115mm & above) x (45mm & above) & sash (44mm & above) x (55mm & above) with zinc alloy (zamak) powder coated handle on two end panels along with multi-point locking system. (Height above 1.8 meter).	sqm	7,611.85
9.147.E5	Casement cum fixed panel window having single casement panel at both ends & middle fixed panel with S.S 304 friction hinges as per size and weight of sash, multi-point locking system, zinc alloy (zamak) powder coated handles.		
9.147.E5.1	Using R2 series with frame (39mm & above) x (39mm & above) & sash (39mm & above) x (60mm & above) & mullion (39mm & above) x (60mm & above). (Height upto 1.2 meter; each openable shutter upto 0.8m width)	sqm	8,560.50
9.147.E5.2	Using R3 series with frame (55mm & above) x (45mm & above) & sash (55mm & above) x (65mm & above) & mullion (55mm & above) x (65mm & above). (Height upto 1.8 meter; each openable shutter upto 0.8m width)	sqm	4,574.65
9.147.E5.3	Using R4 series with frame (64mm & above) x (50mm & above) & sash (64mm & above) x (70mm & above) & mullion (64mm & above) x (70mm & above). (Height above 1.8 meter; each openable shutter upto 0.8m width)	sqm	7,583.00
9.147.E6	Casement Window with Double Rebate Frame with one Side Hung Glazed Panel and one Side Hung wire mesh Panel with S.S. 304 friction hinges as per size and weight of sash, multi-point locking system, zinc alloy (zamak) powder coated handles on both glazed and fly screen panel		
9.147.E6.1	Using R3 series with frame (110mm & above) x (45mm & above) & glazed sash (55mm & above) x (65mm & above) & fly screen sash (30mm & above) x (55mm & above) & metal grill (if required to be paid separately). (Height upto 1.8 meter)	sqm	10,121.90
9.147.E7	Casement Window with Double Rebate Frame with two Side Hung Glazed Panel and two Side Hung wire mesh Panel and Fixed Mullion with S.S. 304 friction hinges as per size and weight of sash, multi-point locking system, zinc alloy (zamak) powder coated handles on both glazed and fly screen panel.		
9.147.E7.1	Using R3 series with frame (110mm & above) x (45mm & above) & glazed sash (55mm & above) x (65mm & above) & fly screen sash (30mm & above) x (55mm & above) & mullion (55mm & above) x (65mm & above) and metal grill (if required to be paid separately). (Height upto 1.8 meter)	sqm	9,196.10
9.147.E8	Casement Window with Double Rebate Frame with two Side Hung Glazed Panel on outside and two Side Hung wire mesh Panel on inside and French (False) Mullion with S.S. 304 friction hinges as per size and weight of sash, multi-point locking system, zinc alloy (zamak) powder coated handles with shoot bolt on both glazed and fly screen panel.		
9.147.E8.1	Using R3 series with frame (110mm & above) x (45mm & above) & glazed sash (55mm & above) x (65mm & above) & fly screen sash (30mm & above) x (55mm & above) & French (False) mullion (55mm & above) x (60mm & above) and metal grill (if required to be paid separately). (Height upto 1.8 meter).	sqm	7,471.85
9.148	Providing and fixing stainless steel (SS-304 grade) friction hinges to the side/top hung uPVC windows, of approved quality, with necessary stainless steel screws etc. as per direction of Engineer-in-charge.		
9.148.1	200 x 19 x 1.9 mm	each	267.00
9.148.2	250 x 19 x 1.9 mm	each	296.00
9.148.3	300 x 19 x 1.9 mm	each	322.75
9.148.4	350 x 19 x 1.9 mm	each	440.05
9.148.5	400 x 19 x 1.9 mm	each	444.70
9.149	Providing and fixing casement handle made of zinc alloyed (white powder coated) for uPVC casement window with necessary screws etc. complete.	each	162.60
9.150	Providing and fixing zinc alloyed (white powder coated) touch lock for uPVC sliding window with necessary screws etc. complete.	each	144.00

Item Code	Description	Unit	Justified Rate
9.151	Providing and fixing steel roller for uPVC sliding window with necessary screws etc. complete.	each	81.25
9.152	Providing and fixing steel roller for uPVC sliding door with necessary screws etc. complete.	each	133.55
9.153	Providing and fixing steel (white power coated) crescent lock for uPVC sliding window/ door with necessary screws etc. complete.	each	139.35
9.154	Providing and fixing frame work for partitions/ wall lining etc. made of 50x50x1.6 mm hollow MS tube, placed along the walls, ceiling and floor in a grid pattern with spacing @ 600 mm centre to centre both ways (vertically & horizontally) or at required spacing near opening, with necessary welding at junctions and fixing the frame to wall/ ceiling/ floors with steel dash fasteners of 8 mm dia, 75 mm long bolt, including making provision for opening for doors, windows, electrical conduits, switch boards etc., including providing with two coats of approved steel primer etc. complete, all as per direction of Engineer-in-charge.	kg	110.60
9.155	Providing and fixing panelling or paneling and glazing in panelled or panelled and glazed shutters for doors, windows and clerestory windows (area of opening for panel inserts excluding portion inside grooves or rebated to be measured). Panelling for panelled and glazed shutters 25mm to 40mm thick: Pre-laminated with decorative lamination on both side exterior Grade - I MDF Board 12 mm thick confirming to IS:14587	sqm	1,419.85
9.156	Providing and fixing Pre -laminated medium density fibre board exterior grade (Grade-I) IS:14587:1998 marked, to frame, backing or studding with screws etc. complete (Frames, backing or studding to be paid separately).		
9.156.1	Pre-laminated with decorative lamination on both side exterior Grade - I MDF Board 12 mm thick confirming to IS:14587	sqm	763.90
9.156.2	Pre-laminated with decorative lamination on both side exterior Grade - I MDF Board 18 mm thick confirming to IS:14587	sqm	936.85
9.157	Providing and fixing Pre-laminated medium density fibre board IS: 14587:1998 marked, with one side decorative lamination other side balancing lamination Grade-I(exterior grade) in shelves with screws and fittings wherever required, edges to be sealed with PVC edge bending tape 2.00 mm thick of approved brand (fittings to be paid separately).		
9.157.1	Pre-laminated with decorative lamination one side and other side balancing lamination exterior Grade - I MDF Board 18 mm thick confirming to IS:14587	sqm	1,058.05
9.157.2	Pre-laminated with decorative lamination one side and other side balancing lamination exterior Grade - I MDF Board 25 mm thick confirming to IS:14587	sqm	1,421.55
9.158	Providing and fixing in wall lining medium density fibre board IS: 14587:1998 marked, Pre-laminated one side decorative lamination and other side balancing lamination, with necessary fixing arrangement and screws etc. complete.		
9.158.1	12 mm thick.	sqm	888.80
9.158.2	18 mm thick.	sqm	1,071.50
9.158.3	25 mm thick.	sqm	1,448.40
9.159	Providing and fixing 25mm thick pre-laminated medium density fibre board exterior grade (Grade-I) IS:14587:1998 marked with one side decorative and other side balancing lamination for cupboard shutters edges to be sealed with PVC edge bending tape 2.00 mm thick of approved brand including ISI marked nickel plated bright finishing M.S. piano hinges conforming to IS:3818 marked with necessary screw etc all complete.	sqm	1,583.45
9.160	Providing and fixing skirting with pre-laminated medium density fibre board exterior grade (Grade-I) conforming to IS: 14587:1998 marked, with (one side decorative and other side balancing lamination and edges to be sealed with PVC edge bending tape 2.00 mm thick of approved brand with necessary fixing arrangements and screws, including drilling necessary holes for rawl plugs etc. all complete.		
9.160.1	18 mm thick.	sqm	1,556.55

Item Code	Description	Unit	Justified Rate
9.160.2	25 mm thick.	sqm	1,933.45
9.161	Providing and fixing fire resistant door frame of section 50 x 60 mm on horizontal side & 35 x 60 mm on vertical sides having built in rebate made out of 1.6 mm thick GI sheet (Zinc coating not less than 120gm/ sqm) suitable for mounting 120 minutes Fire Rated Glazed Door Shutters. The frame shall be filled with mineral wool Insulation having density minimum 96Kg/cum. The frame will have a provision of G.I. anchor fastners 14 nos (5 each on vertical style & 4 on horizontal style of size M10 x 80) suitable for fixing in the opening along with factory made template for SS ball bearing hinges of Size 100x89x3mm for fixing of fire rated glazed shutter . The frame shall be finished with a approved fire resistant primer or powder coating of not less than 30 micron in desired shade as per the directions of Engineer - in- Charge . (Cost of SS ball bearing hinges is excluded).	metre	1,554.85
9.162	Providing and fixing 60 mm thick glazed fire resistant door shutters of 120 minutes fire rating confirming to IS:3614 (Part II) or EN1634-1:1999, tested and certified as per laboratory approved by Engineer-in-Charge, with suitable mounting on door frame, consisting of vertical styles, top rail & side rail 60 mm x 60 mm wide and bottom rail of 110 mm x 60 mm made out of 1.6mm thick G.I. sheet (zinc coating not less than 120gm/sqm) duly filled mineral wool insulation having density minimum 96 kg/cum and fixing with necessary stainless steel ball bearing hinges of size 100x89x3mm of approved make, including applying a coat of approved fire resistant primer or powder coating not less than 30 micron etc all complete as per direction of Engineer-in-Charge (panelling to be paid for seperately).	sqm	8,452.15
9.163	Providing and fixing non load bearing fixed frame for fire resistant glazed partition for 120 minutes Fire Rating, made out to a profile of dimension 60mm x 70 mm of 1.6 mm thick galvanised steel sheet as per test evidence suitable for fixing fire rated glass for 120 minutes of both integrity & radiation control (EW120) & minimum 20 minutes of insulation (EI20).The profile has to be fixed to the supporting construction by means of anchor fasteners of size M10 x 80, every 150 mm from the edges and every 500 mm (approx) c/c. Linear measurement of frame shall be measured for payment. The frame shall be filled with mineral wool insulation of density minimum 96kg/ cum. and finished with a approved fire resistant primer or Powder coating of not less than 30 micron in desired shade as per NBC 2016, IS 16231 (Part 3):2016 and directions of Engineer - in- Charge.	metre	1,554.85
9.164	Providing and fixing glazing in fire resistant door shutters, fixed panels & partitions etc., with G.I. beading made out of 1.6 mm thick G.I. sheet (zinc coating not less than 120 gm/m ²) of size 20 x 33 mm screwed with M4 x 38 mm SS screws at distance 75 mm from the edges and 150 mm c/c , including applying a coat of approved fire resistant primer/ powder coating of not less than 30 micron on G.I. beading, & special ceramic tape of 5 x 20 mm size etc complete in all respect as per NBC 2016, IS 16231 (Part 3):2016 and as per direction of Engineer-in-charge with glass of required thickness having 120 minutes of fire resistance both integrity & radiation control (EW120) and minimum 20 minutes of insulation (EI20). The manufacturer have to give test report/certification of fire glass and the glass should have the stamp showing the value of E, EW & EI. The glass shall be tested in approved NABL accredited lab or by any other accreditation body which operates in accordance with ISO/IEC 17011 and accredits labs as per ISO/IEC 17025 for testing and calibration scopes shall be eligible. The maximum glazing size shall not be more than 1100x2200 mm (w x h) or 2.42 sqm.	sqm	34,721.45
9.165	Providing and fixing bright /matt finished Stainless Steel handles of approved quality & make with necessary screws etc all complete.		
9.165.1	125 mm	each	86.85
9.165.2	100mm	each	65.40

Item Code	Description	Unit	Justified Rate
9.165.3	75 mm	each	42.15
9.166	Providing and fixing 18mm thick both sides Pre-laminated cement bonded wood particle board as per IS : 15786:2008 of approved brand and shade with suitable full threaded steel screws etc. in partitions, boxes, shelves, racks and cupboard, kitchen cabinet under kitchen counter etc. all complete as per direction of Engineer-in-charge (Note: Fittings to be paid separately).		
9.166.1	18 mm thick	sqm	1,019.00
9.167	Providing and fixing 6mm thick both sides Pre-laminated cement bonded wood particle board as per IS : 15786:2008 of approved brand and shade with suitable full threaded steel screws etc. on the backing of racks, drawer, cupboard, kitchen cabinet under kitchen counter etc. all complete as per direction of Engineer- in-charge.	sqm	747.55
9.168	Providing and fixing cupboard shutter with 19mm thick one side decorative and other side balancing lamination factory pressed BWP grade marine ply as per IS 710 of approved brand including 2mm thick PVC edge banding tape with hot glue by edge bending machine etc. with auto closing spring loaded hinges (hydraulic type) etc. complete as per direction of Engineer- in-charge.(Payment of providing and fixing auto closing hinges shall be paid separately)	sqm	2,183.45
9.169	Providing and fixing 19mm thick both side balancing lamination factory pressed BWP grade marine ply as per IS 710 of approved brand boxes,shelves,racks,almirah,cupboard and drawer etc. including necessary nails,screws etc. complete as per direction of Engineer-in-charge.	sqm	1,994.65
9.170	Providing and fixing stainless steel fancy handle of approved make fixed with SS screws etc. complete as per direction of Engineer-in-charge.		
9.170.1	200 mm	each	132.60
9.171	Providing and fixing stainless steel soft closing spring hinges at 0 degree hinges (hydraulic type) of approved make/brand to cupboard shutters with full threaded steel screws including making necessary recess in board and finished etc. complete as per direction of Engineer-in-charge.	each	196.50
9.172	Providing and fixing stainless steel soft closing heavy type telescopic drawer channels of approved make 500 mm long with screws etc. complete as per directions of Engineer- in-charge.	one set	650.85
9.173	Providing and fixing ready made 304 grade stainless steel Modular kitchen basket and accessories such as right angle basket (Plain Cup & Saucer, plant, Partition, Bottle rack, Thali, Cutlery) kitchen utensil basket, Dinner set basket, kitchen grain basket, Multipurpose basket as per site requirement including finishing (wherever required) and fittings. The same shall be fixed with necessary stainless steel nuts & bolts, Stainless Steel screws & telescopic channel etc. as per direction of Engineer-in-charge. (For payment purpose only weight of Stainless steel basket shall be considered excluding weight of all fixing accessories such as nuts, bolts, fasteners telescopic basket channels etc. Payment of providing and fixing telescopic channel shall be paid separately)	kg	362.80
9.174	Providing and fixing 2mm thick 16 to 19mm wide PVC edge binding tape of approved quality for cupboard/wardrobe shutters including necessary synthetic resin hot pressed to edges on binding machine etc. complete as per directions of Engineer- in-charge.	metre	32.35
10	STEEL WORK		
10.1	Structural steel work in single section, fixed with or without connecting plate, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete.	kg	77.95
10.2	Structural steel work riveted, bolted or welded in built up sections, trusses and framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete.	kg	92.55

Item Code	Description	Unit	Justified Rate
10.3	Providing and fixing in position collapsible steel shutters with vertical channels 20x10x2 mm and braced with flat iron diagonals 20x5 mm size, with top and bottom rail of T-iron 40x40x6 mm, with 40 mm dia steel pulleys, complete with bolts, nuts, locking arrangement, stoppers, handles, including applying a priming coat of approved steel primer.	sqm	7,450.80
10.4	Providing and fixing 1 mm thick M.S. sheet sliding-shutters, with frame and diagonal braces of 40x40x6 mm angle iron, 3 mm M.S. gusset plates at the junctions and corners, 25 mm dia pulley, 40x40x6 mm angle and T- iron guide at the top and bottom respectively, including applying a priming coat of approved steel primer	sqm	4,410.45
10.5	Providing and fixing 1mm thick M.S. sheet door with frame of 40x40x6 mm angle iron and 3 mm M.S. gusset plates at the junctions and corners, all necessary fittings complete, including applying a priming coat of approved steel primer.		
10.5.1	Using M.S. angels 40x40x6 mm for diagonal braces	sqm	3,873.50
10.5.2	Using flats 30x6mm for diagonal braces and central cross piece	sqm	3,730.40
10.6	Supplying and fixing rolling shutters of approved make, made of required size M.S. laths, interlocked together through their entire length and jointed together at the end by end locks, mounted on specially designed pipe shaft with brackets, side guides and arrangements for inside and outside locking with push and pull operation complete, including the cost of providing and fixing necessary 27.5 cm long wire springs manufactured from high tensile steel wire of adequate strength conforming to IS: 4454 - part 1 and M.S. top cover of required thickness for rolling shutters.		
10.6.1	80x1.25 mm M.S. laths with 1.25 mm thick top cover	sqm	2,540.85
10.6.2	80x1.20 mm M.S. laths with 1.20 mm thick top cover	sqm	2,418.90
10.6.3	80x0.90 mm M.S. laths with 0.90 mm thick top cover	sqm	2,289.20
10.7	Providing and fixing ball bearing for rolling shutters.	each	368.25
10.8	Extra for providing mechanical device chain and crank operation for operating rolling shutters.		
10.8.1	Exceeding 10.00 sqm and upto 16.80 sqm in the area	sqm	962.50
10.8.2	Exceeding 16.80 sqm in area	sqm	962.50
10.9	Extra for providing grilled rolling shutters manufactured out of 8 mm dia M.S. bar instead of laths as per design approved by Engineer-in- charge, (area of grill to be measured).	sqm	580.75
10.10	Fixing standard steel glazed doors, windows and ventilators in walls, including fixing of float glass panes with glazing clips and special metal- sash putty of approved make, or metal beading with screws, (only steel windows, glass panes cut to size and glazing clips or metal beading with screws, shall be supplied by department free of cost.		
10.10.1	Fixing with 15x3 mm lugs 10 cm long embedded in cement concrete block 15x10x10 cm of C.C. 1:3:6 (1 Cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size)	kg	53.55
10.10.2	Fixing with carbon steel galvanised dash fastener of required dia and size (to be paid for separately)	kg	27.60
10.11	Providing and fixing factory made ISI marked steel glazed doors, windows and ventilators, side /top /centre hung, with beading and all members such as F7D,F4B, K11 B and K12 B etc. complete of standard rolled steel sections, joints mitred and flash butt welded and sash bars tenoned and riveted, including providing and fixing of hinges, pivots, priming coat of approved steel primer, but excluding the cost of other fittings, glass panes complete all as per approved design, (sectional weight of only steel members shall be measured for payment).		
10.11.1	Fixing with 15x3 mm lugs 10 cm long embedded in cement concrete block 15x10x10 cm of C.C. 1:3:6(1 Cement: 3 coarse sand: 6 graded stone aggregate 20 mm nominal size)	kg	93.35
10.11.2	Fixing with carbon steel galvanised dash fastener of required dia and size (to be paid for separately)	kg	91.20

Item Code	Description	Unit	Justified Rate
10.12	Extra for providing and fixing steel beading of size 10 x 10 x 1.6 mm (box type), approved shape and section with screws instead of glazing clips and metal sash putty, in steel doors, windows, ventilators and composite units.	metre	39.90
10.13	Providing and fixing T-iron frames for doors, windows and ventilators of mild steel Tee-sections, joints mitred and welded, including fixing of necessary butt hinges and screws and applying a priming coat of approved steel primer.		
10.13.1	Fixing with 15x3 mm lugs 10 cm long embedded in cement concrete block 15x10x10 cm of C.C. 1:3:6 (1 Cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size).	kg	96.45
10.13.2	Fixing with carbon steel galvanised dash fastener of required dia and size (to be paid for separately)	kg	92.15
10.14	Providing and fixing pressed steel door frames conforming to IS: 4351, manufactured from commercial mild steel sheet of 1.60 mm thickness, including hinges, jamb, lock jamb, bead and if required angle threshold of mild steel angle of section 50x25 mm, or base ties of 1.60 mm, pressed mild steel welded or rigidly fixed together by mechanical means, including M.S. pressed butt hinges 2.5 mm thick with mortar guards, lock strike-plate and shock absorbers as specified and applying a coat of approved steel primer after pre-treatment of the surface as directed by Engineer-in-charge:		
10.14.1	Profile B		
10.14.1.1	Fixing with adjustable lugs with split end tail to each jamb	metre	375.00
10.14.1.2	Fixing with carbon steel galvanised dash fastener of required dia and size (to be paid for separately)	metre	365.15
10.14.2	Profile C		
10.14.2.1	Fixing with adjustable lugs with split end tail to each jamb	metre	398.25
10.14.2.2	Fixing with carbon steel galvanised dash fastener of required dia and size (to be paid for separately)	metre	388.40
10.14.3	Profile E		
10.14.3.1	Fixing with adjustable lugs with split end tail to each jamb	metre	433.10
10.14.3.2	Fixing with carbon steel galvanised dash fastener of required dia and size (to be paid for separately)	metre	423.25
10.15	Providing and fixing M.S. Tubular frames for doors, windows, ventilators and cupboard with rectangular/ L-Type sections, made of 1.60 mm thick M.S. Sheet, joints mitred, welded and grinded finish, with profiles of required size, including fixing of necessary butt hinges and screws and applying a priming coat of approved steel primer.		
10.15.1	Fixing with 15x3 mm lugs 10 cm long embedded in cement concrete block 15x10x10 cm of C.C. 1:3:6 (1 Cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size)	kg	123.80
10.15.2	Fixing with carbon steel galvanised dash fastener of required dia and size (to be paid for separately)	kg	113.20
10.16	Steel work in built up tubular (round, square or rectangular hollow tubes etc.) trusses etc., including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer, including welding and bolted with special shaped washers etc. complete.		
10.16.1	Hot finished welded type tubes	kg	126.60
10.16.2	Hot finished seamless type tubes	kg	138.80
10.16.3	Electric resistance or induction butt welded tubes	kg	114.40
10.17	Providing and fixing M.S. fan clamp type I or II of 16 mm dia M.S. bar, bent to shape with hooked ends in R.C.C. slabs or beams during laying, including painting the exposed portion of loop, all as per standard design complete.	each	150.85

Item Code	Description	Unit	Justified Rate
10.18	Providing and fixing circular/ Hexagonal cast iron or M.S. sheet box for ceiling fan clamp, of internal dia 140 mm, 73 mm height, top lid of 1.5 mm thick M.S. sheet with its top surface hacked for proper bonding, top lid shall be screwed into the cast iron/ M.S. sheet box by means of 3.3 mm dia round headed screws, one lock at the corners. Clamp shall be made of 12 mm dia M.S. bar bent to shape as per standard drawing.	each	152.90
10.19	Providing and fixing mild steel round holding down bolts with nuts and washer plates complete.	kg	75.35
10.20	Providing and fixing bolts including nuts and washers complete.	kg	111.65
10.21	Providing and fixing M.S. rivets of sizes in position.	kg	191.65
10.22	Welding by gas or electric plant including transportation of plant at site etc. complete.	cm	2.95
10.25	Steel work welded in built up sections/ framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required.		
10.25.1	In stringers, treads, landings etc. of stair cases, including use of chequered plate wherever required, all complete	kg	87.55
10.25.2	In gratings, frames, guard bar, ladder, railings, brackets, gates and similar works	kg	116.80
10.26	Providing and fixing hand rail of approved size by welding etc. to steel ladder railing, balcony railing, staircase railing and similar works, including applying priming coat of approved steel primer.		
10.26.1	M.S. tube	kg	128.10
10.26.2	E.R.W. tubes	kg	121.45
10.26.3	G.I. pipes	kg	148.40
10.27	Providing and fixing carbon steel galvanised (minimum coating 5 micron) dash fastener of 10 mm dia double threaded 6.8 grade (yield strength 480 N/mm ²), counter sunk head, comprising of 10 mm dia polyamide PA 6 grade sleeve, including drilling of hole in frame , concrete/ masonry, etc. as per direction of Engineer-in-charge.		
10.27.1	10 x 60 mm	each	86.40
10.27.2	10 x 80 mm	each	91.30
10.27.3	10 x 120 mm	each	112.35
10.27.4	10 x 140 mm	each	122.55
10.27.5	10 x 160 mm	each	150.80
10.28	Providing and fixing stainless steel (Grade 304) railing made of Hollow tubes, channels, plates etc., including welding, grinding, buffing, polishing and making curvature (wherever required) and fitting the same with necessary stainless steel nuts and bolts complete, i/c fixing the railing with necessary accessories & stainless steel dash fasteners , stainless steel bolts etc., of required size, on the top of the floor or the side of waist slab with suitable arrangement as per approval of Engineer-in- charge, (for payment purpose only weight of stainless steel members shall be considered excluding fixing accessories such as nuts, bolts, fasteners etc.).	kg	514.30
10.29	Providing & fixing fly proof wire gauze to windows, clerestory windows & doors with M.S. Flat 15x3 mm and nuts & bolts complete.		
10.29.1	Galvanised M.S. Wire gauze with 0.63 mm dia wire and 1.4 mm aperture on both sides	sqm	603.45
10.29.2	Stainless steel (grade 304) wire gauze of 0.5 mm dia wire and 1.4 mm aperture on both sides	sqm	811.20
10.30	Providing & fixing glass panes with putty and glazing clips in steel doors, windows, clerestory windows, all complete with :		
10.30.1	4.0 mm thick glass panes (weights not less than 10 kg/ sqm)	sqm	800.60
10.30.2	5.0 mm thick glass panes (weights not less than 12.50 kg/ sqm)	sqm	1,063.80

Item Code	Description	Unit	Justified Rate
10.31	Providing and fixing angle iron frames for doors, windows and ventilators of mild steel angle sections of size 35x35x5 mm, joints mitred and welded by angle iron 35x35x5 mm or 35x 5 mm flat pieces to the existing T-iron frame or to the wall with dash fastener, including fixing of necessary butt hinges and screws and applying a priming coat of approved steel primer, all complete as per the direction of Engineer-In-charge.	kg	87.30
11	FLOORING		
11.1	Brick on edge flooring with bricks of class designation 7.5 on a bed of 12 mm cement mortar, including filling the joints with same mortar, with common burnt clay non modular bricks:		
11.1.1	1:4 (1 cement : 4 coarse sand)	sqm	749.15
11.1.2	1:6 (1cement : 6 coarse sand)	sqm	708.85
11.2	Dry brick on edge flooring in required pattern with bricks of class designation 7.5 on a bed of 12 mm mud mortar, including filling joints with local sand, with common burnt clay non modular bricks.	sqm	593.20
11.3	Cement concrete flooring 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate) finished with a floating coat of neat cement, including cement slurry, but excluding the cost of nosing of steps etc. complete.		
11.3.1	40 mm thick with 20 mm nominal size stone aggregate	sqm	452.50
11.4	52 mm thick cement concrete flooring with concrete hardener topping, under layer 40 mm thick cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) and top layer 12 mm thick cement hardener consisting of mix 1:2 (1 cement hardener mix : 2 graded stone aggregate 6 mm nominal size) by volume, hardening compound mixed @ 2 litre per 50 kg of cement or as per manufacturer's specifications. This includes cost of cement slurry, but excluding the cost of nosing of steps etc. complete.	sqm	698.35
11.5	62 mm thick cement concrete flooring with concrete hardener topping, under layer 50 mm thick cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) and top layer 12mm thick cement hardener consisting of mix 1:2 (1 cement hardener mix : 2 graded stone aggregate, 6mm nominal size) by volume, hardening compound mixed @ 2 litre per 50 kg of cement or as per manufacture's specifications. This includes cost of cement slurry, but excluding the cost of nosing of steps etc. complete.	sqm	762.05
11.6	Cement plaster skirting up to 30 cm height, with cement mortar 1:3 (1 cement : 3 coarse sand), finished with a floating coat of neat cement.		
11.6.1	18 mm thick	sqm	432.50
11.7	Cement concrete pavement with 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), including finishing complete.	cum	6,932.10
11.8	Extra for making chequers of approved pattern on cement concrete floors, steps, landing, pavements etc. TERRAZO FLOORING	sqm	50.65
11.9	40 mm thick marble chips flooring rubbed and polished to granolithic finish, under layer 34 mm thick cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 12.5 mm nominal size) and top layer 6mm thick with white, black, chocolate, grey, yellow or green marble chips of sizes from 1 mm to 4 mm nominal size, laid in cement marble powder mix 3:1 (3 cement : 1 marble powder) by weight in proportion of 4:7 (4 cement marble powder mix : 7 marble chips) by volume, including cement slurry etc. complete :		
11.9.1	Dark shade pigment with ordinary cement	sqm	743.15
11.9.2	Light shade pigment with white cement	sqm	764.30
11.9.3	Medium shade pigment with 50% white cement and 50% ordinary cement	sqm	750.80
11.9.4	White cement without any pigment	sqm	745.60
11.9.5	Light shade pigment with ordinary cement	sqm	739.85

Item Code	Description	Unit	Justified Rate
11.9.6	Ordinary cement without any pigment	sqm	719.15
11.10	40 mm thick marble chips flooring, rubbed and polished to granolithic finish, under layer 31 mm thick cement concrete 12:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 12.5 mm nominal size) and top layer 9 mm thick with white, black, chocolate, grey, yellow or green marble chips of sizes from 4 mm to 7 mm nominal size, laid in cement marble powder mix 3 1 (3 cement : 1 marble powder) by weight in proportion of 4:7 (4 cement marble powder : 7 marble chips) by volume, including cement slurry etc. complete		
11.10.1	Dark shade pigment with Ordinary cement	sqm	707.95
11.10.2	Light shade pigment with white cement	sqm	738.15
11.10.3	Medium shade pigment with 50% white cement and 50% ordinary cement	sqm	718.80
11.10.4	White cement without any pigment	sqm	708.60
11.10.5	Light shade pigment with ordinary cement	sqm	703.25
11.10.6	Ordinary cement without any pigment	sqm	673.65
11.11	40 mm thick marble chips flooring, rubbed and polished to granolithic finish, under layer 28 mm thick cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 12.5 mm nominal size) and top layer 12 mm thick with white, black, chocolate, grey yellow or green marble chips of sizes from 7 mm to 10 mm nominal size, laid in cement marble powder mix 3:1 (3 cement : 1 marble powder) by weight in proportion of 2:3 (2 cement marble powder mix : 3 marble chips) by volume, including cement slurry etc. complete		
11.11.1	Dark shade pigment with ordinary cement	sqm	728.15
11.11.2	Light shade pigment with white cement	sqm	670.85
11.11.3	Medium shade pigment with 50% white cement and 50% ordinary cement	sqm	743.40
11.11.4	White cement without any pigment	sqm	729.45
11.11.5	Light shade pigment with ordinary cement	sqm	721.55
11.11.6	Ordinary cement without any pigment	sqm	680.50
11.12	Marble chips skirting up to 30 cm height, rubbed and polished to granolithic finish, top layer 6 mm thick with white, black, chocolate, grey, yellow or green marble chips of sizes from smallest to 4 mm nominal size, laid in cement marble powder mix 3:1 (3 cement : 1 marble powder) by weight in proportion of 4:7 (4 cement marble powder mix : 7 marble chips) by volume :		
11.12.1	18 mm thick with under layer 12 mm thick in cement plaster 1:3 (1 cement : 3 coarse sand) :		
11.12.1.1	Dark shade pigment with ordinary cement	sqm	1,179.60
11.12.1.2	Light shade pigment with white cement	sqm	1,200.75
11.12.1.3	Medium shade pigment with 50% white cement and 50% ordinary cement	sqm	1,187.25
11.12.1.4	White cement without any pigment	sqm	1,180.05
11.12.1.5	Light shade pigment with ordinary cement	sqm	1,176.30
11.12.1.6	Ordinary cement without any pigment	sqm	1,155.60
11.13	Providing and fixing glass strips in joints of terrazo/ cement concrete floors.		
11.13.1	40 mm wide and 4 mm thick	metre	62.40
11.14	Extra for laying terrazo flooring on staircase treads not exceeding 30 cm in width, including cost of forming, nosing etc.	sqm	57.65

Item Code	Description	Unit	Justified Rate
11.15	Crazy marble stone flooring, including filling the gaps with light shade pigment with white cement marble powder mixture (3 parts of white cement : 1 part of marble powder) by weight in proportion of 4:7 (4 cement marble powder mix : 7 white, black or white and black marble chips of sizes from 1 mm to 4 mm nominal size by volume), with under layer 25 mm thick cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 12.5 mm nominal size), including rubbing, polishing and cement slurry etc. complete :		
11.15.1	18 mm thick crazy marble stone white, black or as specified	sqm	1,164.50
11.16	Precast terrazzo tiles 22 mm thick with graded marble chips of size upto 12 mm, laid in foors, and landings, jointed with neat cement slurry mixed with pigment to match the shade of the tiles, including rubbing and polishing complete, on 20 mm thick bed of cement mortar 1:4 (1 cement:4 coarse sand) :		
11.16.1	Light shade pigment using white cement	sqm	1,058.05
11.16.2	Medium shade pigment using 50% white cement and 50% ordinary cement	sqm	1,017.75
11.16.3	Dark shade pigment using ordinary cement	sqm	983.90
11.16.4	Ordinary cement without any pigment	sqm	935.80
11.17	Extra if terrazzo tiles are laid in treads of steps not exceeding 30 cm in width.	sqm	75.00
11.18	Precast terrazzo tiles 22 mm thick with graded marble chips of sizes upto 12 mm, in skirting and risers of steps not exceeding 30 cm in height, on 12 mm thick cement plaster 1:3 (1 cement : 3 coarse sand), jointed with neat cement slurry mixed with pigment to match the shade of the tiles, including rubbing and polishing complete with tiles of :		
11.18.1	Light shade pigment using white cement	sqm	1,577.15
11.18.2	Medium shades pigment using 50% white cement and 50% ordinary cement	sqm	1,529.55
11.18.3	Dark shade pigment using ordinary cement	sqm	1,491.55
11.18.4	Ordinary cement without any pigment	sqm	1,430.90
11.19	Chequered terrazzo tiles 22 mm thick with graded marble chips of size up to 6 mm in floors, jointed with neat cement slurry mixed with pigment to match the shade of the tiles, including rubbing and polishing complete, on 20 mm thick bed of cement mortar 1:4 (1 cement :4 coarse sand) :		
11.19.1	Light shade pigment using white cement	sqm	1,045.25
11.19.2	Medium shade pigment using 50% white cement, 50% ordinary cement	sqm	1,062.45
11.19.3	Dark shade pigment using ordinary cement	sqm	1,003.10
11.19.4	Ordinary cement without any pigment	sqm	954.95
11.20	Chequered precast cement concrete tiles 22 mm thick in footpath & courtyard, jointed with neat cement slurry mixed with pigment to match the shade of tiles, including rubbing and cleaning etc. complete, on 20 mm thick bed of cement mortar 1:4 (1 cement: 4 coarse sand).		
11.20.1	Light shade pigment using white cement	sqm	1,003.60
11.20.2	Medium shade pigment using 50% white cement 50% Grey cement	sqm	942.95
11.20.3	Dark shade pigment using ordinary cement	sqm	792.95
11.20.4	Ordinary cement without any pigment	sqm	744.80
11.21	Providing and fixing 10 mm thick acid and/or alkali resistant tiles of approved make and colour using acid and/or alkali resisting mortar bedding, and joints filled with acid and/or alkali resisting cement as per IS : 4457, complete as per the direction of Engineer-in- Charge.		
11.21.1	In flooring on a bed of 10 mm thick mortar 1:4 (1 acid proof cement : 4 coarse sand)		
11.21.1.1	Acid and alkali resistant tile	sqm	1,263.55

Item Code	Description	Unit	Justified Rate
11.21.2	In dado/skirting on 12 mm thick mortar 1:4 (1 acid proof cement : 4 coarse sand)		
11.21.2.1	Acid and alkali resistant tile	sqm	1,353.85
11.22	Tile work in skirting, risers of steps and dado up to 2 m height over 12 mm thick bed of cement mortar 1:3 (1 cement :3 coarse sand) and jointed with grey cement slurry @ 3.3 kg/sqm, including pointing in white cement mixed with pigment of matching shade complete.		
11.22.1	Marble tiles (polished) Raj Nagar		
11.22.1.1	8 mm thick	sqm	1,075.60
11.23	Marble stone flooring with 18 mm thick marble stone, as per sample of marble approved by Engineer-in-charge, over 20 mm (average) thick base of cement mortar 1:4 (1 cement : 4 coarse sand) laid and jointed with grey cement slurry, including rubbing and polishing complete with :		
11.23.1	Makrana white second quality	sqm	2,829.75
11.23.2	Raj Nagar plain	sqm	1,627.60
11.23.3	Agaria White	sqm	2,161.85
11.23.4	Black Zebra	sqm	2,228.65
11.23.5	Udaipur green marble	sqm	1,721.10
11.23.6	Pink plain marble	sqm	1,807.90
11.24	Extra for pre finished nosing to treads of steps of marble stone.	metre	451.85
11.25	Extra for marble stone flooring in treads of steps and risers using single length up to 2.00 metre.	sqm	528.55
11.26	Kota stone slab flooring over 20 mm (average) thick base laid over and jointed with grey cement slurry mixed with pigment to match the shade of the slab, including rubbing and polishing complete with base of cement mortar 1 : 4 (1 cement : 4 coarse sand) :		
11.26.1	25 mm thick	sqm	1,373.35
11.27	Kota stone slabs 20 mm thick in risers of steps, skirting, dado and pillars laid on 12 mm (average) thick cement mortar 1:3 (1 cement: 3 coarse sand) and jointed with grey cement slurry mixed with pigment to match the shade of the slabs, including rubbing and polishing complete.	sqm	1,593.55
11.28	40 mm thick fine dressed stone flooring over 20 mm (average) thick base of cement mortar 1:5 (1 cement : 5 coarse sand) with joints finished flush.		
11.28.1	Red sand stone	sqm	799.95
11.28.2	White sand stone	sqm	825.50
11.29	40 mm thick fine dressed stone flooring over 20 mm (average) thick base of cement mortar 1:5 (1 cement : 5 coarse sand), including pointing with cement mortar 1:2 (1 cement : 2 stone dust) with an admixture of pigment to match the shade of stone.		
11.29.1	Red sand stone	sqm	959.30
11.29.2	White sand stone	sqm	984.85
11.30	40 mm thick rubbed stone flooring over 20 mm (average) thick base of cement mortar 1:5 (1 cement : 5 coarse sand) with joints 3 mm thick, side buttered with cement mortar 1:2 (1 cement : 2 stone dust) admixed with pigment to match the shade of stone and pointing with same mortar.		
11.30.1	Red sand stone	sqm	1,037.50
11.30.2	White sand stone	sqm	1,063.05
11.31	Extra for pre finished nosing in treads of steps of Kota stone/ sand stone slab.	metre	127.90
11.32	Extra for Kota stone/ sand stone in treads of steps and risers using single length up to 1.05 metre.	sqm	26.30
11.33	25 mm wooden planking, tongued and grooved in flooring, including fixing with iron screws complete with :		
11.33.1	Second class teak wood	sqm	3,600.80
11.33.2	Second class deodar wood	sqm	2,402.85

Item Code	Description	Unit	Justified Rate
11.34	38 mm thick wood block flooring of first class teak wood laid over 25 mm thick leveling layer of cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 10 mm nominal size) to be paid separately, coated with a thin layer of hot bitumen penetration 80/25 (blown type) @ 2.45 kg per sqm, including fixing blocks in position after dipping in hot bitumen (blown type) up to half depth, planed, levelled smooth and finished complete.	sqm	8,509.80
11.35	Providing and fixing M.S. angle 50x50x5 mm to act as nosing with lugs of M.S. flat 10x5 mm, 10 cm long, forked at end 60cm apart (minimum three lugs to be provided), including necessary welding and applying a priming coat of approved primer on exposed surface etc. complete.	kg	117.40
11.37	Providing and laying Ceramic glazed floor tiles of size 300x300 mm (thickness to be specified by the manufacturer) of 1st quality conforming to IS : 15622 of approved make in colours such as White, Ivory, Grey, Fume Red Brown, laid on 20 mm thick cement mortar 1:4 (1 Cement : 4 Coarse sand), Jointing with grey cement slurry @ 3.3 kg/sqm including pointing the joints with white cement and matching pigment etc., complete.	sqm	762.80
11.37A	Providing and fixing 1st quality ceramic glazed floor tiles conforming to IS : 15622 (thickness to be specified by the manufacturer) of approved make in all colours, shades except burgundy, bottle green, black of any size as approved by Engineer-in-Charge in skirting, risers of steps and dados over 12 mm thick bed of cement Mortar 1:3 (1 cement: 3 coarse sand) and jointing with grey cement slurry @ 3.3kg per sqm including pointing in white cement mixed with pigment of matching shade complete.	sqm	762.85
11.38	Providing and laying Ceramic glazed floor tiles of size 300x300 mm (thickness to be specified by the manufacturer), of 1st quality conforming to IS : 15622, of approved make, in all colours, shades, except White, Ivory, Grey, Fume Red Brown, laid on 20 mm thick bed of cement mortar 1:4 (1 Cement : 4 Coarse sand), jointing with grey cement slurry @ 3.3 kg/ sq.m including pointing the joints with white cement and matching pigments etc., complete.	sqm	911.65
11.39	Providing and laying rectified Glazed Ceramic floor tiles of size 300x300 mm or more (thickness to be specified by the manufacturer), of 1st quality conforming to IS : 15622, of approved make, in colours White, Ivory, Grey, Fume Red Brown, laid on 20 mm thick cement mortar 1:4 (1 Cement: 4 Coarse sand), jointing with grey cement slurry @ 3.3 kg/ sqm including grouting the joints with white cement and matching pigments etc., complete.	sqm	942.70
11.40	Providing and laying rectified Glazed Ceramic floor tiles of size 300x300 mm or more (thickness to be specified by the manufacturer), of 1st quality conforming to IS : 15622, of approved make, in all colours, shades, except White, Ivory, Grey, Fume Red Brown, laid on 20 mm thick Cement Mortar 1:4 (1 Cement : 4 Coarse sand), jointing with grey cement slurry @ 3.3 kg/ sqm including pointing the joints with white cement and matching pigments etc., complete.	sqm	1,014.10
11.41	Providing and laying vitrified floor tiles in different sizes (thickness to be specified by the manufacturer) with water absorption less than 0.08% and conforming to IS: 15622, of approved make, in all colours and shades, laid on 20mm thick cement mortar 1:4 (1 cement : 4 coarse sand), jointing with grey cement slurry @ 3.3 kg/ sqm including grouting the joints with white cement and matching pigments etc., complete.		
11.41.1	Size of Tile 500x500 mm	sqm	1,108.95
11.41.2	Size of Tile 600x600 mm	sqm	1,180.40
11.41.3	Size of Tile 800x800 mm	sqm	1,582.65
11.41.4	Size of Tile 1000x1000 mm	sqm	2,166.00

Item Code	Description	Unit	Justified Rate
11.41A	Providing and laying Vitrified tiles in floor in different sizes (thickness to be specified by the manufacturer) with water absorption less than 0.08% and conforming to IS:15622, of approved brand & manufacturer, in all colours and shade, laid on 20 mm thick cement mortar 1:4 (1 cement: 4 coarse sand) jointing with grey cement slurry @3.3 kg/sqm including grouting the joints with white cement and matching pigments etc. The tiles must be cut with the zero chipping diamond cutter only . Laying of tiles will be done with the notch trowel, plier, wedge, clips of required thickness, leveling system and rubber mallet for placing the tiles gently and easily.		
11.41A.1	Double charge vitrified tile polished finish of size		
11.41A.1.1	Size of Tile 600 x 600 mm	sqm	1,067.50
11.41A.1.2	Size of Tile 800 x 800 mm	sqm	1,142.35
11.41A.1.3	Size of Tile 600 x 1200 mm	sqm	1,172.10
11.41A.1.4	Size of Tile 800 x 1600 mm	sqm	1,410.20
11.41A.1.5	Size of Tile 1000 x 1000 mm	sqm	1,350.70
11.41A.2	Glazed vitrified floor tiles polished finish of size		
11.41A.2.1	Size of Tile 600 x 600 mm	sqm	1,112.55
11.41A.2.2	Size of Tile 600 x 1200 mm	sqm	1,350.70
11.41A.2.3	Size of Tile 800 x 800 mm	sqm	1,291.15
11.41A.2.4	Size of Tile 800 x 1200 mm	sqm	1,564.95
11.41A.2.5	Size of Tile 1200 x 1200 mm	sqm	1,945.95
11.41A.3	Glazed Vitrified tiles Matt/Antiskid finish of size		
11.41A.3.1	Size of Tile 600 x 600 mm	sqm	1,088.75
11.41A.3.2	Size of Tile 600 x 1200 mm	sqm	1,350.70
11.41A.3.3	Size of Tile 800 x 800 mm	sqm	1,291.15
11.41A.3.4	Size of Tile 800 x 1200 mm	sqm	1,564.95
11.41A.3.5	Size of Tile 1200 x 1200 mm	sqm	2,184.05
11.42	Deduct for not using 20 mm thick cement mortar 1:4 (1 cement : 4 coarse sand) bedding in laying of floor tiles and jointing with grey cement slurry @ 3.3 kg/ sqm.	sqm	588.95
11.43	Fixing glazed/ Ceramic/ Vitrified floor tiles with cement based high polymer modified quick-set tile adhesive (Water based) conforming to IS: 15477, in average 3mm thickness.	sqm	509.85
11.44	Crazy ceramic tile flooring, with under layer 12 mm thick cement mortar 1:4 (1 cement: 4 coarse sand), with joints not exceeding 5 mm, including filling the gaps with ordinary cement mixture & mixing with synthetic polyester fibre, triangular in shape having specific gravity of 1.34 to 1.40, cross section size ranging from 10 to 40 micron & length upto 6 mm , mixing fibre @ 125 grams per 50 kg of cement in cement mortar, including providing and mixing water proofing material in mortar @ 1 kg per 50 kg of cement, all complete as per direction of Engineer-in-charge.	sqm	619.10
11.45	Providing and laying 500x500x40 mm thick Turf paver (Turf pave XD) on 150 mm thick sub grade of compacted bed of 20 mm thick nominal size stone aggregate and base course and filling with 150 mm thick jamuna sand, including spreading, well ramming, consolidating and finishing smooth etc. all complete as per direction of Engineer-in-charge.	sqm	1,426.20
11.46	Providing and laying Vitrified tiles in different sizes (thickness to be specified by manufacturer), with water absorption less than 0.08 % and conforming to I.S. 15622, of approved make, in all colours & shade, in skirting, riser of steps, over 12 mm thick bed of cement mortar 1:3 (1 cement: 3 coarse sand), jointing with grey cement slurry @ 3.3 kg/ sqm including grouting the joint with white cement & matching pigments etc. complete.		
11.46.1	Size of Tile 500x500 mm	sqm	1,149.75
11.46.2	Size of Tile 600x600 mm	sqm	1,221.20

Item Code	Description	Unit	Justified Rate
11.46.3	Size of Tile 800x800 mm	sqm	1,626.00
11.46.4	Size of Tile 1000x1000 mm	sqm	2,209.35
11.46A	Providing and fixing glazed screen printed border tile 75mm wide having thickness 5mm, of approved quality & make, in all shades, design and prints, in dado, over 12mm thick bed of cement mortar 1:3 (1 Cement : 3 Coarse sand) and jointing with grey cement slurry @ 3.3 kg/sqm including pointing with white cement mixed with pigment of matching shade, all complete as approved by Engineer - in - Charge	metre	143.55
11.47	Providing and laying Vitrified tiles in different sizes (thickness to be specified by the manufacturer), with water absorption less than 0.08% and conforming to IS: 15622, of approved brand & manufacturer, in all colours and shade, in skirting, riser of steps, laid with cement based high polymer modified quick set tile adhesive (water based) conforming to IS: 15477, in average 6 mm thickness, including grouting of joints (Payment for grouting of joints to be made separately).		
11.47.1	Size of Tile 500x500 mm	sqm	1,297.70
11.47.2	Size of Tile 600x600 mm	sqm	1,369.15
11.47.3	Size of Tile 800x800 mm	sqm	1,773.95
11.47.4	Size of Tile 1000x1000 mm	sqm	2,357.30
11.48	Grouting the joints of flooring tiles having joints of 3 mm width, using epoxy grout mix of 0.70 kg of organic coated filler of desired shade (0.10 kg of hardener and 0.20 kg of resin per kg), including filling / grouting and finishing complete as per direction of Engineer-in-charge.		
11.48.1	Size of Tile 500x500 mm	sqm	250.90
11.48.2	Size of Tile 600x600 mm	sqm	208.45
11.48.3	Size of Tile 800x800 mm	sqm	166.05
11.48.4	Size of Tile 1000x1000 mm	sqm	119.20
11.49	Providing and laying Vitrified tiles in floor with different sizes (thickness to be specified by the manufacturer), with water absorption less than 0.08% and conforming to IS:15622, of approved brand & manufacturer, in all colours and shade, laid with cement based high polymer modified quick set tile adhesive (water based) conforming to IS : 15477, in average 6 mm thickness, including grouting of joints (Payment for grouting of joints to be made separately).		
11.49.1	Size of Tile 500x500 mm	sqm	1,194.45
11.49.2	Size of Tile 600x600 mm	sqm	1,265.90
11.49.3	Size of Tile 800x800 mm	sqm	1,670.65
11.49.4	Size of Tile 1000x1000 mm	sqm	2,254.05
11.49.A	Providing and laying full body vitrified tile in floor of minimum thickness 15 mm with water absorption less than 0.06% and conforming to IS:15622, of approved make, brand and manufacturer, laid on 20 mm thick base cement mortar 1:4 (1 cement: 4 coarse sand) jointing with grey cement slurry @3.30 kg / sqm including grouting the joints with white cement and matching pigments etc. The slab must be cut with the zero chipping diamond cutter only. Laying of slab will be done with the help of notch trowel, wedge, clips of required thickness, vacuum cups for lifting, leveling system and rubber mallet for placing the slab gently and easily. Size of tile 800x2400mm of all colours and shades.	sqm	403.30
11.50	Deduct for not grouting the joints with white cement and matching pigment in the items of fixing of vitrified tiles.	sqm	10.15

Item Code	Description	Unit	Justified Rate
11.51	Providing and laying machine cut, mirror polished, Italian Marble stone flooring laid in required pattern in linear portion of the building all complete as per architectural drawings, with 18 mm thick stone slab laid over 20 mm (average) thick base of cement mortar 1:4 (1 cement : 4 coarse sand) laid and jointed with white cement slurry @ 4.4 kg/sqm including pointing with white cement slurry admixed with pigment to match the marble shade including rubbing, curing and polishing etc. all complete as specified and as directed by the Engineer-in-Charge.		
11.51.1	18 mm thick Italian Marble stone slab, Perlato, Rosso verona, Fire Red or Dark Emperadore etc.	sqm	5,183.50
11.52	Providing and laying machine cut, mirror polished Marble stone flooring, in required design (Simple geometrical, abstract etc.) and in patterns in combination with Italian marble stones of different colours, shades and finished surface texture etc., in linear portions of the building, all complete as per the architectural drawings, with 18 mm thick stone slab laid over 20 mm (average) thick base of cement mortar 1:4 (1 cement : 4 coarse sand) laid and jointed with white cement slurry @ 4.4 kg/sqm, including pointing with white cement slurry admixed with pigment to match the marble shade, including rubbing, curing and polishing etc. all complete as specified and as directed by the Engineer-in-Charge.		
11.52.1	18 mm thick Italian Marble stone slab, Perlato, Rosso verona, Fire Red or Dark Emperadore etc.	sqm	5,431.95
11.53	Providing and fixing Glass mosaic tiles on finished plain wall surface of size 20 mm x 20 mm x 4 mm in all colour, design , fixing in customize design as per direction of Engineer-in- Charge. The glass mosaic tiles to be fixed on the wall surface with the help of approved adhesive applied at the rate of 2.5 kg per sqm and grouting of the same. The rate is inclusive of all operation, material and required pattern approved by Engineer-in-Charge:	sqm	2,809.40

Item Code	Description	Unit	Justified Rate
11.54	<p>Providing and fixing removable raised/false access flooring with system and its components of approved make for different plenum height with possible height adjustment upto 50 mm, comprising of modular load bearing floor panels supported on G.I. rectangular stinger frame work and G.I. Pedestal etc. all complete, as per the architectural drawings, as specified and as directed by Engineer-in-charge consisting of: (a) Providing at required spacing to form modular framework, pedestals made out of GI tube of thickness minimum 2 mm and 25 mm outer diameter, fully welded on to the G.I. Base plate of size 100mm x 100mm x 3mm at the bottom of the pedestal tube, G.I. pedestal head of size 75mmx75mmx3.5 mm welded with GI fully threaded stud 16mm outer diameter with two GI Check nuts screwed on the stud for level adjustment upto 50mm, locking and stabilizing the pedestal head in position at the required level. The pedestals shall be fixed to the subfloor (base) through base plate using epoxy based adhesive of approved make or the machine screw with rawl plug. (b) Stringers system in all steel construction hot dipped galvanized of rectangular size 570x20x30x0.80mm thick having holes at both ends for securing the stringers on to the pedestal head using fully threaded screws ensuring maximum lateral stability in all directions, the grid formed by the pedestal and stringer assembly shall receive the floor panel, this system shall provide adequate solid, rigid support for access floor panel, the system shall provide a minimum clear uninterrupted clearance between the bottom of the floor for electrical conduits and wiring etc. all complete as per the architectural drawings, as specified and as directed by the Engineer-in-charge. (c) Providing and fixing Access Floor panel of 600x600x32 mm medium grade Filled Steel anti static high pressure Lamination of 800H grade (FS800H). Access Floor panel shall be steel welded construction with an enclosed bottom pan with uniform pattern of 64 hemispherical cones. The top and bottom plates of Steel Gauges: top 0.6 mm and bottom 0.7 mm fused spot welded together (minimum 64 welds in each dome and 20 welds along each flange). The panel should be Corroresist epoxy coated for lifetime rust protection and cavity formed by the top and bottom plate is filled with Pyrogrip noncombustible Portland cementitious core mixed with lightweight foaming compound. The access floor shall be factory finished with Anti-static High Pressure laminate with Non Warp technology upto 1mm thickness for superior adhesion and Surface flatness within 0.75mm. The panel is to withstand a Concentrated Load of 363 kgs applied on area 25mm x 25mm without collapse in the centre of the panel which is placed on four steel blocks. The panel will withstand and Uniformly Distributed Load (UDL) minimum 1250 kg/sqm and an impact load.</p>		
11.54.1	300 mm Finished Floor Height (FFH)	sqm	4,372.10
11.54.2	450 mm Finished Floor Height (FFH).	sqm	4,643.85
11.55	<p>Providing and laying flamed finish Granite stone flooring in required design and patterns, in linear as well as curvilinear portions of the building all complete as per the architectural drawings with 18 mm thick stone slab over 20 mm (average) thick base of cement mortar 1:4 (1 cement : 4 coarse sand) laid and jointed with cement slurry and pointing with white cement slurry admixed with pigment of matching shade including rubbing, curing and polishing etc. all complete as specified and as directed by the Engineer-in-Charge :</p>		
11.55.1	Flamed finish granite stone slab Jet Black, Cherry Red, Elite Brown, Cat Eye or equivalent.	sqm	2,138.50
11.56	<p>Providing and laying Polished Granite stone flooring in required design and patterns, in linear as well as curvilinear portions of the building all complete as per the architectural drawings with 18 mm thick stone slab over 20 mm (average) thick base of cement mortar 1:4 (1 cement : 4 coarse sand) laid and jointed with cement slurry and pointing with white cement slurry admixed with pigment of matching shade including rubbing, curing and polishing etc. all complete as specified and as directed by the Engineer-in-Charge.</p>		
11.56.1	Polished Granite stone slab colour of Black, Cherry/Ruby Red or equivalent	sqm	3,319.75
11.56.2	Polished Granite stone slab of all colour and texture except Black, Cherry/Ruby Red	sqm	2,251.15
12	ROOFING		

Item Code	Description	Unit	Justified Rate
12.1	Providing corrugated G.S. sheet roofing including vertical / curved surface fixed with polymer coated J or L hooks, bolts and nuts 8 mm diameter with bitumen and G.I. limpet washers or with G.I. limpet washers filled with white lead, including a coat of approved steel primer and two coats of approved paint on overlapping of sheets complete (up to any pitch in horizontal/ vertical or curved surfaces), excluding the cost of purlins, rafters and trusses and including cutting to size and shape wherever required.		
12.1.1	1.00 mm thick with zinc coating not less than 275 gm/m ²	sqm	1,118.45
12.1.2	0.80 mm thick with zinc coating not less than 275 gm/m ²	sqm	957.95
12.1.3	0.63 mm thick with zinc coating not less than 275 gm/ m ²	sqm	821.25
12.2	Extra for straight cutting in C.G.S. sheet roofing for making opening of area exceeding 40 sq. decimeter for chimney stacks, sky light etc.:		
12.2.1	1.00 mm thick	metre	72.95
12.2.2	0.80 mm thick	metre	58.35
12.2.3	0.63 mm thick	metre	58.35
12.3	Extra for circular cutting in C.G.S. sheet roofing for making opening of area exceeding 40 sq. decimeter:		
12.3.1	1.00 mm thick	metre	411.45
12.3.2	0.80 mm thick	metre	328.65
12.3.3	0.63 mm thick	metre	328.65
12.4	Providing ridges or hips of width 60 cm overall width plain G.S. sheet fixed with polymer coated J or L hooks, bolts and nuts 8 mm dia G.I. limpet and bitumen washers complete.		
12.4.1	0.80 mm thick with zinc coating not less than 275 gm/m ²	metre	662.30
12.4.2	0.63 mm thick with zinc coating not less than 275 gm/m ²	metre	600.40
12.5	Providing valleys of 90 cm wide overall in plain G.S. sheet fixed with polymer coated J, or L hooks, bolts and nuts 8 mm dia G.I. limpet and bitumen washers complete :		
12.5.1	1.60 mm thick with zinc coating not less than 350 gm/m ²	metre	1,132.55
12.6	Providing and fixing of 40 cm overall width plain G.S. sheet fixed with polymer coated J or L hooks, bolts and nuts, G.I. limpet and bitumen washer complete, bent to shape and fixed in wall with cement mortar 1:3 (1 cement : 3 coarse sand).		
12.6.1	1.00 mm thick with zinc coating not less than 275 gm/m ²	metre	524.80
12.7	Providing and fixing 15 cm wide, 45 cm overall semi-circular plain G.S. sheet gutter with iron brackets 40x3mm size, bolts, nuts and washers etc., including making necessary connections with rain water pipes complete.		
12.7.1	0.80 mm thick with zinc coating not less than 275 gm/m ²	metre	651.65
12.7.2	0.63 mm thick with zinc coating not less than 275 gm/m ²	metre	600.10
12.8	Providing reinforced by organic fibres and/or inorganic synthetic fibres cement 6 mm thick corrugated sheets (as per IS: 14871) roofing up to any pitch and fixing with polymer coated J, or L hooks, bolts and nuts 8 mm dia. G.I. plain and bitumen washers or with self drilling fastener and EPDM washers etc. complete (excluding the cost of purlins, rafters and trusses), including cutting sheets to size and shape wherever required.	sqm	389.10
12.9	Extra for straight cutting in reinforced by organic fibres and/or inorganic synthetic fibres cement corrugated, semi corrugated 6 mm thick sheet roofing for making openings of area exceeding 40 square decimeter for chimney stacks, skylights etc.	metre	58.35
12.10	Extra for circular cutting in reinforced by organic fibres and/or inorganic synthetic fibres cement corrugated/ semi corrugated 6 mm thick sheet roofing for making openings of area exceeding 40 square decimeter.	metre	161.20
12.11	Extra for providing and fixing wind ties of 40x 6 mm flat iron section.	metre	138.75

Item Code	Description	Unit	Justified Rate
12.12	Providing and fixing ridges and hips in fibre cement reinforced by organic fibres and/or inorganic synthetic fibres roofing with suitable fixing accessories or self drilling fastener and EPDM washer etc. complete.		
12.12.1	Corrugated serrated adjustable ridges	metre	370.80
12.12.2	Plain wing adjustable ridges	metre	370.80
12.12.3	Close fitting adjustable ridges	metre	417.55
12.12.4	Unserrated adjustable hips	metre	369.95
12.13	Providing and fixing fibre cement reinforced by organic fibres and/or inorganic synthetic fibres roofing accessories in all colours with polymer coated J or L hooks, bolts and nuts and or G.I. seam bolts and nuts, G.I. plain and bitumen washers or with self drilling fastener and EPDM washer etc. complete:		
12.13.1	Corrugated apron pieces	metre	308.65
12.13.2	Eave's filler pieces	metre	249.50
12.13.3	North light curves	metre	419.35
12.13.4	Ventilator curves	metre	456.15
12.13.5	Barge boards	metre	541.05
12.13.6	Ridge finials	pair	227.80
12.13.7	Special north light curves	each	753.45
12.13.8	S type louvers	metre	390.05
12.14	Providing flat iron brackets 50x3 mm size with necessary bolts, nuts and washers etc. for fixing G.S. sheets gutters with purlins.	metre	63.05
12.15	Painting top of roofs with bitumen of approved quality @ 17kg per 10 sqm impregnated with a coat of coarse sand at 60 cum per 10 sqm, including cleaning the slab surface with brushes and finally with a piece of cloth lightly soaked in kerosene oil complete :		
12.15.1	With residual type petroleum bitumen of grade VG -10	sqm	103.50
12.16	10 cm thick (average) mud phaska of damped brick earth on roofs laid to slope consolidated and plastered with 25 mm thick mud mortar mixed with bhusa @ 35 kg per cum of earth and gobri leaping with mix 1:1 (1 clay : 1 cow dung) and covered with flat tile bricks, grouted with cement mortar 1:3 (1 cement : 3 fine sand) mixed with 2% of integral water proofing compound by weight of cement and finished neat:		
12.16.1	With common burnt clay F.P.S.(non modular) brick tile of class designation 10	sqm	702.55
12.17	10cm thick (average) mud phaska of damped brick earth on roofs laid to slope consolidated and plastered with 25 mm thick mud mortar with bhusha @ 35 kg per cum of earth and gobri leaping with mix 1:1 (1 clay : 1 cow-dung) and covered with machine moulded tile bricks, grouted with cement mortar 1:3 (1 cement : 3 fine sand) mixed with 2% of integral water proofing compound by weight of cement and finished neat.		
12.17.1	With machine moulded common burnt clay F.P.S. (non modular) brick tiles of class designation 12.5, conforming to IS 2690	sqm	702.55
12.18	Extra for every additional 1 cm thickness of mud phaska.	sqm	16.20
12.19	Providing and laying brick tiles over mumty roofs, grouted with cement mortar 1:3 (1 cement : 3 fine sand) mixed with 2% of integral water proofing compound by weight of cement, over 12 mm layer of cement mortar 1:3 (1 cement : 3 fine sand) and finished neat:		
12.19.1	With common burnt clay F.P.S. (non modular) brick tiles of class designation 10	sqm	454.50
12.20	Providing and laying pressed clay tiles (as per approved pattern 20 mm nominal thickness of approved size) on roofs jointed with cement mortar 1:4 (1 cement : 4 coarse sand) mixed with 2% integral water proofing compound, laid over a bed of 20 mm thick cement mortar 1:4 (1 cement : 4 coarse sand) and finished neat complete.	sqm	483.40

Item Code	Description	Unit	Justified Rate
12.21	Providing gola 75x75 mm in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 stone aggregate 10 mm and down gauge), including finishing with cement mortar 1:3 (1 cement : 3 fine sand) as per standard design :		
12.21.1	In 75x75 mm deep chase	metre	203.75
12.22	Making khurras 45x45 cm with average minimum thickness of 5 cm cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate of 20 mm nominal size) over P.V.C. sheet 1 m x1 m x 400 micron, finished with 12 mm cement plaster 1:3 (1 cement : 3 coarse sand) and a coat of neat cement, rounding the edges and making and finishing the outlet complete.	each	223.95
12.23	Providing sand stone slab for roofing and laying them in cement mortar 1 : 4 (1 cement : 4 coarse sand) over wooden karries or R.C.C. battens or structural steel sections (Karries or battens or structural steel sections to be paid separately), including pointing the ceiling joints with cement mortar 1:3 (1 cement : 3 fine sand) complete :		
12.23.1	Red sand stone slab		
12.23.1.1	40 to 50 mm thick	sqm	727.05
12.23.2	White sand stone slab		
12.23.2.1	40 to 50 mm thick	sqm	752.60
12.24	Providing and fixing insulating board ceiling of approved quality with necessary nails etc. complete (frame work to be paid separately) :		
12.24.1	Natural colour insulating board		
12.24.1.1	12 mm thick	sqm	628.95
12.24.2	White face insulating board		
12.24.2.1	12 mm thick	sqm	660.90
12.24.3	Flame retardant face insulating board		
12.24.3.1	12 mm thick	sqm	769.50
12.25	Providing and fixing flat pressed 3 layer medium density particle board or graded particle board (Grade I) IS: 3087 marked, in ceiling with necessary nails etc. complete (frame work to be paid separately):		
12.25.1	12 mm thick	sqm	727.95
12.26	Providing and fixing plain multipurpose cement board(Hight pressure steam cured) with suitable screws for cement particle board in ceiling etc. complete (frame work to be paid seperately).		
12.26.1	6 mm thick Cement fiber board, Type-B, Category-III as per IS: 14862:2000	sqm	628.30
12.26.2	6 mm thick Cement bonded wood particle board as per IS:14276	sqm	609.15
12.27	Extra for Circular cutting including wastages in ceiling with:		
12.27.1	2nd class teak wood planks 20 mm thick	metre	514.95
12.27.2	Natural colour insulating board		
12.27.2.1	12 mm thick	metre	312.15
12.27.3	White face insulating board:		
12.27.3.1	12 mm thick	metre	316.10
12.27.4	Flame retardant face insulating board:		
12.27.4.1	12 mm thick	metre	329.65
12.27.5	Standard quality hard board sheet:		
12.27.5.1	3 mm thick	metre	300.10
12.27.5.2	4.5 mm thick	metre	312.05
12.28	Extra for providing and fixing ceiling to curved surfaces in narrow widths	sqm	277.35

Item Code	Description	Unit	Justified Rate
12.31	Providing 10 mm thick plaster of Paris (gypsum anhydrous) ceiling up to a height of 5 m above floor level, over first class kail wood strips 25x6 mm with 10 mm gap in between and reinforced with rabbit wire mesh fixed to wooden frame (frame work to be paid separately):		
12.31.1	Flat surfaces	sqm	1,130.25
12.31.2	Curved surfaces	sqm	1,349.10
12.32	Extra for sunk or raised mouldings in the plaster of Paris (Gypsum anhydrous) ceiling.	sqm	378.50
12.33	Extra for providing plaster of Paris (Gypsum anhydrous) ceiling above 5 metres height from floor level.	sqm per metre height	166.95
12.34	Providing fixing thermal insulation of ceiling (under deck insulation) with Resin Bonded Fibre glass wool conforming to IS : 8183, density 24kg / m ³ , 50mm thick, wrapped in 200 G Virgin Polythene bags, fixed to ceiling with metallic cleats (50x50x3 mm) @ 60 cm and wire mesh of 12.5 mm x 24 gauge wire mesh, for top most ceiling of building.	sqm	484.65
12.35	Providing and fixing thermal insulation with Resin Bonded Fibre glass wool conforming to IS: 8183. Density 16 kg/m ³ , 50 mm thick, wrapped in 200G Virgin Polythene bags placed over existing false ceiling and held in position by criss-crossing GI wire.	sqm	200.75
12.36	Thermal Insulation of roofing with Expanded polystyrene fixed with suitable adhesive to the false ceiling as per the directions of the Engineer-in-charge:		
12.36.1	With Type N - Normal 50 mm thick	sqm	230.30
12.36.2	With Type SE - Self Extinguishing type 50 mm thick	sqm	255.85
12.37	Providing and fixing 100 mm diameter and 60 cm long rain water spout in cement mortar 1:4 (1 cement : 4 fine sand).		
12.37.1	Stone ware spout	each	112.85
12.38	Providing and fixing M.S. holder bat clamps of approved design to C.I. or S.C.I. rain water pipes embedded in and including cement concrete blocks 10x10x10 cm of 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) and cost of cutting holes and making good the walls etc. :		
12.38.1	100 mm diameter	each	234.10
12.38.2	150 mm diameter	each	251.50
12.39	Providing lead caulked joints to sand cast iron rain water pipes and fittings:		
12.39.1	100 mm dia Pipe	each	357.60
12.39.2	150 mm dia Pipe	each	489.20
12.40	Providing, fixing and embedding sand cast iron accessories for rain water pipes in the masonry surrounded with 12 mm thick cement mortar of the same mix, as that of masonry (lead caulking will be paid for separately):		
12.40.1	Sand cast iron plain shoes :		
12.40.1.1	150 mm diameter	each	374.25
12.41	Providing and fixing on wall face unplasticised Rigid PVC rain water pipes conforming to IS : 13592 Type A, including jointing with seal ring conforming to IS : 5382, leaving 10 mm gap for thermal expansion, (i) Single socketed pipes.		
12.41.1	75 mm diameter	metre	172.65
12.41.2	110 mm diameter	metre	262.40
12.42	Providing and fixing on wall face unplasticised - PVC moulded fittings/ accessories for unplasticised Rigid PVC rain water pipes conforming to IS : 13592 Type A, including jointing with seal ring conforming to IS : 5382, leaving 10 mm gap for thermal expansion.		
12.42.1	Coupler		
12.42.1.1	75 mm	each	69.25
12.42.1.2	110 mm	each	104.15

Item Code	Description	Unit	Justified Rate
12.42.2	Single pushfit Coupler		
12.42.2.1	75 mm	each	69.25
12.42.2.2	110 mm	each	96.00
12.42.3	Single tee with door		
12.42.3.1	75x75x75 mm	each	122.90
12.42.3.2	110x110x110 mm	each	178.35
12.42.4	Single tee without door		
12.42.4.1	75x75x75 mm	each	107.80
12.42.4.2	110x110x110 mm	each	165.60
12.42.5	Bend 87.5'		
12.42.5.1	75 mm bend	each	79.70
12.42.5.2	110 mm bend	each	114.60
12.42.6	Shoe (Plain)		
12.42.6.1	75 mm Shoe	each	70.45
12.42.6.2	110 mm Shoe	each	100.65
12.43	Providing and fixing unplasticised PVC pipe clips of approved design to unplasticised - PVC rain water pipes by means of 50x50x50 mm hard wood plugs, screwed with M.S. screws of required length, including cutting brick work and fixing in cement mortar 1:4 (1 cement: 4 coarse sand) and making good the wall etc. complete.		
12.43.1	75 mm	each	236.00
12.43.2	110 mm	each	234.80
12.44	Providing and fixing to the inlet mouth of rain water pipe cast iron grating 15 cm diameter and weighing not less than 440 grams.	each	41.60
12.45	Providing and fixing false ceiling at all height including providing and fixing of frame work made of special sections, power pressed from M.S. sheets and galvanized with zinc coating of 120 gms/sqm (both side inclusive) as per IS : 277 and consisting of angle cleats of size 25 mm wide x 1.6 mm thick with flanges of 27 mm and 37mm, at 1200 mm centre to centre, one flange fixed to the ceiling with dash fastener 12.5 mm dia x 50mm long with 6mm dia bolts, other flange of cleat fixed to the angle hangers of 25x10x0.50 mm of required length with nuts & bolts of required size and other end of angle hanger fixed with intermediate G.I. channels 45x15x0.9 mm running at the spacing of 1200 mm centre to centre, to which the ceiling section 0.5 mm thick bottom wedge of 80 mm with tapered flanges of 26 mm each having lips of 10.5 mm, at 450 mm centre to centre, shall be fixed in a direction perpendicular to G.I. intermediate channel with connecting clips made out of 2.64 mm dia x 230 mm long G.I. wire at every junction, including fixing perimeter channels 0.5 mm thick 27 mm high having flanges of 20 mm and 30 mm long, the perimeter of ceiling fixed to wall/partition with the help of rawl plugs at 450 mm centre, with 25mm long dry wall screws @ 230 mm interval, including fixing of gypsum board to ceiling section and perimeter channel with the help of dry wall screws of size 3.5 x 25 mm at 230 mm c/c, including jointing and finishing to a flush finish of tapered and square edges of the board with recommended jointing compound , jointing tapes , finishing with jointing compound in 3 layers covering upto 150 mm on both sides of joint and two coats of primer suitable for board, all as per manufacturer's specification and also including the cost of making openings for light fittings, grills, diffusers, cutouts made with frame of perimeter channels suitably fixed, all complete as per drawings, specification and direction of the Engineer in Charge but excluding the cost of painting with :		
12.45.1	12.5 mm thick tapered edge gypsum plain board conforming to IS: 2095- (Part I) :2011 (Board with BIS certification marks)	sqm	903.65
12.45.2	12.5 mm thick tapered edge Glass Reinforced Gypsum (GRG) board conforming to IS: 2095- (Part 3):1996 (Boards with BIS certification marks)	sqm	1,025.65

Item Code	Description	Unit	Justified Rate
12.45.3	12.5 mm thick tapered edge gypsum moisture resistant board	sqm	1,037.85
12.45.4	Fully Perforated Gypsum Plaster Board of size 1200 x 2400x12.5 mm having approx. 15 % perforated area with perforation size and pattern as approved by the Engineer- in-charge and as per manufacturer's specification, with all 4 side tapered and backed by acoustical tissue with NRC value not less than 0.60	sqm	1,196.35
12.46	Providing and fixing to the inlet mouth of rain water pipe PTMT (an Engineering Thermoplastic) grating square (Slit) 150 mm square with a height of 8 mm and weighing not less than 100 gms.	each	62.50
12.47	Providing & fixing UV stabilised fiberglass reinforced plastic sheet roofing up to any pitch, including fixing with polymer coated 'J' or 'L' hooks, bolts & nuts 8mm dia. G.I plain/bitumen washers complete but excluding the cost of purlins, rafters, trusses etc. The sheets shall be manufactured out of 2400 TEX panel rovigs incorporating minimum 0.3% ultra-violet stabiliser in resin system under approximately 2400 psi and hot cured. They shall be of uniform pigmentation and thickness without air pockets and shall conform to IS 10192 and IS 12866.The sheets shall be opaque or translucent, clear or pigmented, textured or smooth as specified.		
12.47.1	2 mm thick corrugated (2.5" or 4.2" or 6") or step-down (2" or 3" or 6") as specified	sqm	1,001.20
12.47.2	2 mm thick flat	sqm	887.70
12.48	Providing & fixing on roof pressed clay tile (Mangalore tile) of 20 mm nominal thickness and of approved size and as per approved pattern on steel frame work complete (steel frame work to be paid separately).	sqm	276.90
12.49	Providing & laying on roof pressed clay tile ridge (Mangalore tile) of 20mm thickness and of approved pattern on steel frame work complete (steel frame work to be paid separately).	sqm	61.40
12.50	Providing and fixing pre-coated galvanised iron profile sheets (size, shape and pitch of corrugation as approved by Engineer-in-Charge) of total coated thickness 0.50mm (base metal of minimum 0.45mm thickness with total coating thickness of 0.05mm) with zinc coating 120 grams per sqm as per IS: 277, in 240 mpa steel grade, 5-7 microns epoxy primer on both side of the sheet and polyester top coat 15-18 microns. Sheet should have protective guard film of 25 microns minimum to avoid scratches during transportation and should be supplied in single length upto 12 metre or as desired by Engineer-in- charge. The sheet shall be fixed using self drilling /self tapping screws of size (5.5x 55 mm) with EPDM seal, complete upto any pitch in horizontal/ vertical or curved surfaces, excluding the cost of purlins, rafters and trusses and including cutting to size and shape wherever required.	sqm	571.00
12.51	Providing and fixing pre-coated galvanised steel sheet roofing accessories of total coated thickness 0.50mm (base metal of minimum 0.45mm thickness with total coating thickness of 0.05mm) with Zinc coating 120 grams per sqm as per IS: 277, in 240 mpa steel grade, 5-7 microns epoxy primer on both side of the sheet and polyester top coat 15-18 microns using self drilling/ self tapping screws complete:		
12.51.1	Ridges plain (500 - 600mm)	metre	375.90
12.51.2	Flashings/ Aprons.(Upto 600 mm)	metre	350.70
12.51.3	North light curves	metre	394.75
12.51.4	Barge board (Upto 300 mm)	metre	325.40
12.51.5	Crimp curve	sqm	358.15
12.51.6	Gutter (600 mm over all girth)	metre	916.10

Item Code	Description	Unit	Justified Rate
12.52	Providing and fixing tiled false ceiling of specified materials of size 595x595 mm in true horizontal level, suspended on inter locking metal grid of hot dipped galvanized steel sections (galvanized @ 120 grams/ sqm, both side inclusive) consisting of main "T" runner with suitably spaced joints to get required length and of size 24x38 mm made from 0.30 mm thick (minimum) sheet, spaced at 1200 mm center to center and cross "T" of size 24x25 mm made of 0.30 mm thick (minimum) sheet, 1200 mm long spaced between main "T" at 600 mm center to center to form a grid of 1200x600 mm and secondary cross *T" of length 600 mm and size 24x25 mm made of 0.30 mm thick (minimum) sheet to be interlocked at middle of the 1200x600 mm panel to form grids of 600x600 mm and wall angle of size 24x24x0.3 mm and laying false ceiling tiles of approved texture in the grid including, required cutting/making, opening for services like diffusers, grills, light fittings, fixtures, smoke detectors etc. Main '1-u runners to be suspended from ceiling using GI slotted cleats of size 27 x 37 x 25 x1.6 mm fixed to ceiling with 12.5 mm die and 50 mm long dash fasteners, 4 mm GI adjustable rods with galvanised butterfly level clips of size 85 x 30 x 0.8 mm spaced at 1200 mm center to center along main T, bottom exposed width of 24 mm of all T-sections shall be pre- painted with polyester paint, all complete for all heights as per specifications, drawings and as directed by Engineer-in-charge.		
12.52.1	GI Metal Ceiling Lay in plain Tegular edge Global white color tiles of size 595x595 mm, and 0.5 mm thick with 8 mm drop; made of G I sheet having galvanizing of 100 gms/sqm (both sides inclusive) and electro statically polyester powder coated of thickness 60 microns (minimum), including factory painted after bending.	sqm	1,332.70
12.52.2	GI Metal Ceiling Lay in perforated Tegular edge global white color tiles of size 595x595 mm and 0.5 mm thick with 8 mm drop; made of GI sheet having galvanizing of 100 gms/sqm (both sides inclusive) and 20% perforation area with 1.8 mm dia holes and having NRC (Noise Reduction Coefficient) of 0.5, electro statically polyester powder coated of thickness 60 microns (minimum), including factory painted after bending and perforation, and backed with a black Glass fiber acoustical fleece.	sqm	1,466.85
12.52.3	12.5 mm thick square edge PVC Laminated Gypsum Tile of size 595x595 mm, made of Gypsum plasterboard, manufactured from natural gypsum as per IS 2095 part I and laminated with white 0.16mm thick fire retardant PVC film on the face side and 12micron metalized polyester on the back side with all edges sealed with the face side PVC film which goes around and wraps the edges and is bonded to the edges and the back side metalized polyester film so as to make the tile a completely sealed unit.	sqm	1,643.65
12.52.4	12.5 mm thick fully Perforated Gypsum Board tile made from plasterboard having glass fibre conforming to IS: 2095 part I, of size 595x595 mm, having perforation of 9.7x9.7 mm at 19.4 mm c/c with center borders of 48 mm and the side borders of 30 mm, backed with non woven tissue on the back side, having an NRC (Noise Reduction Coefficient) of 0.79, with 50 mm resin bonded glass wool backing.	sqm	1,033.90

Item Code	Description	Unit	Justified Rate
12.53	<p>Providing and Fixing 15 mm thick densified tegular edged eco friendly light weight calcium silicate false ceiling tiles of approved texture of size 595 x 595 mm in true horizontal level, suspended on inter locking metal grid of hot dipped galvanised steel sections (galvanising @ 120 grams per sqm including both side) consisting of main 'T' runner suitably spaced at joints to get required length and of size 24x38 mm made from 0.33 mm thick (minimum) sheet, spaced 1200 mm centre to centre, and cross "T" of size 24x28 mm made out of 0.33 mm (Minimum) sheet, 1200 mm long spaced between main'T' at 600 mm centre to centre to form a grid of 1200x600 mm and secondary cross 'T' of length 600 mm and size 24 x28 mm made of 0.33 mm thick (Minimum) sheet to be inter locked at middle of the 1200x 600 mm panel to from grid of size 600x600 mm, resting on periphery walls /partitions on a Perimeter wall angle pre-coated steel of size(24x24X3000 mm made of 0.40 mm thick (minimum) sheet with the help of rawl plugs at 450 mm centre to centre with 25 mm long dry wall screws @ 230 mm interval and laying 15 mm thick densified edges calicum silicate ceiling tiles of approved texture in the grid, including, cutting/ making opening for services like diffusers, grills, light fittings, fixtures, smoke detectors etc., wherever required. Main 'T' runners to be suspended from ceiling using G.I. slotted cleats of size 25x35x1.6 mm fixed to ceiling with 12.5 mm dia and 50 mm long dash fasteners, 4 mm G.I. adjustable rods with galvanised steel level clips of size 85 x 30 x 0.8 mm, spaced at 1200 mm centre to centre along main 'T', bottom exposed with 24 mm of all Tsections shall be pre-painted with polyster baked paint, for all heights, as per specifications, drawings and as directed by Engineer-in-Charge. Note :- Only calcium silicate false ceiling area will be measured from wall to wall. No deduction shall be made for exposed frames/opening (cut outs) having area less than 0.30 sqm.The calcium silicate ceiling tile shall have NRC value of 0.50 (Minimum), light reflection > 85%, non- combustible as per B.S. 476 part IV, 100% humidity resistance and also having thermal conductivity <0.043 w/mK.</p>	sqm	1,442.90
12.54	<p>Providing and fixing GI Clip in Metal Ceiling System of 600x600 mm module which includes providing and fixing 'C' wall angle of size 20x30x20 mm made of 0.5 mm thick pre painted steel along the perimeter of the room with help of nylon sleeves and wooden screws at 300 mm center to centre, suspending the main C carrier of size 10x38x10 mm made of G.I steel 0.7 mm thick from the soffit with help of soffit cleat 37x27x25x1.6 mm, rawl plugs of size 38x12 mm and C carrier suspension clip and main carrier bracket at 1000 mm c/c. Inverted triangle shaped Spring Tee having height of 24 mm and width of 34 mm made of GI steel 0.45 mm thick is then fixed to the main C carrier and in direction perpendicular to it at 600 mm centers with help of suspension brackets. Wherever the main C carrier and spring T have to join, C carrier and spring T connectors have to be used. All sections to be galvanized @ 120 gms/sqm (both side inclusive), fixing with clip in tiles into spring T with :</p>		
12.54.1	<p>GI Metal Ceiling Clip in plain Beveled edge global white color tiles of size 600x600 and 0.5 mm thick with 25 mm height, made of G I sheet having galvanizing of 100 gms/ sqm (both sides inclusive) and electro statically polyester powder coated of thickness 60 microns (minimum), including factory painted after bending.</p>	sqm	1,575.85
12.54.2	<p>GI Metal Ceiling Clip in plain Beveled edge global white color tiles of size 600x600 and 0.5 mm thick with 25 mm height, made of G I sheet having galvanizing of 100 gms/ sqm (both sides inclusive) and 20% perforation area with 1.8 mm dia holes and having NRC of 0.5, electro statically polyester powder coated of thickness 60 microns (minimum), including factory painted after bending and perforation.</p>	sqm	1,685.60

Item Code	Description	Unit	Justified Rate
12.55	Providing and fixing Heat Resistant Terrace Tiles (300 mm x 300 mm x 20 mm) with SRI (solar refractive index) > 78, solar reflection > 0.70 and initial emittance > 0.75 on waterproof and sloped surface of terrace, laid on 20 mm thick cement sand mortar in the ratio of 1:4 (1 cement : 4 coarse sand) and grouting the joints with mix of white cement & marble powder in ratio of 1:1, including rubbing and polishing of the surface upto 3 cuts complete, including providing skirting upto 150 mm height along the parapet walls in the same manner.	sqm	1,175.20
12.56	Providing and laying roof insulation with 40 mm thick impervious sprayed, closed cell free Rigid Polyurethane foam over deck insulation conforming to IS - 12432 Pt. III (density of foam being 40.45 kg/ cum), over a coat of polyurethane primer applied @ 6-8 sqm per litre, laying 400 G polythene sheet over PUF spray and providing a wearing course of 40 mm thick cement screed 1:2:4(1 cement : 2 coarse sand : 4 stone aggregate 20 mm nominal size) in chequered rough finish, in panels of 2.5 m x 2.5 m and embedding with 24 G wire netting and sealing the joints with polymerized mastic, all complete as per direction of Engineer-in-Charge.	sqm	1,184.05
12.57	Providing and fixing thermal insulation with Resin Bonded Fibre glass wool conforming to IS: 8183 having density 24 kg/m ³ , 50 mm thick, wrapped in 200G Virgin Polythene Bags fixed to wall with screw, rawel plug & washers and held in position by criss crossing GI wire etc. complete as per directions of Engineer-in-Charge.	sqm	256.75
12.58	Providing and fixing tiled false ceiling of specified materials of size 595x595 mm in true horizontal level, suspended on interlocking metal grid of hot dipped galvanized steel sections (galvanized @ 120 grams/ sqm, both side inclusive) consisting of main "T" runner with suitably spaced joints to get required length and of size 24x38 mm made from 0.30 mm thick (minimum) sheet, spaced at 1200 mm center to center and cross "T" of size 24x25 mm made of 0.30 mm thick (minimum) sheet, 1200 mm long spaced between main "T" at 600 mm center to center to form a grid of 1200x600 mm and secondary cross "T" of length 600 mm and size 24x25 mm made of 0.30 mm thick (minimum) sheet to be interlocked at middle of the 1200x600 mm panel to form grids of 600x600 mm and wall angle of size 24x24x0.3 mm and laying false ceiling tiles of approved texture in the grid including, required cutting/making, opening for services like diffusers, grills, light fittings, fixtures, smoke detectors etc. Main "T" runners to be suspended from ceiling using GI slotted cleats of size 27 x 37 x 25 x 1.6 mm fixed to ceiling with 12.5 mm dia and 50 mm long dash fasteners, 4 mm GI adjustable rods with galvanized butterfly level clips of size 85 x 30 x 0.8 mm spaced at 1200 mm center to center along main T, bottom exposed width of 24 mm of all T-sections shall be pre-painted with polyester paint, all complete for all heights as per specifications, drawings and as directed by Engineer-in-charge.		
12.58.1	8 mm thick fully perforated calcium silicate board made with Calcareous & Siliceous materials reinforced with cellulose fiber manufactured through autoclaving process to give stable crystalline structure with minimum compressive strength 225 kg/ sq. cm, bending strength 100 kg/sq. cm, of size 595x595 mm, having perforation of dia. 10 mm with minimum perforated area 18 % with non woven tissue on the back side, having an NRC (Noise Reduction Coefficient) of 0.85, with 50 mm thick rockwool of 48 kg /cum backing.	sqm	1,607.10

Item Code	Description	Unit	Justified Rate
12.59	Providing & fixing false ceiling at all height including providing & fixing of framework made of special section, power pressed from M.S. sheets and galvanised with zinc coating of 120 gms/ sqm (both side inclusive) as per IS : 277 and consisting of angle cleat of size 25mm wide x 1.6mm thick with flanges of 27mm and 37mm, at 1200mm c/c, one flange fixed to the ceiling with dash fastener 12.5mm dia x 50mm long with 6mm dia bolts, other flange of cleat fixed to the angle hangers of 25 x10 x0.50mm of required length with nuts & bolts of required size and other end of angle hanger fixed with intermediate G.I chanel 45 x15 x 0.90mm running at the spacing of 1200 mm c/c, to which the ceiling section 0.5mm thick bottom wedge of 80mm with tapered flanges of 26 mm each having lips of 10.5mm, at 450mm c/c, shall be fixed in a direction perpendicular to G.I intermediate channel with connecting clip made out of 2.64mm dia x 230mm long G.I wire at every junction, including fixing perimeter channels 0.50mm thick 27mm high having flanges of 20mm and 30mm long, the perimeter of ceiling fixed to wall/ partitions with the help of Rawl plugs at 450mm centre, with 25mm long dry wall screws @ 230mm interval, including fixing of Calcium Silicate Board to ceiling section and perimeter channels with the help of dry wall screws of size 3.5 x25mm at 230mm c/c, including jointing & finishing to a flush finish of tapered and square edges of the board with recommended jointing compounds, jointing tapes, finishing with jointing compounds in three layers covering up to 150mm on both sides of joints and two coats of primer suitable for boards, all as per manufacture's specification and also including the cost of making opening for light fittings, grills, diffusers, cut outs made with frame of perimeter channels suitably fixed, all complete as per drawings, specificaton and direction of the Engineer in charge but excluding the cost of painting with:		
12.59.1	8 mm thick Calcium Silicate Board made with Calcareous & Siliceous materials reinforced with cellulose fiber manufactured through autoclaving process.	sqm	1,063.80
12.60	Providing and fixing thermal insulation of ceiling (under deck insulation) with Resin Bonded Rockwool conforming to IS: 8183,density 48 kg/ m3, 50 mm thick, wrapped in 200 G Virgin Polythene bags fixed to ceiling with metallic cleats (50x50x3 mm) @ 60 cm and wire mesh of 12.5mm x 24 gauge wire mesh, for top most ceiling of building.	sqm	459.10
12.61	Providing and fixing thermal insulation with Resin bonded rock wool conforming to IS: 8183, density 48 kg/m3, 50 mm thick, wrapped in 200 G virgin Polythene bags placed over existing false ceiling and held in position by criss-crossing GI wire.	sqm	226.30
12.62	Providing and fixing thermal insulation with Resin Bonded rock wool conforming to IS: 8183, having density 48 kg/m3,50 mm thick,wrapped in 200 G Virgin Polythene Bags fixed to wall with screw, rawel plug & washers and held and in position by criss cossing GI wire etc. complete as per directions of Engineer- in- Charge.	sqm	231.20
12.63	Providing and applying two coats of High Albedo paint having minimum Solar Reflective Index (SRI) 108 (with solar reflectance & thermal emittance tested as per ASTM) C 1549 and ASTM C 1371 respectively), VOC less than 10 cc/gm. The coating thickness and the methodology of application shall strctly as per manufacturer's specifications and as approved by Engineer-in-Charge. Surface preparation includes cleaning with metal wire brush to remove all dust, fungus etc., washing with water all complete. The contractor shall give guarantee for the performance of SRI and also the durability of coating, all complete as per direction of Engineer-in-Charge.	sqm	254.50

Item Code	Description	Unit	Justified Rate
12.64	Providing and fixing at all heights, levels and locations Mill finish Aluminium alloy roofing sheets of alloy IS designation 31500, temper Hx8 conforming to IS 737 and dimensions as per IS code 2676 with characteristics of good formability and corrosion resistance. The profile sheets shall be fixed to truss members in slope or required pitch or curvature with Hex cap headed self drilling/tapping stainless steel screws MA, 60mm long with 3mm EPDM seal washer etc all inclusive of labour, scaffolding, T&P and sundries etc. complete as per direction of Engineer in Charge (Cost of truss/frame work shall be paid separately).		
12.64.1	0.56 mm, Aluminium troughed profile with center to center pitch of 200 mm, depth of 32 mm, overall profile width 1092 mm, cover width 1000mm.	sqm	801.15
12.64.2	0.71mm, Aluminium troughed profile with center to center pitch of 200mm, depth of 32mm, overall profile width 1092mm, cover width 1000mm	sqm	993.85
12.64.3	0.91 mm, troughed profile with center to center pitch of 200 mm, depth of 32 mm, overall profile width 1092 mm, cover width 1000mm.	sqm	1,248.70
12.64.4	0.56mm Aluminium profile with center to center pitch of 175 mm, depth of 46mm, top crest width of 41mm, bottom valley width of 80mm, overall profile width of 1144mm, cover width 1050mm.	sqm	1,030.80
12.64.5	0.71mm Aluminium profile with center to center pitch of 175 mm, depth of 46mm, top crest width of 41mm, bottom valley width of 80mm, overall profile width of 1144mm, cover width 1050mm.	sqm	1,280.55
12.64.6	0.91mm Aluminium profile with center to center pitch of 175 mm, depth of 46mm, top crest width of 41mm, bottom valley width of 80mm, overall profile width of 1144mm, cover width 1050mm.	sqm	1,612.65
12.64.7	0.56mm Aluminium Circular (sinusoidal) profile with center to center pitch of 75 mm, depth of 19 mm, overall profile width 1250mm, cover width 1150mm.	sqm	783.95
12.64.8	0.71mm Aluminium Circular (sinusoidal) profile with center to center pitch of 75 mm, depth of 19 mm, overall profile width 1250mm, cover width 1150mm.	sqm	983.80
12.64.9	0.91mm Aluminium Circular (sinusoidal) profile with center to center pitch of 75 mm, depth of 19 mm, overall profile width 1250mm, cover width 1150mm.	sqm	1,250.35
12.65	Providing & fixing at all heights, levels and locations colour finish Aluminium alloy roofing sheets of alloy IS designation 31500, temper Hx8 conforming to IS 737 and dimensions as per IS code 2676 with characteristics of good formability and corrosion resistance. The profile sheets shall be fixed to truss members in slope or required pitch or curvature with Hex cap headed self drilling/tapping Stainless steel screws M6, 50 mm long with 3 mm EPDM seal washer etc. all inclusive of labour, scaffolding, T&P and sundries etc. complete as per directions of the Engineer-In-Charge. (Cost of truss/frame work shall be paid separately).		
12.65.1	0.56 mm, Aluminium Color coated troughed profile with center to center pitch of 200 mm, depth of 32 mm, overall profile width 1092 mm, cover width 1000mm.	sqm	913.65
12.65.2	0.71 mm, Aluminium Color coated troughed profile with center to center pitch of 200 mm, depth of 32 mm, overall profile width 1092 mm, cover width 1000mm.	sqm	1,137.45
12.65.3	0.91 mm, Aluminium Color coated troughed profile with center to center pitch of 200 mm, depth of 32 mm, overall profile width 1092 mm, cover width 1000mm.	sqm	1,433.65
12.65.4	0.56mm Aluminium color profile with center to center pitch of 175 mm, depth of 46mm, top crest width of 41mm, bottom valley width of 80mm, overall profile width of 1144mm, cover width 1050mm.	sqm	1,180.10
12.65.5	0.71mm Aluminium color coated profile with center to center pitch of 175 mm, depth of 46mm, top crest width of 41mm, bottom valley width of 80mm, overall profile width of 1144mm, cover width 1050mm.	sqm	1,469.75
12.65.6	0.91mm Aluminium color coated profile with center to center pitch of 175 mm, depth of 46mm, top crest width of 41mm, bottom valley width of 80mm, overall profile width of 1144mm, cover width 1050mm.	sqm	1,854.70

Item Code	Description	Unit	Justified Rate
12.65.7	0.56 mm Aluminium profile with center to center pitch of 177.5 mm, depth of 28.5 mm, 987mm overall profile width, cover width 900mm	sqm	965.50
12.65.8	0.71 mm Aluminium profile with center to center pitch of 177.5 mm, depth of 28.5 mm, 987mm overall profile width, cover width 900mm	sqm	1,212.40
12.66	Providing and fixing of Pre-coated colour or mill finish Aluminium Roofing Accessories in 0.71 mm thickness ,Alloy 31500 (IS designation) [Aluminium Alloy (AA) 3004 (ISO designation)] For color, coating shall be 5-7 microns epoxy primer on both sides of the sheet and polyester top coat 15-18 microns, using self drilling/tapping SS screws of size 6 x 50mm with 3mm thick EPDM seal and SS plain washer complete :		
12.66.1	Precoated/mill finish aluminium Ridges plain (500- 600mm)	metre	826.35
12.66.2	Precoated/mill finish aluminium Flashings/ Aprons (Upto 600 mm)	metre	761.05
12.66.3	Precoated/mill finish aluminium North light curves	metre	834.25
12.66.4	Precoated/mill finish aluminium Barge board (Upto 200 mm)	metre	641.40
12.66.5	Precoated/mill finish aluminium Crimp curve	metre	711.00
12.66.6	Precoated/mill finish aluminium Gutter (600 mm over all girth)	metre	1,354.85
13	FINISHING		
13.1	12 mm cement plaster of mix :		
13.1.1	1:4 (1 cement: 4 fine sand)	sqm	231.05
13.1.2	1:6 (1 cement: 6 fine sand)	sqm	217.70
13.2	15 mm cement plaster on the rough side of single or half brick wall of mix :		
13.2.1	1:4 (1 cement: 4 fine sand)	sqm	266.70
13.2.2	1:6 (1 cement: 6 fine sand)	sqm	250.75
13.3	20 mm cement plaster of mix :		
13.3.1	1:4 (1 cement: 4 fine sand)	sqm	317.40
13.3.2	1:6 (1 cement: 6 fine sand) CEMENT PLASTER (IN COARSE SAND)	sqm	296.60
13.4	12 mm cement plaster of mix :		
13.4.1	1:4 (1 cement: 4 coarse sand)	sqm	231.05
13.4.2	1:6 (1 cement: 6 coarse sand)	sqm	217.70
13.5	15 mm cement plaster on rough side of single or half brick wall of mix:		
13.5.1	1:4 (1 cement: 4 coarse sand)	sqm	266.70
13.5.2	1:6 (1 cement: 6 coarse sand)	sqm	250.75
13.6	20 mm cement plaster of mix :		
13.6.1	1:4 (1 cement: 4 coarse sand)	sqm	317.40
13.6.2	1:6 (1 cement: 6 coarse sand)	sqm	296.60
13.7	12 mm cement plaster finished with a floating coat of neat cement of mix :		
13.7.1	1:3 (1 cement: 3 fine sand)	sqm	298.15
13.7.2	1:4 (1 cement: 4 fine sand)	sqm	284.75
13.8	15 mm cement plaster on rough side of single or half brick wall finished with a floating coat of neat cement of mix :		
13.8.1	1:3 (1 cement: 3 fine sand)	sqm	336.35
13.8.2	1:4 (1 cement: 4 fine sand)	sqm	320.40
13.9	Cement plaster 1:3 (1 cement: 3 coarse sand) finished with a floating coat of neat cement.		
13.9.1	12 mm cement plaster	sqm	298.15
13.9.2	20 mm cement plaster	sqm	391.85
13.10	15 mm cement plaster 1:3 (1 cement: 3 coarse sand) finished with a floating coat of neat cement on the rough side of single or half brick wall.	sqm	336.35

Item Code	Description	Unit	Justified Rate
13.11	18 mm cement plaster in two coats under layer 12 mm thick cement plaster 1:5 (1 cement : 5 coarse sand) finished with a top layer 6 mm thick cement plaster 1:6 (1 cement : 6 fine sand).	sqm	333.80
13.12	18 mm cement plaster in two coats under layer 12 mm thick cement plaster 1:5 (1 cement : 5 coarse sand) and a top layer 6 mm thick cement plaster 1:3 (1 cement : 3 coarse sand) finished rough with sponge.	sqm	347.15
13.13	12 mm cement plaster 1:2 (1 cement : 2 stone dust).	sqm	264.75
13.14	15 mm cement plaster 1:2 (1 cement : 2 stone dust) on the rough side of single or half brick wall.	sqm	306.90
13.15	20 mm cement plaster 1:2 (1 cement : 2 stone dust).	sqm	369.75
13.16	6 mm cement plaster of mix :		
13.16.1	1:3 (1 cement : 3 fine sand)	sqm	195.85
13.17	6 mm cement plaster 1:3 (1 cement : 3 fine sand) finished with a floating coat of neat cement and thick coat of Lime wash on top of walls when dry for bearing of R.C.C. slabs and beams.	sqm	260.50
13.18	Neat cement punning.	sqm	55.15
13.19	Rough cast plaster upto 10 m height above ground level with a mixture of sand and gravel or crushed stone from 6 mm to 10 mm nominal size, dashed over and including the fresh piaster in two layers, under layer 12 mm cement plaster 1:4 (1 cement : 4 coarse sand) and top layer 10 mm cement plaster 1:3 (1 cement : 3 fine sand) mixed with 10% finely grounded hydrated lime by volume of cement.		
13.19.1	Ordinary cement finish using ordinary cement	sqm	578.25
13.20	Pebble dash plaster upto 10 m height above ground level with a mixture of washed pebble or crushed stone 6 mm to 12.5 mm nominal size, dashed over and including fresh plaster in two layers under layer 12 mm cement plaster 1:4 (1 cement : 4 coarse sand) and top layer 10 mm cement plaster with cement mortar 1:3 (1 cement : 3 fine sand) mixed with 10% finely grounded hydrated lime by volume of cement.	sqm	542.85
13.21	Extra for providing and mixing water proofing material in cement plaster work in proportion recommended by the manufacturers.	per bag of 50kg cement used in the mix	16.05
13.22	Extra for plastering exterior walls of height more than 10 m from ground level for every additional height of 3 m or part thereof.	sqm	55.90
13.23	Extra for plastering on circular work not exceeding 6 m in radius:		
13.23.1	In one coat	sqm	29.50
13.23.2	In two coats	sqm	44.90
13.24	Extra for plastering done on moulding, cornices or architraves including neat finish to line and level:		
13.24.1	In one coat	sqm	437.05
13.24.2	In two coats	sqm	720.10
13.25	Extra for plastering:		
13.25.1	Spherical ceiling	sqm	110.05
13.25.2	Groined ceiling	sqm	119.35
13.25.3	Flewing soffits	sqm	72.65
13.26	Providing and applying plaster of paris putty of 2 mm thickness over plastered surface to prepare the surface even and smooth complete.	sqm	167.75
13.27	Extra for lining out plaster to imitate stone or concrete blocks walling.	sqm	69.80
13.28	12 mm thick plain cement mortar bands in cement mortar 1:4 (1 cement : 4 fine sand):		
13.28.1	Flush Band	cm per metre	4.75
13.28.2	Sunk Band	cm per metre	5.20

Item Code	Description	Unit	Justified Rate
13.28.3	Raised Band	cm per metre	5.90
13.28.4	Moulded Band	cm per metre	10.05
13.29	18 mm thick plain cement mortar band in cement mortar 1:4 (1 cement : 4 fine sand):		
13.29.1	Flush Band	cm per metre	5.80
13.29.2	Sunk Band	cm per metre	6.40
13.29.3	Raised Band	cm per metre	7.25
13.29.4	Moulded Band	cm per metre	13.45
13.30	18 mm thick moulded cement mortar band in two coats under layer 12 mm thick with cement mortar 1:5 (1 cement : 5 coarse sand) top layer 6 mm thick with cement mortar 1:4 (1 cement : 4 fine sand).	cm per metre	13.35
13.31	Pointing on brick work or brick flooring with cement mortar 1:3 (1 cement : 3 fine sand):		
13.31.1	Flush / Ruled/ Struck or weathered pointing	sqm	162.90
13.31.2	Raised and cut pointing	sqm	264.55
13.32	Pointing on tile brick work with cement mortar 1:3 (1 cement : 3 fine sand):		
13.32.1	Flush/ Ruled/ Struck or weathered pointing	sqm	222.25
13.33	Pointing on stone work with cement mortar 1:3 (1 cement : 3 fine sand):		
13.33.1	Flush/ Ruled pointing	sqm	239.00
13.33.2	Raised and cut pointing	sqm	432.85
13.34	Raised and cut pointing on stone work in white cement mortar 1:3 (1 white cement : 3 marble dust).	sqm	446.10
13.35	Pointing on stone slab ceiling with cement mortar 1:2 (1 cement : 2 fine sand):		
13.35.1	Flush/ Ruled pointing	sqm	134.05
13.36	Extra for pointing on walls on the outside at height more than 10 m from ground level for every additional height of 3 m or part there of.	sqm	6.60
13.37	White washing with lime to give an even shade :		
13.37.1	New work (three or more coats)	sqm	24.30
13.38	Satna lime wash on walls with one coat.	sqm	9.85
13.39	Colour washing such as green, blue or buff to give an even shade :		
13.39.1	New work (two or more coats) with a base coat of white washing with lime	sqm	33.40
13.39.2	New work (two or more coats) with a base coat of whiting	sqm	32.95
13.41	Distemping with 1st quality acrylic distemper (ready mixed) having VOC content less than 50 gram/litre, of approved manufacturer, of required shade and colour all complete:		
13.41.1	New work (two or more coats) over and including water thinnable priming coat with cement primer having VOC content less than 50 pram/litre	sqm	115.00
13.44	Finishing walls with water proofing cement paint of required shade :		
13.44.1	New work (Two or more coats applied @ 3.84 kg/10 sqm)	sqm	74.70
13.45	Finishing walls with textured exterior paint of required shade :		
13.45.1	New work (Two or more coats applied @ 3.28 ltr/10 sqm) over and including priming coat of exterior primer applied @ 2.20kg/10 sqm	sqm	200.55
13.46	Finishing walls with Acrylic Smooth exterior paint of required shade .		
13.46.1	New work (Two or more coat applied @ 1.67 ILO 0 sqm over and including priming coat of exterior primer applied @ 0.90 litre/10 sarM	sqm	115.85

Item Code	Description	Unit	Justified Rate
13.47	Finishing walls with Premium Acrylic Smooth exterior paint with Silicone additives of required shade:		
13.47.1	New work (Two or more coats applied @ 1.43 ltr/10 sqm over and including priming coat of exterior primer applied @ 0.90 litre/10 sqm)	sqm	111.95
13.48	Finishing with Deluxe Multi surface paint system for interiors and exteriors using Primer as per manufacturers specifications :		
13.48.1	Two or more coats applied on walls @ 1.25 ltr/10 sqm over and including one coat of Special primer applied @ 0.75 ltr /10 sqm	sqm	125.85
13.48.2	Painting wood work with Deluxe Multi Surface Paint of required shade. Two or more coat applied @ 0.90 ltr/10 sqm over an under coat of primer applied @0.75 ltr/10 sqm of approved brand and manufacture	sqm	113.65
13.48.3	Painting Steel work with Deluxe Multi Surface Paint to give an even shade. Two or more coat applied @ 0.90 ltr/ 10 sqm over an under coat of primer applied @ 0.80 ltr/ 10 sqm of approved brand and manufacture	sqm	109.45
13.48A	Finishing walls with ready mixed Premium acrylic emulsion paint (Company Depot Tinted) having VOC less than 50 gm/litre and UV resistance as per IS 15489:2004, Alkali & fungal resistance, dirt resistance exterior paint of required shade with silicon additives.		
13.48A.1	New work (Two or more coats applied @ 1.43 litre) 10 sqm over and including priming coat of exterior primer applied @ 0.90 litre/10 sqm.	sqm	121.90
13.50	Applying priming coat		
13.50.2	With ready mixed aluminium primer of approved brand and manufacture on resinous wood and plywood	sqm	46.75
13.50.3	With ready mixed red oxide zinc chromate primer of approved brand and manufacture on steel galvanized iron/ steel works	sqm	41.85
13.50.4	With ready mixed red oxide zinc chromate primer of approved brand and manufacture on steel work (second coat)	sqm	22.65
13.51	Painting with silicon & acrylic emulsion based water thinnable sealer of approved brand and manufacture on wet or patchy portion of plastered surfaces :		
13.51.1	One coat	sqm	65.35
13.51.2	Two coats	sqm	103.85
13.52	Finishing with Epoxy paint (two or more coats) at all locations prepared and applied as per manufacturer's specifications including appropriate priming coat, preparation of surface, etc. complete.		
13.52.1	On steel work	sqm	154.30
13.52.2	On concrete work	sqm	151.40
13.53	Painting on G.S. sheet with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade :		
13.53.1	New work (two or more coats) including a coat of approved steel primer but excluding a coat of mordant solution	sqm	113.00
13.54	Applying a coat of mordant solution on G.S. sheet:		
13.54.1	With a solution of 38 gms of copper acetate in a litre of soft water	sqm	39.40
13.54.2	With a solution made of 13 gms of hydrochloric acid in a solution of 13 gms each of copper chloride, copper nitrate and ammonium chloride dissolved in a litre of soft water	sqm	39.25
13.55	Painting (two or more coats) on rain water, soil waste and vent pipes and fittings with black anticorrosive bitumastic paint of approved brand and manufacture, over and including a priming of ready mixed zinc chromate yellow primer on new work:		
13.55.1	100 mm diameter pipes	metre	47.95
13.55.2	150 mm diameter pipes	metre	71.55
13.56	Painting (two or more coats) on rain water, soil waste and vent pipes and fittings with synthetic enamel paint of approved brand and manufacture and required colour over a priming coat of approved steel primer on new work.		
13.56.1	100 mm diameter pipes	metre	53.05
13.56.2	150 mm diameter pipes	metre	79.00

Item Code	Description	Unit	Justified Rate
13.57	Painting with oil type wood preservative of approved brand and manufacture :		
13.57.1	New work (two or more coats)	sqm	36.95
13.58	Providing and applying two coats of fire retardant paint on cleaned wood / ply surface @ 3.5 sqm per litre per coat including preparation of base surface as per recommendations of manufacturer to make the surface fire retardant.	sqm	233.90
13.59	Coal tarring two coats on new work using 0.16 Litre and 0.12 litre coal tar per sqm in the first coat and second coat respectively.	sqm	42.05
13.61	Painting with synthetic enamel paint of approved brand and manufacture to give an even shade :		
13.61.1	Two or more coats on new work	sqm	99.90
13.62	Painting with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade :		
13.62.1	Two or more coats on new work over an under coat of suitable shade with ordinary paint of approved brand and manufacture	sqm	145.35
13.63	Painting with aluminium paint of approved brand and manufacture to give an even shade .		
13.63.1	Two or more coats on new work	sqm	91.20
13.64	Painting with acid proof paint of approved brand and manufacture of required colour to give an even shade :		
13.64.1	Two or more coats on new work	sqm	106.65
13.65	Painting with black anti-corrosive bitumastic paint of approved brand and manufacture to give an even shade :		
13.65.1	Two or more coats on new work	sqm	85.70
13.67	Varnishing with varnish of approved brand and manufacture :		
13.67.1	Two or more coats of glue sizing with copal varnish over an under coat of flattening varnish	sqm	147.65
13.67.2	Two or more coats glue sizing with spar varnish or an under coat of flattening varnish	sqm	148.35
13.68	French spirit polishing :		
13.68.1	Two or more coats on new works including a coat of wood filler	sqm	277.45
13.69	Polishing on wood work with ready mixed wax polish of approved brand and manufacture :		
13.69.1	New work	sqm	121.40
13.70	Floor polishing on masonry or concrete floors with wax polish of approved brand and manufacture.	sqm	58.55
13.71	Lettering with black Japan paint of approved brand and manufacture	per letter per cm height	3.70
13.72	Washed stone grit plaster on exterior walls height upto 10 metre above ground level, in two layers, under layer 12 mm cement plaster 1:4 (1 cement : 4 coarse sand), furrowing the under layer with scratching tool, applying cement slurry on the under layer @ 2 Kg of cement per square metre, top layer 15 mm cement plaster 1:1/ 2:2 (1 cement: 1/2 coarse sand : 2 stone chipping 10 mm nominal size), in panels with groove all around as per approved pattern, including scrubbing and washing the top layer with brushes and water to expose the stone chippings ,complete as per specification and direction of Engineer-in-charge (payment for providing grooves shall be made separately).	sqm	773.15
13.73	Forming groove of uniform size in the top layer of washed stone grit plaster as per approved pattern using wooden battens, nailed to the under layer, including removal of wooden battens, repair to the edges of panels and finishing the groove complete as per specifications and direction of the Engineer-in-charge :		
13.73.1	15 mm wide and 15 mm deep groove	metre	48.25
13.73.2	20 mm wide and 15 mm deep groove	metre	48.75
13.74	Extra for washed grit plaster on exterior walls of height more than 10 m from ground level for every additional height of 3 m or part thereof.	sqm	114.45
13.75	Extra for washed stone grit plaster on circular work not exceeding 6 m in radius (in two coats).	sqm	86.20

Item Code	Description	Unit	Justified Rate
13.76	Forming groove of uniform size from 12x12 mm and upto 25x15 mm in the top layer of washed stone grit plastered surface as per approved pattern, including providing and fixing aluminum channels of appropriate size and thickness (not less than 2 mm), nailed to the under layer with rust proof screws and nails and finishing the groove complete as per specifications and direction of the Engineer-in-Charge.	metre	74.40
13.77	Extra for using white cement in place of ordinary cement in the top layer of the item of washed stone grit plaster.	sqm	60.40
13.78	Providing and applying 12 mm thick (average) premixed formulated one coat gypsum lightweight plaster having additives and light weight aggregates as vermiculite/ perlite respectively conforming to IS: 2547 (Part - 1 & II) 1976, applied on hacked / uneven background such as bare brick/ block/ RCC work on walls & ceiling at all floors and locations, finished in smooth line and level etc. complete.	sqm	287.65
13.79	Extra for addition of synthetic Polyester triangular fibre of length 6 mm, effective diameter 10-40 microns and specific gravity of 1.34 to 1.40 in cement plaster/mortar by using 125 gms. of synthetic Polyester triangular fibre for 50 Kgs. cement used in cement mortar as per directions of Engineer-in-Charge.	per bag of 50kg of cement	59.50
13.80	Providing and applying white cement based putty of average thickness 1 mm, of approved brand and manufacturer, over the plastered wall surface to prepare the surface even and smooth complete.	sqm	98.45
13.81	Distemping with 1st quality acrylic distemper (ready mixed) having VOC (Volatile Organic Compound) content less than 50 gram/ litre, of approved brand and of required said and colour complete to give and even said.		
13.81.1	Old work (one or more coats)	sqm	38.55
13.82	Wall painting with acrylic emulsion paint, having VOC (Volatile Organic Compound) content less than 50 grams/ litre, of approved brand and manufacture, including applying additional coats wherever required, to achieve even shade and colour.		
13.82.1	One coat	sqm	56.65
13.82.2	Two coats	sqm	84.50
13.83	Wall painting with premium acrylic emulsion paint of interior grade, having VOC (Volatile Organic Compound) content less than 50 grams/ litre of approved brand and manufacture, including applying additional coats wherever required to achieve even shade and colour.		
13.83.1	One coat	sqm	59.70
13.83.2	Two coats	sqm	89.25
13.85	Applying priming coats with primer of approved brand and manufacture, having tow VOC (Volatile Organic Compound) content.		
13.85.1	With ready mixed pink or grey primer on wood work (hard and soft wood) having VOC content less than 60 grams/ litre	sqm	45.45
13.85.3	With water thinnable cement primer on wall surface having VOC content less than 50 grams/litre	sqm	46.50
13.86	6 mm plaster on cement concrete or reinforced cement concrete work with white cement based polymer modified self curing mortar of approved make as per the direction of Engineer-In-Charge.	sqm	173.50
13.87	White washing with lime to give an even shade :		
13.87.1	Old work (two or more coats)	sqm	14.30
13.87.2	Old work (one or more coats)	sqm	8.80
13.88	Removing white or colour wash by scrapping and sand papering and preparing the surface smooth including necessary repairs to scratches etc. complete	sqm	11.85
13.91	Removing dry or oil bound distemper, water proofing cement paint and the like by scrapping, sand papering and preparing the surface smooth including necessary repairs to scratches etc. complete.	sqm	15.25
13.92	Painting on G.S. sheet with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade :		

Item Code	Description	Unit	Justified Rate
13.92.1	Old work (one or more coats)	sqm	57.50
13.93	Painting (two or more coats) on rain water, soil, waste and vent pipes and fittings with black anticorrosive bitumastic paint of approved brand and manufacture over and including a priming coat of ready mixed zinc chromate yellow primer on new work :		
13.93.1	75 mm diameter pipes	metre	35.90
13.94	Painting (one or more coats) on rain water, soil waste and vent pipes and fittings with black anticorrosive bitumastic paint of approved brand and manufacture on old work :		
13.94.1	75 mm diameter pipes	metre	16.95
13.94.2	100 mm diameter pipes	metre	22.35
13.94.3	150 mm diameter pipes	metre	32.10
13.95	Painting (two or more coats) on rain water, soil waste and vent pipes and fittings with aluminium paint of approved brand and manufacture over a priming coat of ready mixed zinc chromate yellow primer on new work :		
13.95.1	75 mm diameter pipes	metre	37.30
13.95.2	100 mm diameter pipes	metre	51.90
13.95.3	150 mm diameter pipes	metre	77.35
13.96	Painting (one or more coats) on rain water, soil waste and vent pipes and fittings with synthetic enamel paint of approved brand and manufacture and required colour on old work :		
13.96.1	75 mm diameter pipes	metre	17.95
13.96.2	100 mm diameter pipes	metre	23.05
13.96.3	150 mm diameter pipes	metre	33.10
13.97	Painting with oil type wood preservative of approved brand and manufacture:		
13.97.1	Old work (one or more coats)	sqm	28.15
13.99	Painting with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade :		
13.99.1	One or more coats on old work	sqm	65.65
13.100	Painting with aluminium paint of approved brand and manufacture to give an even shade:		
13.100.1	One or more coats on old work	sqm	59.45
13.101	Painting with acid proof paint of approved brand and manufacture of required colour to give an even shade :		
13.101.1	One or more coats on old work	sqm	69.70
13.102	Painting with black anti-corrosive bitumastic paint of approved brand and manufacture to give an even shade :		
13.102.1	One or more coats on old work	sqm	57.40
13.103	French spirit polishing :		
13.103.1	One or more coats on old work	sqm	139.70
13.104	Polishing on wood work with ready made wax polish of approved brand and manufacture :		
13.104.1	Old work	sqm	61.50
13.105	Re-lettering with black Japan paint of approved brand and manufacture.	per letter per cm height	2.35
13.106	Painting (one or more coats) with black Japan paint of approved brand and manufacture to give an even shade.	sqm	58.75
13.107	Providing and fixing C.P. brass chain and rubber plug complete for sink or wash basin:		
13.107.1	32 mm dia	each	66.30
13.107.2	40 mm dia	each	66.30
13.109	Finishing walls with water proofing cement paint of required shade :		
13.109.1	Old work (one or more coats applied @ 2.20 kg/10 sqm) over priming coat of primer applied @ 0.80 litres/10 sqm complete including cost of Priming coat.	sqm	72.30

Item Code	Description	Unit	Justified Rate
13.109.2	Old work (one or more coats @ 2.20 kg/10 sqm) complete.	sqm	48.35
13.110	Finishing walls with textured exterior paint of required shade :		
13.110.1	Finishing walls with textured exterior paint of required shade : Old work (Two or more coats on existing cement paint surface applied @ 3.28 ltr/10 sqm.	sqm	157.35
13.110.2	Old work (One or more coats) applied @ 1.82 ltr/10 sqm.	sqm	96.75
13.111	Finishing walls with Acrylic Smooth exterior paint of required shade:		
13.111.1	Old work (Two or more coat applied @ 1.67 ltr/10 sqm) on existing cement paint surface	sqm	87.55
13.111.2	Old work (One or more coat applied @ 0.90 ltr/10 sqm).	sqm	56.70
13.112	Finishing walls with Premium Acrylic Smooth exterior paint with Silicone additives of required shade		
13.112.1	Old work (Two or more coats applied @ 1.43 ltr/ 10 sqm) over existing cement paint surface	sqm	83.65
13.112.2	Old work (one or more coats applied @0.83 ltr/10 sqm).	sqm	56.15
13.113	Varnishing with varnish of approved brand and manufacture:		
13.113.1	One or more coats with copal varnish	sqm	59.45
13.113.2	One or more coats with spar varnish	sqm	59.85
13.114	Melamine polishing on wood work (one or more coat).	sqm	93.50
13.115	Varnishing with flattening varnish of approved brand and manufacture one or more coats on old work.	sqm	62.55
13.116	Polishing in high gloss/matt finish melamine clear polish on wood work in required color/wooden shade texture with following process in the sequence as detailed below: 1. The surface to be polished is rubbed with sand paper 80/120 no. and then with sand paper of 160/180 nos. 2. Applying two coats of sealer with spray gun and allowing sufficient drying time for 1st coat and 2nd coat is allowed to dry for 8 to 12 hrs. 3. On drying of sealer coat, wet rubbing with emery cloth of finer grading with ample water to remove excess sealer layer and make the surface further smooth after this wet rubbing, then surface is applied with special grade melamine fillers to fill all the small and big holes/grooves etc. Filler coat to be allowed to dry for 4 to 6 hrs on which again a light wet rubbing is done this surface is further allowed to dry for 12 hrs. 4. On this, 1st coat of melamine polish is applied with spray gun using melamine clear polish and melamine thinner in required proportion. This 1st coat is allowed to dry for 24 hrs then this dry surface is again fine wet rubbed smooth, which is further allowed to dry for 12 hrs. The final melamine polish is applied with compressor pressure spray gun using melamine clear polish and melamine thinner mixed in required proportion complete as per direction of Engineer-in-Charge. (Final coat to be done in 1 or 2 layers without gap of time.)	sqm	926.60
14	REPAIRS TO BUILDING		
14.1	Repairs to plaster of thickness 12 mm to 20 mm in patches of area 2.5 sq.meters and under, including cutting the patch in proper shape, raking out joints and preparing and plastering the surface of the walls complete, including disposal of rubbish to the dumping ground, all complete as per direction of Engineer-in-Charge.		
14.1.1	With cement mortar 1:4 (1 cement : 4 fine sand)	sqm	356.95
14.1.2	With cement mortar 1:4 (1cement: 4 coarse sand)	sqm	356.95
14.2	Fixing chowkhats in existing opening including embedding chowkhats in floors or walls cutting masonry for holdfasts, embedding hold fasts in cement concrete blocks of size 15 x 10 x 10 cm with cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size), painting two coats of approved wood preservative to sides of chowkhats and making good the damages to walls and floors as required complete, including disposal of rubbish to the dumping ground, all complete as per direction of Engineer-in-Charge.		
14.2.1	Door chowkhats	each	1,157.10

Item Code	Description	Unit	Justified Rate
14.2.2	Window chowkhats	each	723.50
14.2.3	Clerestory window chowkhats	each	532.90
14.3	Fixing chowkhat in existing opening in brick/ RCC wall with dash fasteners/Chemical fasteners of appropriate size (3 nos on each vertical member of door chowkhat and 2 nos on each vertical member of window chowkhats), including Cost of dash fasteners/ chemical fastener.	each	157.90
14.4	Making the opening in brick masonry including dismantling in floor or walls by cutting masonry and making good the damages to walls, flooring and jambs complete, to match existing surface i/c disposal of mulba/ rubbish to the nearest municipal dumping ground, all complete as per direction of Engineer-in-Charge.		
14.4.1	For door/ window/ clerestory window	sqm	756.25
14.5	Renewing glass panes, with putty and nails wherever necessary including racking out the old putty:		
14.5.1	Float glass panes of nominal thickness 4 mm (weight not less than 10kg/sqm)	sqm	757.10
14.5.2	Float glass panes of nominal thickness 5 mm (weight not less than 12.5kg/sqm)	sqm	1,020.30
14.6	Renewing glass panes, with wooden fillets wherever necessary:		
14.6.1	Float glass panes of nominal thickness 4 mm (weight not less than 10kg/sqm)	sqm	1,054.30
14.6.2	Float glass panes of nominal thickness 5 mm (weight not less than 12.5kg/sqm)	sqm	1,317.50
14.7	Renewing glass panes and refixing existing wooden fillets:		
14.7.1	Float glass panes of nominal thickness 4 mm (weight not less than 10kg/sqm)	sqm	836.95
14.7.2	Float glass panes of nominal thickness 5 mm (weight not less than 12.5kg/sqm)	sqm	1,100.15
14.8	Supplying and fixing new wooden fillets wherever necessary:		
14.8.1	2nd class teak wood fillets	metre	50.75
14.8.2	Hollock wood fillets	metre	44.95
14.9	Renewal of old putty of glass panes (length)	metre	34.20
14.10	Refixing old glass panes with putty and nails	sqm	444.40
14.11	Fixing old glass panes with wooden fillets (excluding cost of fillets)	sqm	407.55
14.12	Providing and fixing 16 mm M.S. Fan clamps of standard shape and size in existing R.C.C. slab, including cutting chase, anchoring clamp to reinforcement bar, including cleaning, refilling, making good the chase with matching concrete, plastering and painting the exposed portion of the clamps complete.	each	354.65
14.13	Regrading terracing of mud phaska covered with tiles or brick, in cement mortar by dismantling tiles or bricks, removing mud plaster, preparing the surface of mud phaska to proper slope, relaying mud plaster gobri leaping and tiles or bricks, grouted in cement mortar 1:3 (1 cement : 3 fine sand), including replacing unserviceable tiles or bricks with new ones and disposal of unserviceable material to the dumping ground (the cost of the new tiles or brick excluded), all complete as per direction of Engineer-in-Charge.	sqm	436.45
14.14	Replacing sand stone slabs in roofing, laid in cement mortar 1:4 (1 cement : 4 coarse sand), including necessary repairs and cement pointing with same mortar complete, including disposal of rubbish to dumping ground, all complete as per direction of Engineer-in-Charge.		
14.14.1	Red/ white sand stone slabs 30 to 50 mm thick	sqm	868.00
14.15	Renewing wooden battens in roofs, including making good the holes in wall and painting with oil type wood preservative of approved brand and manufacture complete, including removal of rubbish to the dumping ground, all complete as per direction of Engineer-in-Charge.		
14.15.1	Sal wood battens	cum	78,738.65

Item Code	Description	Unit	Justified Rate
14.16	Renewing wooden beams in roofs including making good the holes in walls and painting with oil type wood preservative of approved brand and manufacture complete, including removal of rubbish to the dumping ground, all complete as per direction of Engineer-in-Charge.		
14.16.1	Not exceeding 4.00 metres in length.		
14.16.1.1	Sal wood beams	cum	82,223.65
14.16.1.2	Hollock wood beams	cum	53,140.75
14.16.2	Above 4.00 metres and upto 5.00 metres length.		
14.16.2.1	Sal wood beams	cum	83,863.60
14.16.2.2	Hollock wood beams	cum	54,754.80
14.17	Raking out joints in lime or cement mortar and preparing the surface for re-pointing or replastering, including disposal of rubbish to the dumping ground, all complete as per direction of Engineer-in-Charge.	sqm	42.30
14.18	Flush pointing with cement mortar 1:3 (1 cement : 3 fine sand) mixed with 2% of integral water proofing compound by weight of cement for flat tile bricks on top of mud phaska :		
14.18.1	With F.P.S. brick tiles	sqm	86.25
14.18.2	With modular brick tiles	sqm	87.45
14.19	Taking out wind ties from roof including cutting out rusted bolts, nuts etc. and removing materials to any distance within compound and stacking.	kg	3.25
14.20	Fixing of old wind tie with new fittings including painting two or more coats with anticorrosive bitumastic paint of approved brand & manufacturer over and including priming coat of ready mixed zinc chromate yellow primer of approved brand.	metre	87.60
14.21	Renewing bottom rail and/or top runner of collapsible gate including making good all damages and applying priming coat of zinc chromate yellow primer of approved brand and manufacturer.	kg	192.85
14.22	Renewing Wrought iron or M.S. Wheel or roller of steel door or gate and fitting and fixing the same with necessary clamps, nuts and bolts/welding and erection etc. complete.		
14.22.1	Wheel 50 mm dia and below	each	59.00
14.22.2	Wheel above 50 mm dia	each	213.60
14.23	Pumping out water caused by springs, tidal or river seepage, broken water mains or drains and the like.	kilo litre	139.10
14.25	Brick work with common burnt clay bricks of class designation 7.5 in mud mortar	Cum	4,632.55
14.26	Providing and fixing 25 mm thick shutters for cup board etc. :		
14.26.1	Panelled or panelled & glazed shutters :		
14.26.1.1	Superior class teak wood including nickel plated bright finished M.S. piano hinges with necessary screws.	sqm	3,853.60
14.26.1.2	Ist class teak wood including nickel plated bright finished M.S. piano hinges with necessary screws.	sqm	3,329.35
14.26.2	Glazed shutters:		
14.26.2.1	Superior class teak wood including nickel plated bright finished M.S. piano hinges with necessary screws.	sqm	3,815.00
14.26.2.2	Ist class teak wood including nickel plated bright finished M.S. piano hinges with necessary screws.	sqm	3,250.40
14.27	Providing and fixing plain jaffri door and window shutters including bright or/and black enamelled M.S. butt hinges with necessary screws 35x10 mm laths placed 35 mm apart (frames to be paid separately), including fixing 50x12 mm beading complete with :		
14.27.1	Second class teak wood	sqm	3,473.95
14.28	Providing and fixing brass curtain rods of wall thickness 1.25 mm with two brass brackets fixed with brass screws and wooden plugs etc. wherever necessary complete.		
14.28.1	20 mm diameter.	metre	253.40
14.28.2	25 mm diameter.	metre	311.45

Item Code	Description	Unit	Justified Rate
14.29	Providing and fixing M.S. round or square bars with M.S. flats at required spacing in wooden frames of windows and clerestory windows.	kg	82.70
14.30	Providing joists (karries) including hoisting, fixing in position and applying wood preservative on unexposed surface etc. complete with :		
14.30.1	Sal wood	cum	77,862.05
14.30.2	Hollock wood	cum	49,073.10
14.31	Providing and fixing bright finished brass single acting spring hinges with necessary brass screws etc. complete :		
14.31.1	150 mm	each	561.20
14.31.2	125 mm	each	398.60
14.31.3	100 mm	each	353.30
14.32	Providing and fixing bright finished brass double acting spring hinges with necessary brass screws etc. complete :		
14.32.1	150 mm	each	625.10
14.32.2	125 mm	each	532.15
14.32.3	100 mm	each	515.90
14.33	Providing and fixing bright finished brass flush bolts with necessary brass screws etc. complete :		
14.33.1	250 mm	each	199.15
14.33.2	150 mm	each	173.15
14.33.3	100 mm	each	126.65
14.34	Providing and fixing 150 mm bright finished floor brass door stopper with rubber cushion, necessary brass screws etc. to suit shutter thickness complete	each	201.95
14.35	Providing and fixing bright finished brass hard drawn hooks and eyes :		
14.35.1	300 mm	each	75.05
14.35.2	250 mm	each	72.00
14.35.3	200 mm	each	64.60
14.35.4	150 mm	each	51.80
14.35.5	100 mm	each	45.40
14.36	Providing and fixing bright finished brass fan light pivot with necessary brass screws etc. complete.	each	34.45
14.37	Providing and fixing 300 mm long bright finished brass chain with hook for fan light including necessary brass screws etc. complete.	each	55.20
14.38	Providing and fixing bright finished brass quadrant stay 300 mm long with necessary brass screws etc. complete.	each	141.15
14.39	Providing and fixing bright finished brass helical door spring (superior quality).	each	396.55
14.40	Providing and fixing chromium plated brass butt hinges with necessary chromium plated brass screws etc. complete.		
14.40.1	125x70x4 mm (ordinary type)	each	147.25
14.40.2	100x70x4 mm (ordinary type)	each	126.00
14.40.3	75x65x4 mm (heavy type)	each	140.30
14.40.4	75x40x2.5 mm (ordinary type)	each	84.05
14.40.5	50x40x2.5 mm (ordinary type)	each	35.40
14.41	Providing and fixing 85x42 mm chromium plated brass pull bolt lock with necessary chromium plated brass screws, nuts, bolts and washers etc. complete.	each	219.05

Item Code	Description	Unit	Justified Rate
14.72	Providing and fixing double scaffolding system (cup lock type) on the exterior side, up to seven story height made with 40 mm dia M.S. tube 1.5 m centre to centre, horizontal & vertical tubes joining with cup & lock system with M.S. tubes, M.S. tube chalties, M.S. clamps and M.S. staircase system in the scaffolding for working platform etc. and maintaining it in a serviceable condition for the required duration as approved and removing it there after .The scaffolding system shall be stiffened with bracings, runners, connection with the building etc wherever required for inspection of work at required locations with essential safety features for the workmen etc. complete as per directions and approval of Engineer- in-charge .The elevational area of the scaffolding shall be measured for payment purpose .The payment will be made once irrespective of duration of scaffolding. Note: - This item to be used for maintenance work judiciously, necessary deduction for scaffolding in the existing item to be done.	sqm	221.10
14.73	Providing and fixing bright finished brass casement window fasteners or peg stays to windows/ ventilators with necessary welding and machine screws etc. complete.	kg	420.45
14.74	Providing and fixing 14 mm bright finished brass spring catch to steel centre hung ventilators with necessary welding and machine screws etc. complete.	each	51.55
14.75	Repair to plaster of thickness 12mm to 20 mm in patches of area 2.5 sqm and under, including cutting the patch in proper shape, raking out joints and preparing plastering the wall surface with white cement based polymer modified self curing mortar, including disposal of rubbish, all complete as per the direction of Engineer-In-Charge.	sqm	432.10
14.75A	Cleaning of terrace/loft water storage tank (inside surface area) upto 2000 litre capacity at all heights with coconut brushes, duster etc., removal of silt, rubbish from the tank and cleaning the tank with fresh water disinfecting with bleaching powder @ 0.5gm per litre capacity of tank including marking the date of cleaning on the side of tank body with the help of stencil and paint and disposing of malba all complete as per direction of Engineer-in-Charge. (The old date already written on tank should be removed with paint remover or black paint and if date is not written with the stencil or old date is not removed deduction will be made @ Rs. 0.10 per litre) (if during cleaning any GI fittings or ball cock is damaged that is to be repaired by contractor at his own cost and nothing extra will be paid on this account)	litre	0.30
14.76	Cleaning and desilting of gully trap chamber, including removal of rubbish mixed with earth etc. and disposal of same, all as per the direction of Engineer-in-charge.	each	73.60
14.77	Cleaning of choked sewer line by diesel running vehicle mounting hydraulic operated high pressure suction cum jetting sewer cleaning machine fitted with pump having 4000 litres suction capacity and 6000 litres water jetting tank capacity including skilled operator, supervising engineer etc. for cleaning and partial desilting of manholes and dechocking of sewer lines. Dechocking and flushing of sewer line from one manhole to another by high pressure jetting system of 2200 PSI for sewer line from 150mm dia upto 300mm	metre	245.90
14.78	Cleaning of under ground sump, Over Head R.C.C. Tank (independent staging) including disposal of slit and rubbish, all as per direction of Engineer-in-Charge. The cleaning shall consist following operations:- Tank shall be emptied of water by pumping & bottom shall be cleaned of silt and other deposits. Entire surface area of the sump shall then scrubbed thoroughly with wire brush etc. and pressure washed with water. (iii) Chlorination of RCC internal surface by liquid chlorine. The treated surface shall be dried using air jetting and all loose particles shall be removal from the surface. Finally the surface shall be treated with ultraviolet radiation etc. as per direction of Engineer-in-Charge.	sqm	53.75

Item Code	Description	Unit	Justified Rate
14.79	Disconnecting damaged overhead/terrace PVC water storage tank of any size from water supply line and removing from the terrace including shifting at ground level as per direction of Engineer-in-charge.	each	255.45
14.8	Providing 8i fixing White vitreous china water closet squatting pan (Indian type) along with "S" or "P" trap including dismantling of old WC seat and "5" or "P" trap at site complete with all operations including all necessary materials, labour and disposal of dismantled material i/c malba, all complete as per the direction of Engineer-in charge.		
14.80.1	Long pattern W.O Pan of size 580x440 mm	each	2,380.70
14.80.2	Orissa pattern W.C Pan of size 580x440 mm	each	3,162.20
14.81	Cutting holes of required size in brick masonry wall for fixing of exhaust fan including providing and fixing 300 mm dia PVC pipe conforming BIS-12818 and making good the same etc. complete as per direction of Engineer-in-charge.	each	182.65
14.82	Dismantling W.C. Pan of all sizes including disposal of dismantled materials i/c malba all complete as per directions of Engineer-in-Charge.	each	78.25
14.83	Hacking of CC flooring including cleaning for surface etc. complete as per direction of the Engineer-in-Charge.	sqm	2.05
14.84	Dismantling 15 to 40 mm dia G.I. pipe including stacking of dismantled pipes (within 50 metres lead) as per direction of Engineer- in-Charge.(a) Internal Work- Exposed on wall	metre	2.45
14.85	Taking out existing wooden door shutter, repair by cutting, painting etc. and refixing of repaired door shutters to existing door frames, including replacement of hinges with screws, etc. as required, all complete as per the direction of the Engineer-in-charge.	each	266.35
14.86	Providing and laying in situ seven course water proofing treatment with APP (Atactic poly-propylene) modified Polymeric memberane over roof consisting of first coat of bitumen primer @ 0.40 litre per sqm, 2nd, 4th & 6th courses of bonding material @ 1.20 Kg/sqm, which shall consist of blown type bitumen of grade 85/25 conforming to IS : 702, 3rd and 5th layers of roofing membrane APP modified Polymeric membrane 1.5 mm thick of 2.25 Kg/sqm weight consisting of five layers prefabricated with centre core as 20 micron HMHDPE film sandwiched on both sides with polymeric mix and the polymeric mix is protected on both side with 20 micron HMHDPE film. 7th, the top most layer shall be finished with brick tiles of class designation 10 grouted with cement mortar 1:3 (1cement : 3 fine sand) mixed with 2% integral water proofing compound by weight of cement over a 12 mm layer of cement mortar 1:3 (1 cement : 3 fine sand) and finished neat (item of laying brick tiles shall be paid for separately).	sqm	509.45
14.87	Providing and laying in situ five course water proofing treatment with APP (Atactic Polypropylene) modified Polymeric memberane over roof consisting of first coat of bitumen primer @ 0.40 litre per sqm, 2nd & 4th courses of bonding material @ 1.20 kg/sqm, which shall consist of blown type bitumen of grade 85/25 conforming to IS : 702, 3rd layer of roofing membrane APP modified Polymeric membrane 2.0 mm thick of 3.00 Kg/ sqm weight consisting of five layers prefabricated with centre core as 100 micron HMHDPE film sandwiched on both sides with polymeric mix and the polymeric mix is protected on both side with 20 micron HMHDPE film. 5th, the top most layer shall be finished with brick tiles of class designation 10 grouted with cement mortar 1:3 (1 cement : 3 fine sand) mixed with 2% integral water proofing compound by weight of cement over a 12 mm layer of cement mortar 1:3 (1 cement : 3 fine sand) and finished neat (item of laying brick tiles shall be paid for separately).	sqm	376.90

Item Code	Description	Unit	Justified Rate
14.88	Providing and laying in situ seven course water proofing treatment with APP (Atactic Polypropylene) modified Polymeric memberane over roof consisting of first coat of bitumen primer @ 0.40 litre per sqm, 2nd, 4th & 6th courses of bonding material @ 1.20 kg/sqm, which shall consist of blown type bitumen of grade 85/25 conforming to IS : 702, 3rd and 5th layers of roofing membrane APP modified Polymeric membrane 2.0 mm thick of 3.00 Kg/sqm weight consisting of five layers prefabricated with centre core as 100 micron HMHDPE film sandwiched on both sides with polymeric mix and the polymeric mix is protected on both side with 20 micron HMHDPE film. 7th, the top most layer shall be finished with brick tiles of class designation 10 grouted with cement mortar 1:3 (1 cement : 3 fine sand) mixed with 2% integral water proofing compound by weight of cement over a 12 mm layer of cement mortar 1:3 (1 cement : 3 fine sand) and finished neat (item of laying brick tiles shall be paid for separately).	sqm	611.65
14.89	Providing and fixing APP (Atactic Polypropylene Polymer) modified prefabricated five layer 2 mm thick water proofing membrane, black finished reinforced with glass fibre matt consisting of a coat of bitumen primer for bitumen membrane @ 0.40 litre/sqm by the same membrane manufacture of density at 25°C, 0.87 - 0.89 kg/ litre and viscosity 70 - 160 cps. Over the primer coat the layer of membrane shall be laid using Butane torch and sealing all joints etc., and preparing the surface complete. The vital physical and chemical parameters of the membrane shall be as under : Joint strength in longitudinal and transverse direction at 23°C as 350/300 N/ 5 cm. Tear strength in longitudinal and transverse direction as 60/80N. Softening point of membrane not less than 150°C. Cold flexibility shall be upto -2°C when tested in accordance with ASTM, D - 5147. The laying of membrane shall be got done through the authorised applicator of the manufacture of membrane.		
14.89.1	2mm (for corrugated roof sheets)	sqm	367.05
14.90	Providing and laying APP (Atactic Polypropylene Polymer) modified prefabricated five layer, 3 mm thick water proofing membrane, black finished reinforced with glass fibre matt consisting of a coat of bitumen primer for bitumen membrane @ 0.40 litre/sqm by the same membrane manufactured of density at 25°C, 0.87 - 0.89 kg/litre and viscosity 70 - 160 cps. Over the primer coat the layer of membrane shall be laid using butane torch and sealing all joints etc., and preparing the surface complete. The vital physical and chemical parameters of the membrane shall be as under : Joint strength in longitudinal and transverse direction at 23°C as 350/300 N/5 cm. Tear strength in longitudinal and transverse direction as 60/80N. Softening point of membrane not less than 150°C. Cold flexibility shall be upto -2°C when tested in accordance with ASTM, D - 5147. The laying of membrane shall be got done through the authorised applicator of the manufacturer of membrane :		
14.90.1	3 mm thick	sqm	443.70
14.91	Providing and laying APP (Atactic Polypropylene Polymer) modified prefabricated five layer 3 mm thick water proofing membrane, black finished reinforced with non-woven polyester matt consisting of a coat of bitumen primer for bitumen membrane @ 0.40 litre/sqm by the same membrane manufacture of density at 25°C, 0.87-0.89 kg/ litre and viscosity 70-160 cps. Over the primer coat the layer of membrane shall be laid using Butane Torch and sealing all joints etc, and preparing the surface complete. The vital physical and chemical parameters of the membrane shall be as under : Joint strength in longitudinal and transverse direction at 23°C as 650/ 450N/ 5cm. Tear strength in longitudinal and transverse direction as 300/ 250N. Softening point of membrane not less than 150°C. Cold flexibility shall be upto -2°C when tested in accordance with ASTM, D - 5147. The laying of membrane shall be got done through the authorised applicator of the manufacturer of membrane :		

Item Code	Description	Unit	Justified Rate
14.91.1	3 mm thick	sqm	469.25
14.92	Extra for covering top of membrane with Geotextile, 120 gsm non woven, 100% polyester of thickness 1 to 1.25 mm bonded to the membrane with intermittent touch by heating the membrane by Butane Torch as per manufactures recommendation.	sqm	85.85
14.93	Providing round the clock security guard without gun for watch & ward of Government premises and its all belongings by deploying neatly dressed security guards in 8 hour's shift including necessary T&P like torch, lathi and uniform etc.complete,as per the direction of Engineer-in-charge. (One job means 8 hour's duty).	each job	877.15
14.94	Providing round the clock security guard with gun for watch & ward of Government premises and its all belongings by deploying neatly dressed security guards in 8 hour's shift including necessary T&P like torch, lathi and uniform etc.complete, as per the direction of Engineer-in-charge.(One job means 8 hour's duty).	each job	1,025.85
15	DISMANTLING & DEMOLISHING		
15.1	Demolishing lime concrete manually/ by mechanical means and disposal of material within 50 metres lead as per direction of Engineer-in-charge.	cum	493.65
15.2	Demolishing cement concrete manually/ by mechanical means including disposal of material within 50 metres lead as per direction of Engineer - in - charge.		
15.2.1	Nominal concrete 1:3:6 or richer mix (i/c equivalent design mix)	cum	1,412.40
15.2.2	Nominal concrete 1:4:8 or leaner mix (i/c equivalent design mix)	cum	871.80
15.3	Demolishing R.C.C. work manually/ by mechanical means including stacking of steel bars and disposal of unserviceable material within 50 metres lead as per direction of Engineer - in- charge.	cum	2,060.50
15.4	Demolishing R.B. work manually/ by mechanical means including stacking of steel bars and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in- charge.	cum	1,842.55
15.5	Extra for cutting reinforcement bars manually/ by mechanical means in R.C.C. or R.B. work (Payment shall be made on the cross sectional area of R.C.C. or R.B. work) as per direction of Engineer-in-charge.	sqm	690.40
15.6	Extra for scrapping, cleaning and straightening reinforcement from R.C.C. or R.B. work.	kg	5.40
15.7	Demolishing brick work manually/ by mechanical means including stacking of serviceable material and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in-charge.		
15.7.1	In mud mortar	cum	408.80
15.7.2	In lime mortar with old mughal bricks	cum	1,033.30
15.7.3	In lime mortar	cum	493.65
15.7.4	In cement mortar	cum	1,194.45
15.8	Removing mortar from bricks and cleaning bricks including stacking within a lead of 50 m (stacks of cleaned bricks shall be measured):		
15.8.1	From brick work in mud mortar	1000 Nos	2,713.10
15.8.2	From brick work in lime mortar	1000 Nos	3,135.35
15.8.3	From brick work in cement mortar	1000 Nos	3,929.90
15.9	Demolishing stone rubble masonry manually/ by mechanical means including stacking of serviceable material and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in-charge :		
15.9.1	In lime mortar	cum	671.75
15.9.2	In cement mortar	cum	1,425.45
15.10	Dismantling dressed stone work ashlar face stone work, marble work or precast concrete work manually/ by mechanical means including stacking of serviceable and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in-charge :		
15.10.1	In lime mortar	cum	849.50

Item Code	Description	Unit	Justified Rate
15.10.2	In cement mortar	cum	1,668.00
15.11	Removing mortar from and cleaning stones and concrete articles (net quantity of stacks of cleaned materials will be measured):		
15.11.1	In lime mortar	cum	279.20
15.11.2	In cement mortar	cum	401.45
15.12	Dismantling doors, windows and clerestory windows (steel or wood) shutter including chowkhats, architrave, holdfasts etc. complete and stacking within 50 metres lead :		
15.12.1	Of area 3 sq. metres and below	each	218.95
15.12.2	Of area beyond 3 sq. metres	each	300.00
15.13	Taking out doors, windows and clerestory window shutters (steel or wood) including stacking within 50 metres lead :		
15.13.1	Of area 3 sq. metres and below	each	85.20
15.13.2	Of area beyond 3 sq. metres	each	112.45
15.14	Dismantling wood work in frames, trusses, purlins and rafters up to 10 metres span and 5 metres height including stacking the material within 50 metres lead :		
15.14.1	Of sectional area 40 square centimetres and above	cum	2,662.60
15.14.2	Of sectional area below 40 square centimetres	metre	10.65
15.15	Extra for dismantling trusses, rafters, purlins etc. of wood work for every additional span of one metre or part thereof beyond 10 metres :		
15.15.1	Of sectional area 40 square centimetres and above	cum per metre span	356.55
15.15.2	Of sectional area below 40 square centimetres	metre per metre span	1.00
15.16	Extra for dismantling trusses, rafters, purlins etc. of wood work for every additional height of one metre or part thereof beyond 5 metres :		
15.16.1	Of sectional area 40 square centimetres and above	cum per metre span	513.25
15.16.2	Of sectional area below 40 square centimetres	metre per metre span	2.00
15.17	Dismantling steel work in single sections including dismembering and stacking within 50 metres lead in:		
15.17.1	R.S. Joists	kg	2.05
15.17.2	Channels, angles, tees and flats	kg	1.40
15.18	Dismantling steel work in built up sections in angles, tees, flats and channels including all gusset plates, bolts, nuts, cutting rivets, welding etc. including dismembering and stacking within 50 metres lead.	kg	3.40
15.19	Dismantling steel work manually/ by mechanical means in built up sections without dismembering and stacking within 50 metres lead as per direction of <u>Engineer-in-charge.</u>	kg	2.30
15.20	Extra for dismantling trusses, rafters, purlins etc. of steel work for every additional span of one metre or part thereof beyond 10 metres	kg per metre span	0.50
15.21	Extra for dismantling trusses, rafters, purlins etc. of steel work for every additional height of one metre or part thereof beyond 5 metres.	kg per metre height	0.50
15.22	Extra for marking of structural steel work required to be re-erected.	kg	2.90
15.23	Dismantling tile work in floors and roofs laid in cement mortar including stacking material within 50 metres lead.		
15.23.1	For thickness of tiles 10 mm to 25 mm	sqm	43.75
15.23.2	For thickness of tiles above 25 mm and up to 40 mm	sqm	67.95

Item Code	Description	Unit	Justified Rate
15.24	Demolishing dry brick pitching in floors, drains etc. including stacking of serviceable material and disposal of unserviceable material within 50 metres lead :	cum	764.60
15.25	Dismantling stone slab flooring laid in cement mortar including stacking of serviceable material and disposal of unserviceable material within 50 metres lead.	sqm	154.75
15.26	Demolishing brick tile covering in terracing including stacking of serviceable material and disposal of unserviceable material within 50 metres lead.	sqm	63.10
15.27	Demolishing mud phaska in terracing and disposal of material within 50 metres lead.	CUM	530.05
15.28	Dismantling roofing including ridges, hips, valleys and gutters etc., and stacking the material within 50 metres lead of:		
15.28.1	G.S. Sheet	sqm	97.70
15.28.2	Asbestos Cement sheet	sqm	45.80
15.29	Dismantling stone slab roofing over wooden karries or R.C.C. battens (dismantling karries and battens to be paid for separately), including stacking of serviceable material and disposal of unserviceable material within 50 metres lead.	cum	1,547.75
15.30	Dismantling jack arch roofing and floors including stacking of serviceable material and disposal of unserviceable material within 50 metres lead.	sqm	147.50
15.31	Dismantling tiled roofing with battens, boarding etc. complete including stacking of serviceable material and disposal of unserviceable material within 50 metres lead.	sqm	122.05
15.32	Demolishing thatch roofing including mats, bamboo, jaffari etc. complete including stacking of serviceable material and disposal of unserviceable material within 50 metres lead.	sqm	33.65
15.33	Dismantling wooden ballies in posts and struts including stacking within 50metres lead.	metre	12.15
15.34	Dismantling and stacking within 50 metres lead, fencing posts or struts including all earth work and dismantling of concrete etc. in base of:		
15.34.1	T' or 'L' iron or pipe	each	142.60
15.34.2	R.C.C.	each	155.40
15.35	Cutting ballies or wooden posts of fencing at the point of projection above the concrete or ground and stacking the same within 50 metres lead.	each	10.25
15.36	Dismantling barbed wire or flexible wire rope in fencing including making rolls and stacking within 50 metres lead.	kg	21.35
15.37	Dismantling wooden trellis work excluding frames but including stacking the serviceable material within 50 metres lead.	sqm	38.05
15.38	Dismantling expanded metal or I.R.C. fabrics with necessary battens and beading including stacking the serviceable material within 50 metres lead.	sqm	44.50
15.39	Dismantling wooden boardings in lining of walls and partitions, excluding supporting members but including stacking within 50 metres lead :		
15.39.1	Up to 10 mm thick	sqm	36.20
15.39.2	Thickness above 10 mm up to 25 mm	sqm	46.15
15.39.3	Thickness above 25 mm up to 40 mm	sqm	53.85
15.40	Dismantling precast concrete or stone slabs in walls, partition walls etc. including stacking within 50 metres lead :		
15.40.1	Thickness up to 40 mm	sqm	169.05
15.40.2	Thickness above 40 mm up to 75 mm	sqm	253.25
15.41	Dismantling cement asbestos or other hard board ceiling or partition walls including stacking of serviceable materials and disposal of unserviceable materials within 50 metres lead.	sqm	33.65
15.42	Dismantling C.I. or asbestos rain water pipe with fittings and clamps including stacking the material within 50 metres lead :		
15.42.1	75 to 80 mm dia pipe	metre	43.90
15.42.2	100 mm dia pipe	metre	45.25

Item Code	Description	Unit	Justified Rate
15.42.3	150 mm dia pipe	metre	46.60
15.43	Dismantling manually/ by mechanical means including stacking of serviceable material and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in-charge :		
15.43.1	Water bound macadam road	sqm	127.40
15.43.2	bituminous road	sqm	249.90
15.44	Dismantling G.I. pipes (external work) including excavation and refilling trenches after taking out the pipes, manually/ by mechanical means including stacking of pipes within 50 metres lead as per direction of Engineer-in-charge :		
15.44.1	15 mm to 40 mm nominal bore	metre	88.85
15.44.2	Above 40 mm nominal bore	metre	97.70
15.45	Dismantling C.I. pipes including excavation and refilling trenches after taking out the pipes, manually/ by mechanical means breaking lead caulked joints, melting of lead and making into blocks including stacking of pipes & lead at site within 50 metre lead as per direction of Engineer-in-charge:		
15.45.1	Up to 150mm diameter	metre	210.95
15.45.2	Above 150 mm dia up to 300 mm dia	metre	287.10
15.45.3	Above 300 mm diameter	metre	382.75
15.46	Dismantling steel cylinder R.C. pipes including excavation and refilling trenches after taking out the pipes, manually/ by mechanical means breaking lead caulked joints, melting of lead and making into blocks including stacking of pipes & lead at site within 50 metres lead as per direction of Engineer-in-charge :		
15.46.1	Up to 600 mm diameter	metre	412.30
15.46.2	Above 600 mm diameter	metre	1,039.10
15.47	Dismantling asbestos cement pressure pipes including excavation and refilling trenches after taking out the pipes manually/ by mechanical means and stacking the pipes within 50 metres lead as per direction of Engineer-in-charge :		
15.47.1	Up to 150 mm diameter	metre	192.70
15.47.2	Above 150 mm diameter	metre	233.85
15.48	Taking out C.I. cover with frame from R.C.C. top slab of manholes of various sizes including demolishing of R.C.C. work manually/ by mechanical means and stacking of useful materials near the site and disposal of unserviceable materials within 50 metres lead as per direction of Engineer-in-charge.	each	408.85
15.49	Taking out C.I. cover with frame from R.C.C. top slab of inspection chambers of various sizes including demolishing of R.C.C. work manually/ by mechanical means and stacking of useful materials near the site and disposal of unserviceable materials within 50 metres lead as per direction of Engineer-in-charge.	each	239.05
15.50	Dismantling of R.C.C. spun vent shaft including excavating the cement concrete pit completely, taking out the shaft, refilling the excavated gap, stacking the useful materials near the site and disposal of unserviceable materials within 50 metres lead.	each	2,793.35
15.51	Dismantling of road gully chamber of various sizes including C.I. grating with frame including stacking of useful materials near the site and disposal of unserviceable materials within 50 metres lead including refilling the excavated gap.	each	560.10
15.52	Dismantling of flushing cistern of all types (C.I /PVC/Nitrious China) including stacking of useful materials near the site and disposal of unserviceable materials within 50 metres lead.	each	67.00
15.53	Dismantling of C.I. sluice valve including stacking of useful materials within a lead of 50 metres		
15.53.1	Up to 150 mm diameter	each	198.60
15.53.2	Above 150 mm diameter	each	723.85
15.54	Dismantling of spindle fire hydrant including stacking of useful materials within 50 metres lead.	each	441.25

Item Code	Description	Unit	Justified Rate
15.55	Dismantling of cement concrete platform along with curtain walls and base concrete etc. including stacking of useful materials near the site and disposal of unserviceable materials within 50 metres lead :		
15.55.1	120 x 120 cm (2outside to outside)	each	640.15
15.55.2	210x 120 cm (outside to outside)	each	981.90
15.55.3	320 x 120 cm (outside to outside)	each	1,389.75
15.56	Dismantling old plaster or skirting raking out joints and cleaning the surface for plaster including disposal of rubbish to the dumping ground within 50 metres lead.	sqm	32.00
15.57	Dismantling aluminium/ Gypsum partitions, doors, windows, fixed glazing and false ceiling including disposal of unserviceable material and stacking of serviceable material with in 50 meters lead as directed by Engineer-in-charge.	sqm	33.70
15.58	Demolishing R.C.C. work by mechanical means and stockpiling at designated locations and disposal of dismantled materials up to a lead of 1 kilometre, stacking serviceable and unserviceable material separately including cutting reinforcement bars.	cum	1,754.20
15.59	Dismantling of flexible pavement (bituminous courses) by mechanical means and disposal of dismantled material up to a lead of 1 kilometre, as per direction of Engineer-in-charge.	cum	257.95
15.60	Disposal of building rubbish / malba / similar unserviceable, dismantled or waste materials by mechanical means, including loading, transporting, unloading to approved municipal dumping ground or as approved by Engineer-in-charge, beyond 50 m initial lead, for all leads including all lifts involved.	cum	190.40
16	ROAD WORK		
16.1	Preparation and consolidation of sub grade with power road roller of 8 to 12 tonne capacity after excavating earth to an average of 22.5cm depth, dressing to camber and consolidating with road roller including making good the undulations etc. and re-rolling the subgrade and disposal of surplus earth with lead upto 50 metres.	sqm	128.30
16.2	Extra for compaction of earth work in embankment under optimum moisture conditions to give at least 95% of the maximum dry density (proctor density).	cum	15.65
16.3	Supplying and stacking at site.		
16.3.1	90 mm to 45 mm size stone aggregate	cum	1,798.20
16.3.2	63 mm to 45 mm size stone aggregate	cum	1,828.40
16.3.3	53 mm to 22.4 mm size stone aggregate	cum	1,833.05
16.3.4	Over burnt (Jhama) brick aggregate 120 mm to 40 mm	cum	845.80
16.3.5	Over burnt (Jhama) brick aggregate 90 mm to 45 mm	cum	903.85
16.3.6	Stone screening 13.2 mm nominal size (Type A)	cum	1,619.05
16.3.7	Stone screening 11.2 mm nominal size (Type B)	cum	1,793.30
16.3.8	Red bajri	cum	1,351.90
16.3.9	Good earth	cum	493.05
16.3.10	Moorum	cum	771.15
16.4	Laying, spreading and compacting stone aggregate of specified size to WBM specifications in uniform thickness, hand picking, rolling with 3 wheeled road/vibratory roller 8-10 tonne capacity in stages to proper grade and camber, applying and brooming requisite type of screening / binding material to fill up interstices of coarse aggregate, watering and compacting to the required density .	cum	641.20
16.5	Laying water bound macadam sub-base with brick aggregate and binding material, earth etc. including screening, sorting and spreading to template and consolidation with light power road-roller etc. complete. (payment for brick aggregate and moorum etc. to be made separately)		
16.5.1	Over burnt (Jhama) brick aggregate 120 mm to 40 mm	cum	520.45
16.5.2	Over burnt (Jhama) brick aggregate 90 mm to 45 mm	cum	520.45

Item Code	Description	Unit	Justified Rate
16.6	Supplying, stacking and Spreading 6 mm thick red bajri, watering and rolling complete including preparation of the surface and rolling.		
16.6.1	With road roller/ hand roller	sqm	17.40
16.7	Brick edging in full brick width and half brick depth including excavation, refilling and disposal of surplus earth lead upto 50 metres.		
16.7.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	metre	147.80
16.8	Brick edging laid lengthwise with half brick depth including excavation, refilling and disposal of surplus earth lead upto 50 metres :		
16.8.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	metre	41.35
16.9	Scarifying metalled (water-bound) road surface including disposal of rubbish, lead upto 50 m and consolidation of the aggregate received from scarifying with power road roller of 8 to 10 tonne capacity.	sqm	20.25
16.10	Making bajri path including preparation of subgrade, supplying and laying brick aggregate of 50 mm nominal size 7.5 cm deep with blinding material consisting of 12 mm moorum and 12 mm red bajri consolidated with road roller.	sqm	152.80
16.11	Dry stone pitching 22.5 cm thick including supply of stones and preparing surface complete.	sqm	640.50
16.12	Dry brick pitching half brick thick in drains including supply of bricks and preparing the surface complete :		
16.12.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	sqm	504.55
16.13	Cutting road and making good the same including supply of extra quantities of materials i.e. aggregate, moorum screening, red bajri and labour required.		
16.13.1	bituminous portion	cum	3,079.80
16.13.2	Water bound macadam	curt	1,917.80
16.14	Cutting bajri paths and making good the same including supply of extra quantities of brick aggregate, moorum and red bajri required.	sqm	176.55
16.15	Supplying at site:		
16.15.1	R.C.C. Standards post/ struts/rails/ pales of mix 1:1.5:3 (1 cement: 1.5 coarse sand : 3 graded stone aggregate 12.5 mm nominal size) with wooden plugs or 6mm bar nibs wherever required as per direction of Engineer-in-charge (cost of earth works in excavation, concrete works in foundation to be paid separately).	cum	24,223.25
16.15.2	Welded steel wire fabric of required width having rectangular mesh painted with two or more coats of enamel paint of approved shade over a coat of primer (Priming & Painting to be paid for separately).	kg	64.60
16.16	Supplying and fixing turn buckles and straining bolts for barbed wire fencing	each set	199.55
16.17	Fencing with R.C.C. post placed at required distance, embedded in cement concrete blocks, every 15th post, last but one end post and corner post shall be strutted on both sides and end post one side only, provided with horizontal lines and two diagonals of barbed wire weighing 9.38 kg per 100 metres (minimum), between the two posts fitted and fixed with G.I. staples on wooden plugs or G.I. binding wire tied to 6 mm bar nibs fixed while casting the post (cost of R.C.C. posts, struts, earth work and concrete to be paid for separately) :- Payment to be made per metre cost of total length of barbed wire used.		
16.17.1	With G.I. barbed wire	metre	10.25

Item Code	Description	Unit	Justified Rate
16.18	Fencing with angle iron post placed at required distance embedded in cement concrete blocks, every 15th post, last but one end post and corner post shall be strutted on both sides and end post on one side only and provided with horizontal lines and two diagonals interwoven with horizontal wires, of barbed wire weighing 9.38 kg per 100 m (minimum), between the two posts fitted and fixed with G.I. staples, turn buckles etc. complete. (Cost of posts, struts, earthwork and concrete work to be paid for separately). Payment to be made per metre cost of total length of barbed wire used.		
16.18.1	With G.I. barbed wire	metre	16.15
16.19	Supplying at site Angle iron post & strut of required size including bottom to be split and bent at right angle in opposite direction for 10cm length and drilling holes upto 10 mm dia. etc. complete.	kg	82.55
16.20	Welded steel wire fabric fencing with posts of specified material and of standard design placed and embedded in cement concrete blocks 45x45x 60 cm of mix 1:5:10 (1 cement:5 fine sand : 10 graded stone aggregate 40 mm nominal size), every 15th post, last but one end post and corner post shall be strutted on both sides and end post on one side only and struts embedded in cement concrete blocks 70x45x50 cm of the same mix, provided with welded steel wire fabric fixed between the posts fitted and fixed with G.I. staples on wooden plugs or tied to 6 mm bar nibs with G.I. binding wire (cost of posts, welded steel wire fabric, painting, earth work in excavation and concrete to be paid for separately).	sqm	42.65
16.21	Engraving letters in hard stone	per cm height per letter	7.10
16.22	Providing and fixing 15x15x90 cm boundary stone of hard stone with top 30 cm chisel dressed on all four sides including top (cost of excavation, refilling and concrete etc. to be paid for separately).	each	175.90
16.23	Providing and fixing 15 cm dia at top, 20 cm at bottom and 90 cm high precast reinforced cement concrete 1:1.5:3 (1 cement: 1.5 coarse sand: 3 graded stone aggregate 20 mm nominal size) boundary stone as per standard design, including finishing smooth with cement mortar 1:3 (1 cement : 3 fine sand) (cost of excavation, refilling and concreting to be paid for separately).	each	595.45
16.24	Providing and fixing precast reinforced cement concrete 1:1.5:3 (1 cement : 1.5 coarse sand : 3 graded stone aggregate 20 mm nominal size) kilometre stone as per standard design, including finishing smooth in 1:3 cement mortar (1 cement : 3 fine sand) but excluding the cost of earth work, concrete in foundation, painting and lettering etc. which shall be paid for separately_		
16.24.1	35x111x25 cm size	each	2,161.25
16.24.2	50x152.5x25 cm size	each	3,932.40
16.24.3	35x93.5x18 cm size	each	1,451.20
16.25	Surface dressing on new surface with paving bitumen of grade VG -10 of approved quality using 2.25 kg of bitumen per sqm with 1.65 cum of stone chippings 13.2 mm nominal size per 100 sqm of road surface, including consolidation with road roller of 6 to 8 tonne capacity etc. complete:	sqm	144.80
16.26	Surface dressing on new surface in two coats with bitumen of grade VG -10 of approved quality using 1.8 kg of bitumen per sqm with 1.5 cum of stone chippings 13.2 mm nominal size per 100 sqm of road surface for first coat and 1.1 kg. of bitumen per sqm with 1.00 cu.metre of stone chippings 11.2 mm nominal size per 100 sqm of road surface for second coat, including consolidation of each coat separately with road roller of 6 to 8 tonne capacity etc. complete.	sqm	201.15
16.27	Surface dressing on old surface with hot bitumen of grade VG - 10 of approved quality using 1.95 kg of bitumen per sqm with 1.50 cum of stone chippings 11.2 mm nominal size per 100 sqm of road surface, including consolidation with road roller of 6 to 8 tonne capacity, etc. complete.	sqm	113.85

Item Code	Description	Unit	Justified Rate
16.28	Surface dressing one coat on new surface with bitumen of specified grade at a rate of 1.95 kg/sqm of surface area with 1.5 cum of stone chippings 13.2 mm nominal size per 100 sqm of road surface, including consolidation with road roller of 6 to 8 tonne capacity, etc. complete.		
16.28.1	Using bitumen emulsion (minimum 50% bitumen content-RS grade conforming to IS : 8887)	sqm	138.40
16.29	Surface dressing one coat on old surface with bitumen of specified grade at the rate of 1.22 kg/ sqm of surface area with 1.10 cum of stone chippings 11.2 mm nominal size per 100 sqm of road surface, including consolidation with road roller of 6 to 8 tonne capacity etc. complete.		
16.29.1	Using bitumen emulsion (minimum 50% bitumen content-RS grade conforming to IS : 8887)	sqm	87.85
16.30	Providing and applying tack coat using hot straight run bitumen of grade VG - 10, including heating the bitumen, spraying the bitumen with mechanically operated spray unit fitted on bitumen boiler, cleaning and preparing the existing road surface as per specifications :		
16.30.1	On W.B.M. @ 0.75 Kg / sqm	sqm	36.15
16.30.2	On bituminous surface @ 0.50 Kg / sqm	sqm	28.70
16.31	Providing and applying tack coat using bitumen emulsion conforming to IS:8887, using emulsion pressure distributor including preparing the surface & cleaning with mechanical broom.		
16.31.1	With rapid setting bitumen emulsion		
16.31.1.1	On W.B.M / W.M.M. @ 0.4kg/sqm	sqm	10.00
16.31.1.2	On bituminous surface @ 0.25kg/sqm	sqm	6.80
16.31.2	With medium setting bitumen emulsion		
16.31.2.1	On W.B.M / W.M.M. @ 0.4kg/sqm	sqm	14.10
16.31.2.2	On bituminous surface @ 0.25kg/sqm	sqm	9.35
16.32	2 cm premix carpet surfacing with 1.8 cum and 0.90 cum of stone chippings of 13.2 mm size and 11.2 mm size respectively per 100sqm and 52 kg and 56 kg of hot bitumen per cum of stone chippings of 13.2 mm and 11.2 mm size respectively, including a tack coat with hot straight run bitumen, including consolidation with road roller of 6 to 9 tonne capacity etc. complete (tack coat to be paid for separately).		
16.32.1	With paving Asphalt grade VG - 10 heated and then mixed with solvent at the rate of 70 grams per kg of asphalt	sqm	151.60
16.32.2	With paving Asphalt grade VG - 30 with no solvent	sqm	170.90
16.32.3	With Refinery Modified Bitumen CRMB 55 conforming to IRC: SP: 53	sqm	157.45
16.33	2.5 cm premix carpet surfacing with 2.25 cum and 1.12 cum of stone chippings of 13.2 mm and 11.2 mm size respectively per 100sqm and 52 kg and 56 kg of hot bitumen per cum of stone chippings of 13.2 mm and 11.2 mm size respectively, including a tack coat with hot straight run bitumen, including consolidation with road roller of 6 to 9 tonne capacity etc. complete (tack coat to be paid for separately).		
16.33.1	With paving Asphalt grade VG - 10 heated and then mixed with solvent at the rate of 70 grams per kg of asphalt	sqm	182.40
16.33.2	With paving Asphalt grade VG - 30 with no solvent	sqm	206.55
16.33.3	With Refinery Modified Bitumen CRMB 55 conforming to IRC: SP: 53	sqm	189.75
16.34	2 cm premix carpet surfacing with 2.4 cum of stone chippings 11.2mm nominal size per 100 sqm and bitumen emulsion (medium setting min. 65% bitumen content) complying with IS : 8887, using 96 kg per cum of chippings, including consolidation with road roller of 6 to 9 tonne capacity etc. complete.	sqm	142.05
16.35	2.5 cm premix carpet surfacing with 3 cum of stone chippings 10mm nominal size per 100 sqm and bitumen emulsion (medium setting min. 65% bitumen content) complying with IS : 8887, using 96 kg per cum of chippings of road surface, including consolidation with road roller etc complete.	sqm	171.70

Item Code	Description	Unit	Justified Rate
16.36	Providing and laying Bitumen Penetration Macadam with hard stone aggregate of quality, size and grading as specified, with bitumen of suitable penetration grade, including required key aggregate as specified, spreading coarse aggregate with the help of self propelled/tipper tail mounted aggregate spreader and applying bitumen by a pressure distributor and then spreading key aggregate with the help of aggregate spreader complete, including consolidation with road roller of minimum 8 to 10 tonne capacity to achieve specified values of compaction and surface accuracy :		
16.36.1	For 50mm compacted thickness using coarse aggregate of size 50-20 mm graded @ 0.60 cum per 10 sqm key aggregate of size 12.5 mm graded @ 0.15 cum per 10sqm. With paving asphalt grade VG - 10 @ 50 kg/ 10sqm.	sqm	369.30
16.36.2	For 75 mm compacted thickness in two layers using stone aggregate of size 63-41 mm graded @ 0.90 cum per 10sqm key aggregate of size 20.0 mm graded @ 0.18 cum per 10 sqm. With paving asphalt grade VG - 10 @ 68 kg/10 sqm.	sqm	554.90
16.37	Providing and laying bitumen mastic wearing course (as per specifications) with industrial bitumen of grade 85/25 conforming to IS : 702, prepared by using mastic cooker and laid to required level and slope, including providing anti-skid surface with bitumen pre-coated fine grained hard stone chipping of approved size at the rate of 0.005 cum per 10 sqm and at approximate spacing of 10 cm centre to centre in both directions, pressed into surface protruding 1 mm to 4mm over mastic surface, including cleaning the surface, removal of debris etc. all complete. (Considering bitumen using 10.2% as per MORTH specification).		
16.37.1	25 mm thick	sqm	595.65
16.37.2	40 mm thick	sqm	951.95
16.38	2.5 cm thick bitumastic sheet with hot bitumen of approved quality, using stone chippings (60% with 12.5 mm nominal size and 40% with 10 mm nominal size) @ 1.65 cum per 100 sqm and coarse sand @ 1.65 cum per 100 sqm of road surface and with bitumen @ 56 kg/cum of stone chippings and @ 128 kg/cum of sand over tack coat with hot straight run bitumen, including consolidation with road roller of 8 to 10 tonne etc. complete. (tack coat to be paid separately) :		
16.38.1	With paving Asphalt grade VG - 10 heated and then mixed with solvent at the rate of 70 grams per kg of asphalt	sqm	218.55
16.38.2	With paving Asphalt grade VG - 30	sqm	259.20
16.38.3	With Refinery Modified Bitumen CRMB 55 conforming to IRC: SP : 53	sqm	230.90
16.39	4 cm thick bitumastic sheet with hot bitumen of approved quality, using stone chippings (60% with 12.5 mm nominal size and 40% with 10 mm nominal size) @ 2.60 cum per 100 sqm and coarse sand @ 2.60 cum per 100 sqm of road surface and with bitumen @ 56 kg/cum of stone chippings and @ 128 kg/cum of sand over tack coat with hot straight run bitumen, including consolidation with road roller of 8 to 10 tonne etc. complete. (tack coat to be paid separately) :		
16.39.1	With paving Asphalt grade VG - 10 heated and then mixed with solvent at the rate of 70 grams per kg of asphalt	sqm	328.75
16.39.2	With paving asphalt grade VG - 30 with no solvent	sqm	392.85
16.39.3	With Refinery Modified Bitumen CRMB 55 conforming to IRC: SP : 53	sqm	348.25
16.40	Providing and laying seal coat of premixed fine aggregate (passing 2.36 mm and retained on 180 micron sieve) with bitumen using 128kg of bitumen of grade VG - 10 bitumen per cum of fine aggregate and 0.60 cum of fine aggregate per 100 sqm of road surface, including rolling and finishing with road roller all complete.	sqm	52.65

Item Code	Description	Unit	Justified Rate
16.41	Providing and laying seal coat over prepared surface of road with bitumen heated in bitumen boiler fitted with the spray set spraying using 98 kg of bitumen of grade VG - 10 and blinding surface with 0.90 cum of stone aggregate of 6.7 mm size (Passing 11.2 mm sieve and retained on 2.36 mm sieve) per 100 sqm of road surface, including rolling and finishing with power road roller all complete. Note: Seal coat items to be operated only with the prior approval of chief Engineer concerned.	sqm	90.00
16.42	Cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 40 mm nominal size) in pavements, laid to required slope and camber in panels as required including consolidation, finishing and tamping complete.	cum	6,318.75
16.43	Providing and laying design mix cement concrete of M-30 grade, in roads/ taxi tracks/ runways, using cement content as per design mix, using coarse sand and graded stone aggregate of 40 mm nominal size in appropriate proportions as per approved & specified design criteria, providing dowel bars with sleeve/ tie bars wherever required, laying at site, spreading and compacting mechanically by using needle and surface vibrators, levelling to required slope/ camber, finishing with required texture, including steel form work with sturdy M.S. channel sections, curing, making provision for contraction/ expansion, construction & longitudinal joints (10 mm wide x 50 mm deep) by groove cutting machine, providing and filling joints with approved joint filler and sealants, complete all as per direction of Engineer-in-charge (Item of joint fillers, sealants, dowel bars with sleeve/ tie bars to be paid separately). Note:- Cement content considered in M-30 is @ 340 kg/cum. Excess/ less cement used as per design mix is payable/ recoverable separately.		
16.43.1	Cement concrete prepared with batch mixing machine	cum	7,967.20
16.43.2	Cement concrete manufactured in automatic batching plant (RMC plant) i/c transportation to site in transit mixer	cum	8,400.45
16.44	Extra for providing and mixing hardening compound of approved quality as per manufacturer's specification in cement concrete.	litre	41.80
16.45	Providing and fixing pre-moulded joint filler in expansion joints of RCC roads / CC pavements after making the joints dust free with high pressure air jet cleaners, all complete as per direction of the Engineer-in-Charge. (Pre-moulded joint fillers shall be made of bitumen hot sealing compound impregnated fibre board having impregnation more than 35%, conforming to IS:1838 for fibre board and IS: 1834 for hot sealing bitumen compound grade A.)	per cm depth per cm width per metre length	3.95
16.46	Providing and filling in position rubberized bitumen hot sealing compound for sealing of expansion joints in roads / pavements all complete as per direction of the Engineer-in-Charge.		
16.46.1	Using grade 'A' sealing compound conforming to IS: 1834.	per cm depth per cm width per metre length	6.00
16.47	Painting runway/taxi track/apron marking with adequate nos of coats to give uniform finish with road marking paint of superior make as approved by the Engineer-in-charge, i/c cleaning the surface of all dirt, scales, oil, grease and other foreign material etc. and lining out complete.		
16.47.1	New work (Two or more coats)	sqm	123.35
16.47.2	Old work (One or more coats)	sqm	78.70
16.48	Painting road surface marking with adequate nos of coats to give uniform finish with ready mixed road marking paint conforming to IS: 164, on bituminous surface in white/yellow shade, including cleaning the surface of all dirt, scales, oil, grease and foreign material etc. complete.		
16.48.1	New work (Two or more coats)	sqm	176.60
16.48.2	Old work (One or more coats)	sqm	115.75

Item Code	Description	Unit	Justified Rate
16.49	Making bell mouth opening/ entrance of size 100x50x50 cm for drainage pipe under footpath, including providing cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) for shape of bell mouth, including plastering providing and fixing precast R.C.C./ S.F.R.C. slab including plastering with cement mortar 1:3 (1 cement : 3 fine sand) of 6 mm thickness on exposed surface of the slab & bell mouth including centring, shuttering & neat cement punning inside the bell mouth etc. all complete	each	2,283.95
16.50	Providing and fixing Glow studs of size 100x20 mm made of heavyduty body shall be moulded ASA (Acrylic styrene Acryloretrite) orHIP (High impact polystyrene) or ABS having electronically weldedmicro- prismatic lens with abrasion resistant coating as approved byEngineer in charge. The glow stud shall support a load of 13635 kgtested in accordance with ASTM D4280. The slope of retro- reflective surface shall be 35 (+/-5) degress to base .The reflective panels onboth sides with at least 12 cm of reflective area up each side. Theluminance intensity should be as per the specification and shall betested as described in ASTM I: 809 as recommended in BS: 873part 4 : 1973. The studs shall be fixed to the Road surface using theadhesive conforming to IS, as per procedure recommended by themanufacturer complete and as per direction of Engineer-in-charge.	each	143.60
16.51	Preparation of sub-base road pavement with commercial dry lime(slaked), fly ash stabilised soil with a mix of 3% lime, 12% fly ashand 85% local suitable soil by weight, so as to achieve minimumfield C.B.R. of 20, including mixing, rolling with road roller curing etc. all complete.		
16.51.1	Minimum thickness 15 cm	cum	1,011.15
16.52	Providing and fixing precast lime fly ash concrete blocks 1:2:3:6 (1lime: 2 fly ash : 3 coarse sand : 6 graded stone aggregate 20 mmmnominal size), including finishing with 10mm thick cement mortar1:3 (1 cement : 3 coarse sand) in foot paths, including preparation ofsub grade with a hand rammer, laying 10 mm thick leveling course offine sand (jamuna sand) and filling the joints with fine sand.	cum	9,444.70
16.53	Providing and fixing concertina coil fencing with punched tapeconcertina coil 600 mm dia 10 metre openable length (total length90 m), having 50 nos rounds per 6 metre length, upto 3 m height ofwall with existing angle iron 'Y' shaped placed 2.4m or 3.00 m apartand with 9 horizontal R.B.T. reinforced barbed wire, stud tied withG.I. staples and G.I. clips to retain horizontal, including necessarybolts or G.I. barbed wire tied to angle iron, all complete as per directionof Engineer-in-charge, with reinforced barbed tape(R.B.T.) / Springcore (2.5mm thick) wire of high tensile strength of 165 kg/ sq.mmwith tape (0.52 mm thick) and weight 43.478 gm/ metre (cost ofM.S. angle, C.C. blocks shall be paid separately)	metre	255.85
16.54	Providing and laying Dense Graded Bituminous Macadam usingcrushed stone aggregates of specified grading, premixed withbituminous binder and filler, transporting the hot mix to work site bytipper, laying with paver finisher equipped with electronic sensor tothe required grade, level and alignment and rolling with smoothwheeled, vibratory and tandem rollers as per specifications to achievethe desired compaction and density, complete as per specificatonsand directions of Engineer-in-Charge.		
16.54.1	50 to 100 mm average compacted thickness with bitumenof grade VG-30 @ 5% (percentage by weight of total mix)and lime filler @ 2% (percentage by weight of Aggregate)prepared in Batch Type Hot Mix Plant of 100-120 TPHcapacity.	cum	9,072.80
16.54.2	50 to 100 mm average compacted thickness with bitumenof grade VG-30 @ 5% (percentage by weight of total mix)and lime filler @ 2% (percentage by weight of Aggregate)prepared in Drum Type Hot Mix Plant of 60-90 TPHcapacity.	cum	9,001.30

Item Code	Description	Unit	Justified Rate
16.55	Providing and laying bituminous macadam using crushed stone aggregates of specified grading premixed with bituminous binder, transported to site by tippers, laid over a previously prepared surface with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers as per specifications to achieve the desired compaction and density, complete as per specifications and directions of Engineer-in-Charge.		
16.55.1	50 to 100 mm average compacted thickness with bitumen of grade VG-30 @ 3.50% (percentage by weight of total mix) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.	cum	7,245.20
16.55.2	50 to 100 mm average compacted thickness with bitumen of grade VG-30 @ 3.50% (percentage by weight of total mix) prepared in Drum Type Hot Mix Plant of 60-90 TPH capacity.	cum	7,177.25
16.56	Providing and laying semi-dense Bituminous concrete using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction and density as per specification, complete and as per directions of Engineer-in-Charge.		
16.56.1	25 mm compacted thickness with bitumen of grade VG-30 @ 5% (percentage by weight of total mix) and lime filler @ 2% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.	sqm	225.90
16.56.2	25 mm compacted thickness with bitumen of grade VG-30 @ 5% (percentage by weight of total mix) and lime filler @ 2% (percentage by weight of Aggregate) prepared in Drum Type Hot Mix Plant of 60-90 TPH capacity.	sqm	224.15
16.57	Providing and laying Bituminous concrete using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction and density as per specification, complete and as per directions of Engineer-in-Charge.		
16.57.1	40/50 mm compacted thickness with bitumen of grade VG-30 @ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.	cum	9,802.30
16.57.2	40/50 mm compacted thickness with bitumen of grade VG-30 @ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) and waste plastic additive @ 8% (percentage by weight of bitumen) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.	cum	10,261.05
16.57.3	40/50 mm compacted thickness with bitumen of grade PMB-40 @ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.	cum	9,019.70
16.57.4	40/50 mm compacted thickness with bitumen of grade CRMB-60 @ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.	cum	8,447.75
16.57.5	40/50 mm compacted thickness with bitumen of grade VG-30 @ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in drum Type Hot Mix Plant of 60-90 TPH capacity.	cum	9,729.35
16.57.6	40/50 mm compacted thickness with bitumen of grade VG-30 @ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) and waste plastic additive @ 8% (percentage by weight of bitumen) prepared in drum Type Hot Mix Plant of 60-90 TPH capacity.	cum	10,188.10

Item Code	Description	Unit	Justified Rate
16.57.7	40/50 mm compacted thickness with bitumen of gradePMB-40 @ 5.5% (percentage by weight of total mix) andlime filler @ 3% (percentage by weight of Aggregate)prepared in drum Type Hot Mix Plant of 60-90 TPHcapacity.	cum	8,946.70
16.57.8	40/50 mm compacted thickness with bitumen of gradeCRMB-60 @ 5.5% (percentage by weight of total mix)and lime filler @ 3% (percentage by weight of Aggregate)prepared in Drum Type Hot Mix Plant of 60-90 TPHcapacity.	cum	8,374.75
16.59	Manufacturing, supplying and fixing retro reflective sign boards made up of 2 mm thick aluminium sheet, face to be fully covered with high intensity encapsulated type heat activated retro reflective sheeting conforming to type - IV of ASTM-D 4956-01 in blue and silver white or other colour combination including subject matter, message (bi-lingual), symbols and borders etc. as per IRC ; 67:2001, pasted on substrate by an adhesive backing which shall be activated by applying heat and pressure conforming to class -2 of ASTM-D-4956-01 and fixing the same with suitable sized aluminium alloy rivets @ 20 cm c/c to back support frame of M.S. angle iron of size 25x25x3 mm along with theft resistant measures, mounted and fixed with 2 Nos. M.S. angles of size 35x35x5 mm to a vertical post made up to M.S. Tee section ISMT 50x50x6 mm welded with base plate of size 100x100x5 mm at the bottom end and including making holes in pipes, angles flats, providing & fixing M.S. message plate of required size, steel work to be painted with two or more coats of synthetic enamel paint of required shade and of approved brand & manufacture over priming coat of zinc chromate yellow primer (vertical MS-Tee support to be painted in black and white colours).Backside of aluminium sheet to be painted with two or more coats of epoxy paint over and including appropriate priming coat including all leads and lifts etc. complete as per drawing , specification and direction of Engineer-in-charge.		
16.59.1	Mandatory/ Regulatory sign boards of 900 mm diametre with support length of 3750 mm	Each	5,457.30
16.59.2	Cautionary /warning sign boards of equilateral triangular shape having each side of 900 mm with support length of 3650 mm	Each	4,114.30
16.60	Manufacturing, supplying and fixing retro reflective overhead signageboards made up of 2 mm thick aluminium sheet, face to be fullycovered with high intensity and encapsulated lens type heat activatedretro reflective sheeting conforming to type - III of ASTM-D-4956-01as approved by Engineer-in-charge, letters, borders etc. as per IRC: 67-2001 in silver white with blue colour back ground and with highintensity grade, pasted on substrate by pressure sensitive adhesivebacking which shall be activated by applying pressure conforming toclass II of ASTM-D-4956-01 and fixing the same to the plate ofstructural frame work by means of suitable sized aluminium alloys,rivets or bolts & nuts @ 300 mm centre to centre all along theperiphery as well as in two vertical rows along with theft resistantmeasures, including the cost of painting with two or more coats ofepoxy paint in grey colour on the back side of aluminium sheetincluding appropriate priming coat. The rate includes the cost ofrounding off the corners, lowering down the structural frame workfrom the gantry, fixing and erecting the same in position all complete as per drawings, specification and direction of the engineer-in-charge.(Structural frame work including M.S. plate to be providedseparately. Rectangular area of the sheet only shall be measured for payment).		
16.60.1	Overhead informatory road signage	sqm	4,849.00

Item Code	Description	Unit	Justified Rate
16.61	Providing Retro-reflective regulatory sign board of size 900 mm dia meter made out of 2 mm thick aluminium sheet, face to be fully covered with high intensity encapsulated lens type retro -reflective sheeting as approved by Engineer-in-charge . Letter, symbols, borders etc. will be as per IRC - 67 with required colour scheme on the boards and with the high intensity grade A. The aluminium sheet to be riveted to M.S. frame of angle iron of size 40x40x4 mm. The boards will be fixed to 1 No. 50x50 mm square post made of M.S. angle 50x50x4 mm, 4 m long welded to the frame with adequate anti-theft arrangement .Sheet work to be painted with two or more coats of synthetic enamel paint over an under coat (primer) and back side of aluminium sheet to be painted with two or more coats of epoxy paint including appropriate priming coat complete in all respects as per direction of Engineer-in-charge.	Each	6,121.55
16.62	Providing and applying 2.5 mm thick road marking strips (retro-reflective) of specified shade/ colour using hot thermoplastic material by fully/ semi automatic thermoplastic paint applicator machine fitted with profile shoe, glass beads dispenser, propane tank heater and profile shoe heater, driven by experienced operator on road surface including cost of material, labour, T&P, cleaning the road surface of all dirt, seals, oil, grease and foreign material etc. complete as per direction of Engineer-in-charge and accordance with applicable specifications.	sqm	535.95
16.63	Providing, laying and making kerb channel 30 cm wide and 50 mm thick with cement concrete 1:3:6 (1 cement: 3 coarse sand:6 graded stone aggregate 20 mm nominal size) over 75mm bed of dry brick ballast 40 mm nominal size, well rammed and consolidated and grouted with fine sand, including finishing the top smooth etc. complete and as per direction of Engineer-in-charge.	sqm	435.75
16.64	Providing and laying 75 mm thick compacted bed of dry brick aggregate of 40 mm thick nominal size including spreading, well ramming, consolidating and grouting with jamuna sand, including finishing smooth etc. complete as per direction of Engineer-in-charge.	sqm	159.55
16.65	Providing and fixing post delineators made of ABS round body fitted with 2 nos 100 mm dia high reflective reflectors and mounted on M.S. pipe of 65 mm dia duly powder coated anti-rust and anti theft steel to be installed as per direction of Engineer-in-charge.	each	678.35
16.66	Excavating holes upto 0.10 cum, including getting out the excavated soil, then returning the soil as deposited in layers not exceeding 20 cm in depth, including consolidating and deposited layer by ramming watering etc., disposing of surplus excavated soil as directed with in a lead of 50 mm and lift upto 1.5 m.		
16.66.1	All kind of soil	each	19.95
16.67	Providing and fixing at or near ground level factory made RCC pavement slab of M-30 grade of size 450x450x50 mm, including reinforcement with 6 mm dia M.S. bars 4 nos on each side, including setting in position in footpath to the required level and line over a bed of 20 mm average thick cement mortar 1:5 (1 cement : 5 coarse sand), having joint thickness not more than 5mm except on curve, including filling of joints with same cement mortar and making grooves etc. complete as per direction of Engineer-in-charge.	sqm	1,140.50
16.68	Providing and laying 60mm thick factory made cement concrete interlocking paver block of M -30 grade made by block making machine with strong vibratory compaction, of approved size, design & shape, laid in required colour and pattern over and including 50mm thick compacted bed of coarse sand, filling the joints with line sand etc. all complete as per the direction of Engineer-in-charge.	sqm	752.85

Item Code	Description	Unit	Justified Rate
16.69	Providing and laying at or near ground level factory made kerb stone of M-25 grade cement concrete in position to the required line, level and curvature, jointed with cement mortar 1:3 (1 cement: 3 coarse sand), including making joints with or without grooves (thickness of joints except at sharp curve shall not be more than 5mm), including making drainage opening wherever required complete etc. as per direction of Engineer-in-charge (length of finished kerb edging shall be measured for payment). (Precast C.C. kerb stone shall be approved by Engineer-in-charge).	cum	7,335.15
16.7	Providing and fixing G.I. chain link fabric fencing of required width in mesh size 50x50 mm including strengthening with 2 mm dia wire nuts, bolts and washers as required complete as per the direction of Engineer-in-charge.		
16.70.1	Made of G.I. wire of dia 4 mm	sqm	697.15
16.70.2	Made of G.I. wire of dia. 4 mm, PVC coated to achieve outer dia not less than 5 mm in required colour and shade	sqm	733.75
16.71	Providing and fixing G.I. chain link fabric fencing of required width in mesh size 25x25 mm made of G.I. wire of dia 3 mm including strengthening with 2 mm dia wire or nuts, bolts and washers as required complete as per the direction of Engineer-in-charge.	sqm	794.75
16.72	Supplying and stacking of hard stone (for stone pitching) 22.5 cm thick at site.	cum	920.90
16.73	Dry stone pitching 22.5 cm thick laid in courses and required profile with hammer dressed stones having no side less than 15 cm, with minimum depth of 20 cm including preparing the bedding surface etc. all complete. (Payment for Stone to be made separately).	sqm	398.25
16.74	75 mm thick back filling for pitching including supplying of required materials and consolidation etc. complete with :		
16.74.1	Moorum	sqm	68.70
16.74.2	Stone aggregate 20 mm nominal size	sqm	184.45
16.74.3	Stone aggregate 40 mm nominal size	sqm	150.85
16.75	Providing and laying C.C. pavement of mix M-25 with ready mixed concrete from batching plant. The ready mixed concrete shall be laid and finished with screed board vibrator, vacuum dewatering process and finally finished by floating, brooming with wire brush etc. complete as per specifications and directions of Engineer-in-charge. (The panel shuttering work shall be paid for separately). (Note:- Cement content considered in this item is @ 330 kg/cum. Excess/less cement used as per design mix is payable/ recoverable separately).	cum	7,804.90
16.76	Deduct for using of M-20 grade concrete instead of M-25 grade concrete in C.C. pavement.	cum	197.30
16.77	Scarifying the existing bituminous road surface to a depth of 50 mm and disposal of scarified material within all lifts and lead upto 1km (by mechanical means).	sqm	4.70
16.78	Construction of granular sub-base by providing close graded material conforming to specifications, mixing in a mechanical mix plant at OMC, carriage of mixed material by tipper to work site, for all leads & lifts, spreading in uniform layers of specified thickness with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge.		
16.78.1	With material conforming to Grade-I (size range 75 mm to 0.075 mm) having CBR Value-30	cum	2,598.55
16.78.2	With material conforming to Grade-II (size range 53 mm to 0.075 mm) having CBR Value-25	cum	2,611.40
16.78.3	With material conforming to Grade-III (size range 26.5 mm to 0.075 mm) having CBR Value-20	cum	2,262.00

Item Code	Description	Unit	Justified Rate
16.79	Providing, laying, spreading and compacting graded stone aggregate(size range 53 mm to 0.075 mm) to wet mix macadam (WMM)specification including premixing the material with water at OMC infor all leads & lifts, laying in uniform layers with mechanicalpaverfinisher in sub- base / base course on well prepared surfaceand compacting with vibratory roller of 8 to 10 tonne capacity toachieveth the desired density, complete as per specifications anddirections of Engineer-in-Charge.	cum	2,698.35
16.80	Construction of dry lean cement concrete sub base over a preparedsub-grade with coarse and fine aggregate conforming to IS:383, thesize of coarse aggregate not exceeding 25 mm, aggregate cementratio not to exceed 15:1, aggregate gradation after blending to be asper specifications, cement content not to be less than 150 Kg/cum,optimum moisture content to be determined during trial lengthconstruction, concrete strength not to be less than 10 Mpa at 7days, mixed in a batching plant, transported to site, for all leads &lifts, laid with a mechanical paver, compacting with 8-10 tonne vibratoryroller, finishing and curing etc. complete as per direction of Engineer-in- charge.	cum	3,802.55
16.81	Providing and erecting 2.00 metre high temporary barricading at site;each panel of size 2.50mx2.00m made of 40x40x6mm angle iron or50x50x3mm hollow MS tube posts/horizontal members/bracingscovered with 1.63mm thick MS sheet. The sheet shall be fixed with30x5mm MS flat by suitable welding/riveting. The panels shall bemade so that gap of 50cm above the ground is available makingoverall height as 2.5m. MS channel ISLC 75 @ 5.70 kg/m, 50cmlong shall be provided at the bottom having oval shaped holes of size50x25mm at both ends with 50cm long MS angle 40x40x6mmbracing. Suitable arrangement shall be made to fix the barricading toavoid from overturning by providing 250mm long expansion fastenersat both ends. The work shall be executed as per drawing/direction of Engineer-in-Charge which includes writing and painting, arrangementfor traffic diversion such as traffic signals during construction at sitefor day and night, glow lamps, reflective signs, marking, flags, cautiontape as directed by the Engineer-in-Charge. The barricading providedshall be retained in position at site continuously i/c shifting ofbarricading from one location to another location as many times asrequired during the execution of the entire work till its completion.Rate include its maintenance for damages, painting, all incidentals,labour materials, equipments and works required to execute the job.The barricading shall not be removed without prior approval of Engineer-(Note :- One time payment shall be made for providing barricadingfrom start of work till completion of work i/c shifting. The barricadingprovided shall remain to be the property of the contractor on completion in-Charge.of the work).	metre	2,143.70
16.82	Taking out existing kerb stones of all types from footpath/ centralverge, including removal of mortar etc., disposal of unserviceablematerial to the dumping ground, for which payment shall be madeseparately and stacking of serviceable material within 50 metre leadas per direction of Engineer-in-Charge.	metre	22.80
16.83	Taking out existing CC interlocking paver blocks from footpath/ centralverge, including removal of rubbish etc., disposal of unserviceablematerial to the dumping ground, for which payment shall be madeseparately and stacking of serviceable material within 50 metre leadas per direction of Engineer-in-Charge.	sqm	76.45
16.84	Laying old cement concrete interlocking paver blocks of any design/shape laid in required line, level, curvature, colour and pattern overand including 50 mm thick compacted bed of coarse sand, filling thejoints with fine sand etc. all complete as per the direction of Engineer-in-charge. (Old CC paver blocks shall be supplied by the department free of cost)	sqm	241.75

Item Code	Description	Unit	Justified Rate
16.85	Laying at or near ground level old kerb stones of all types in position to the required line, level and curvature, jointed with cement mortar 1:3 (1 cement : 3 coarse sand), including making joints with or without grooves (thickness of joints, except at sharp curve, shall not be more than 5 mm), including making drainage opening wherever required etc. complete as per direction of Engineer-in-charge. (Length of finished kerb edging shall be measured for payment). (Old kerb stones shall be supplied by the department free of cost)	metre	68.15
16.86	Providing and laying gang saw cut 18 mm thick, mirror polished pre moulded and pre polished machine cut granite stone of required size and shape of approved shade, colour and texture in footpath, flooring cut granite stone of required size and shape of approved shade, colour and texture in footpath, flooring in road side plazas and similar locations, laid over 20mm thick base of cement mortar 1:4 (1 cement : 4 coarse sand) including grouting the joints with white cement mixed with matching pigment, epoxy touch ups etc. complete as per direction of Engineer-in-Charge.		
16.86.1	With granite stone of area less than 0.50 sqm.	sqm	3,466.35
16.87	Providing and laying gang saw cut 30 mm thick, mirror polished pre moulded and pre polished machine cut granite stone of required size and shape of approved shade, colour and texture in footpath, flooring in road side plazas and similar locations, laid over 20mm thick base of cement mortar 1:4 (1 cement : 4 coarse sand) including grouting the joints with white cement mixed with matching pigment, epoxy touch ups etc. complete as per direction of Engineer-in-Charge.		
16.87.1	With granite stone of colour black, cherry/ruby red of area less than 0.50 sqm.	sqm	3,610.40
16.87.2	With granite stone of all colour except black, cherry/ruby red of area less than 0.50 sqm.	sqm	3,832.25
16.88	Providing and laying matt finished vitrified tile of size 100x100x16mm having water absorption less than 0.5% and conforming to IS: 15622 of approved make in all colours and shades in outdoor floors such as footpath, court yard multi models etc., laid on 20mm thick base of cement mortar 1:4 (1 cement : 4 coarse sand) in all shapes & patterns including grouting the joints with white cement mixed with matching pigments etc. complete as per direction of Engineer-in-Charge.	sqm	1,570.65
16.89	Providing and laying matt finished vitrified tile of size 300x300x9.8mm having with water absorption less than 0.5% and conforming to IS:15622 of approved make in all colours and shades in for outdoor floors such as footpath, court yard, multi models location etc., laid on 20mm thick base of cement mortar 1:4 (1 cement : 4 coarse sand) in all shapes & patterns including grouting the joints with white cement mixed with matching pigments etc. complete as per direction of Engineer-in-Charge.	sqm	1,036.40
16.90	Providing and laying tactile tile (for vision impaired persons as per standards) of size 300x300x9.8mm having with water absorption less than 0.5% and conforming to IS:15622 of approved make in all colours and shades in for outdoor floors such as footpath, court yard, multi models location etc., laid on 20mm thick base of cement mortar 1:4 (1 cement : 4 coarse sand) in all shapes & patterns including grouting the joints with white cement mixed with matching pigments etc. complete as per direction of Engineer-in-Charge.	sqm	1,442.90
16.91	Providing and laying factory made chamfered edge Cement Concrete paver blocks in footpath, parks, lawns, drive ways or light traffic parking etc, of required strength, thickness & size/ shape, made by table vibratory method using PU mould, laid in required colour & pattern over 50mm thick compacted bed of sand, compacting and proper embedding/laying of inter locking paver blocks into the sand bedding layer through vibratory compaction by using plate vibrator, filling the joints with sand and cutting of paver blocks as per required size and pattern, finishing and sweeping extra sand. complete all as per direction of Engineer-in-Charge.		

Item Code	Description	Unit	Justified Rate
16.91.1	60mm thick cement concrete paver block of M-35 grade with approved colour, design & pattern.	sqm	737.10
16.91.2	80 mm thick C.C. paver block of M-30 grade with approved color design and pattern.	sqm	805.10
16.92	Providing and fixing 10x10x7.50 cm Granite stone block hand cut and chisel dressed on top, for paving in floors, drains etc. laid over 20mm thick base mortar 1:4 (1 cement : 4 coarse sand) with joints 10mm wide filled with same mortar including ruled pointing etc. complete as per direction of engineer-in-charge.	sqm	1,522.40
16.93	Providing and placing in position 100 mm thick factory made machine batched & machine mixed Precast RCC Rectangular Covers on drains of footpath of various sizes, of M-25 grade cement concrete for RCC work, including cost of centering, shuttering, reinforcement of 8 mm dia TMT bars of Fe 500 grade @ maximum 100mm c/c on both ways, neat cement punning on finished surface, properly encased on all edges with 1.6 mm thick, 100 mm wide MS sheet duly painted over priming coat reinforcement to be welded at edges with MS sheet and providing 2 Nos. 12 mm dia bar for hooks etc i/c cost of cartage, all leads & lift, handling at site etc. all complete as per direction of Engineer-in-Charge.	sqm	2,305.85
16.94	Providing & making Gabion structure with Mechanically Woven Double Twisted Hexagonal Shaped Wire mesh Gabion Boxes as per IS16014:2012, MORTH Clause 2500, of required size, Mesh Type 10x12 (D=100 mm with tolerance of $\pm 2\%$) Zinc coated, Mesh wire diameter 3.0 mm, mechanically edged/selvedged with partitions at every 1m interval and shall have minimum 10 numbers of openings per meter of mesh perpendicular to twist, tying with lacing wire of diameter 2.2mm, supplied @ 3% by weight of Gabion boxes, filled with boulders with least dimension of 200 mm, as per drawing, all complete as per direction of Engineer-in-charge.	cum	3,092.70
16.95	Providing & making Gabion structure with Mechanically Woven Double Twisted Hexagonal Shaped Wire mesh Gabion Boxes as per IS16014:2012, MORTH Clause 2500, of required size, Mesh Type 10x12 (D=100 mm with tolerance of $\pm 2\%$) Zinc+PVC coated, Mesh wire diameter 2.7/3.7mm, mechanically edged/selvedged with partitions at every 1m interval and shall have minimum 10 numbers of openings per meter of mesh perpendicular to twist, tying with lacing wire of diameter 2.2/3.2mm (ID/OD), supplied @ 3% by weight of Gabion boxes, filled with boulders with least dimension of 200mm, as per drawing, all complete as per directions of Engineer-in-charge.	cum	3,205.15
16.96	Providing & making Gabion structure with Mechanically Woven Double Twisted Hexagonal Shaped Wire mesh Gabion Boxes as per IS16014:2012, MORTH Clause 2500, of required size, Mesh Type 10x12 (D=100 mm with tolerance of $\pm 2\%$), Zinc+10% Al alloy+PVC coated, Mesh wire diameter 2.7/3.7mm (ID/OD), mechanically edged/selvedged with partitions at every 1m interval and shall have minimum 10 numbers of openings per meter of mesh perpendicular to twist, tying with lacing wire of diameter 2.2/3.2mm (ID/OD), supplied @ 3% by weight of Gabion boxes, filled with boulders with least dimension of 200 mm, as per drawing, all complete as per directions of Engineer-in-charge.	cum	3,460.70
17	SANITARY INSTALLATIONS		
17.1	Providing and fixing water closet squatting pan (Indian type W.C. pan) with 100 mm sand cast Iron P or S trap, 10 litre low level white P.V.C. flushing cistern, including flush pipe, with manually controlled device (handle lever) conforming to IS : 7231, with all fittings and fixtures complete, including cutting and making good the walls and floors wherever required:		
17.1.1	White Vitreous china Orissa pattern W.C. pan of size 580x440 mm with integral type foot rests	each	4,774.45
17.1.2	Stainless Steel AISI-304(18/8) Orissa pattern W.C. pan of size 585x480 mm with flush pipe and integrated type foot rests	each	8,502.90

Item Code	Description	Unit	Justified Rate
17.2	Providing and fixing white vitreous china pedestal type water closet(European type W.C. pan) with seat and lid, 10 litre low level whiteP.V.C. flushing cistern, including flush pipe, with manually controlleddevice (handle lever), conforming to IS : 7231, with all fittings andfixtures complete, including cutting and making good the walls andfloors wherever required :		
17.2.1	W.C. pan with ISI marked white solid plastic seat and lid	each	4,565.40
17.2.2	W.C. pan with ISI marked black solid plastic seat and lid	each	4,466.65
17.3	Providing and fixing white vitreous china pedestal type water closet(European type) with seat and lid, 10 litre low level white vitreouschina flushing cistern & C.P. flush bend with fittings & C.I. brackets,40 mm flush bend, overflow arrangement with specials of standardmake and mosquito proof coupling of approved municipal designcomplete, including painting of fittings and brackets, cutting andmaking good the walls and floors wherever required :		
17.3.1	W.C. pan with ISI marked white solid plastic seat and lid	each	5,766.90
17.3.2	W.C. pan with ISI marked black solid plastic seat and lid	each	5,668.15
17.4	Providing and fixing white vitreous china flat back or wall corner typelipped front urinal basin of 430x260x350 mm and 340x410x265 mmsizes respectively with automatic flushing cistern with standard flushpipe and C.P. brass spreaders with brass unions and G.I clampscomplete, including painting of fittings and brackets, cutting andmaking good the walls and floors wherever required :		
17.4.1	One urinal basin with 5 litre white P.V.C. automatic flushing cistern	each	4,257.55
17.4.2	Range of two urinal basins with 5 litre white P.V.C. automaticflushing cistern	each	6,585.35
17.4.3	Range of three urinal basins with 10litre white P.V.C.automatic flushing cistern	each	9,111.10
17.4.4	Range of four urinal basins with 10 litre white P.V.C.automatic flushing cistern	each	12,591.90
17.5	Providing and fixing white vitreous china flat back half stall urinal ofsize 580x380x350 mm with white PVC automatic flushing cistern,with fittings, standard size C.P. brass flush pipe, spreaders withunions and clamps (all in C.P. brass) with waste fitting as per IS :2556, C.I. trap with outlet grating and other couplings in C.P. brass,including painting of fittings and cutting and making good the wallsand floors wherever required :		
17.5.1	Single half stall urinal with 5 litre P.V.C. automaticflushing cistern	each	8,003.45
17.5.2	Range of two half stall urinals with 5 litre P.V.C.automatic flushing cistern	each	11,945.50
17.5.3	Range of three half stall urinals with 10 litre P.V.C.automatic flushing cistern	each	14,723.15
17.5.4	Range of four half stall urinals with 10 litre P.V.C.automatic flushing cistern	each	17,416.95
17.6	Providing and fixing one piece construction white vitreous chinasquatting plate with an integral longitudinal flushing pipe, white P.V.C.automatic flushing cistern, with fittings, standard size G.I. / PVCflush pipe for back and front flush with standard spreader pipes withfittings, G.I clamps and C.P. brass coupling complete, includingpainting of fittings and cutting and making good the walls and floorsetc. wherever required :		
17.6.1	Single squatting plate with 5 litre P.V.C. automaticflushing cistern	each	6,156.45
17.6.2	Range of two squatting plates with 5 litre P.V.C.automatic flushing cistern	each	9,018.70
17.6.3	Range of three squatting plates with 10 litre P.V.C.automatic flushing cistern	each	11,887.70
17.6.4	Range of four squatting plates with 10 litre P.V.C.automatic flushing cistern	each	14,348.45
17.7	Providing and fixing wash basin with C.I. brackets, 15 mm C.P. brasspillar taps, 32 mm C.P. brass waste of standard pattern, includingpainting of fittings and brackets, cutting and making good the wallswherever require:		
17.7.1	White Vitreous China Wash basin size 630x450 mmwith a pair of 15 mm C.P. brass pillar taps	each	1,975.00

Item Code	Description	Unit	Justified Rate
17.7.2	White Vitreous China Wash basin size 630x450 mmwith a single 15 mm C.P. brass pillar tap	each	1,661.35
17.7.3	White Vitreous China Wash basin size 550x400 mmwith a pair of 15 mm C.P. brass pillar taps	each	1,771.70
17.7.4	White Vitreous China Flat back wash basin size 550x400 mm with single 15 mm C.P. brass pillar tap	each	1,458.10
17.7.5	White Vitreous China Angle back wash basin size 600 x480 mm with single 15mm C.P. brass pillar tap	each	1,661.35
17.7.6	White Vitreous China Angle back wash basin size 400 x400 mm with single 15 mm C.P. brass pillar tap	each	1,312.90
17.7.7	White Vitreous China Flat back wash basin size 450x300 mm with single 15mm C.P. brass pillar tap	each	1,144.50
17.7.8	White Vitreous China Surgeon type wash basin of size660x460 mm with a pair of 15 mm C.P. brass pillar tapswith elbow including operated levers	each	2,782.20
17.7.9	White Vitreous China Surgeon type wash basin of size660x460 mm with single 15 mm C.P. brass pillar tapswith elbow operated levers ISI Marked	each	2,282.75
17.7.10	Stainless Steel AISI-304(18/8) Round basin 405x355 mmwith single 15 mm C.P. brass pillar tap	each	2,561.55
17.7.11	Stainless Steel AISI-304(18/8) Wash basin 530x345 mmwith single 15 mm C.P. brass pillar tap	each	3,142.30
17.7A	Providing and fixing wash basin with C.I. brackets, 15 mm dia CPBrass single hole basin mixer of approved quality and make, includingpainting of fittings and brackets, cutting and making good the wallswherever required:-(a) White Vitreous China Wash basin size 550x400 mm with a15 mm CP Brass single hole basin mixer	each	3,002.90
17.7B	Providing and fixing wash basin with C.I. brackets, 15 mm PTMTpillar cock, 32 mm PTMT waste coupling of standard pattern, includingpainting of fittings and brackets, cutting and making good the wallswherever required. White Vitreous China Flat back wash basin size550x400 mm with single 15 mm PTMT pillar cock.	each	1,218.85
17.8	Providing and fixing white vitreous china pedestal for wash basincompletely recessed at the back for the reception of pipes andfittings.	each	1,302.20
17.9	Providing and fixing kitchen sink with C.I. brackets, C.P. brass chainwith rubber plug, 40 mm C.P. brass waste complete, including paintingthe fittings and brackets, cutting and making good the walls whereverrequired:		
17.9.1	White glazed fire clay kitchen sink of size 600x450x 250 mm	each	2,755.40
17.10	Providing and fixing Stainless Steel A ISI 304 (18/8) kitchen sink asper IS:13983 with C.I. brackets and stainless steel plug 40 mm,including painting of fittings and brackets, cutting and making goodthe walls wherever required :		
17.10.1	Kitchen sink with drain board		
17.10.1.1	510x1040 mm bowl depth 250 mm	each	5,051.30
17.10.1.2	510x1040 mm bowl depth 225 mm	each	5,632.05
17.10.1.3	510x1040 mm bowl depth 200 mm	each	5,283.60
17.10.1.4	510x1040 mm bowl depth 178 mm	each	5,051.30
17.10.2	Kitchen sink without drain board		
17.10.2.1	610x510 mm bowl depth 200 mm	each	3,598.80
17.10.2.2	610x460 mm bowl depth 200 mm	each	2,785.75
17.10.2.3	470x420 mm bowl depth 178 mm	each	2,437.30
17.11	Providing and fixing white vitreous china laboratory sink with C.I.brackets, C.P. brass chain with rubber plug, 40 mm C.P brass wasteand 40mm C.P. brass trap with necessary C.P. brass unions complete,including painting of fittings and brackets, cutting and making goodthe wall wherever required :		
17.11.1	Size 450x300x150 mm	each	3,597.50
17.11.2	Size 600x450x200 mm	each	4,759.00

Item Code	Description	Unit	Justified Rate
17.12	Providing and fixing draining board with C.I. brackets including painting of brackets, cutting and making good the walls wherever required :		
17.12.1	White glazed fire clay draining board of size 600x450x25 mm	each	1,128.65
17.13	Providing and fixing white vitreous china water closet squatting pan (Indian type) :		
17.13.1	Long pattern W.C. pan of size 580 mm	each	1,347.40
17.13.2	Orissa pattern W.C. pan of size 580x440 mm	each	2,294.00
17.14	Extra for using coloured W.C. pan instead of white W.C. pan :		
17.14.1	Orissa pattern W.C. pan 580x440 mm	each	360.05
17.15	Providing and fixing white vitreous china pedestal type (European type/ wash down type) water closet pan.	each	1,986.20
17.16	Extra for using coloured pedestal type W.C pan (European type) with low level cistern of same colour instead of white vitreous china W.C pan and cistern.	each	145.20
17.16A	Providing and fixing 8 mm dia C.P. / S.S. Jet with flexible tube upto 1 metre long with S.S. triangular plate to European type W.C. of quality and make as approved by Engineer - in - charge.	each	259.90
17.17	Providing and fixing a pair of white vitreous china foot rests of standard pattern for squatting pan water closet :		
17.17.1	250x130x30 mm	pair	187.15
17.17.2	250x125x25 mm	pair	190.65
17.18	Providing and fixing P.V.C. low level flushing cistern with manually controlled device (handle lever) conforming to IS : 7231, with all fittings and fixtures complete.		
17.18.1	10 litre capacity - White	each	863.00
17.18.2	10 litre capacity - coloured	each	834.00
17.19	Providing and fixing controlled flush, low level cistern made of vitreous china with all fittings complete.		
17.19.1	10 litre (full flush) capacity-white	each	1,575.75
17.19.2	10 litre (full flush) capacity-coloured	each	2,098.45
17.20	Providing and fixing solid plastic seat with lid for pedestal type W.C. pan complete :		
17.20.1	White solid plastic seat with lid	each	509.20
17.20.2	Black solid plastic seat with lid	each	410.45
17.20.3	Coloured (other than black & white) solid plastic seat with lid	each	439.50
17.22	Providing and fixing G.I. inlet connection for flush pipe connecting with W.C. pan.	each	114.30
17.22A	Providing and fixing CP Brass 32mm size Bottle Trap of approved quality & make and as per the direction of Engineer-in-charge.	each	769.35
17.22B	Providing and fixing CP Brass Single lever telephonic wall mixer of quality & make as approved by Engineer in charge. (a) 15 mm nominal dia	each	5,312.25
17.23	Providing and fixing white vitreous china flat back or wall corner type lipped front urinal basin of 430x260x350 mm or 340x410x265 mm sizes respectively.	each	1,123.65
17.24	Providing and fixing white vitreous china squatting plate urinal with integral rim longitudinal flush pipe.	each	2,741.45
17.25	Providing and fixing white vitreous china wash basin including making all connections but excluding the cost of fittings :		
17.25.1	Flat back wash basin of size 630x450 mm	each	998.00
17.25.2	Flat back wash basin of size 550x400 mm	each	794.70
17.25.3	Angle back wash basin of size 600x480 mm	each	998.00
17.25.4	Angle back wash basin of size 400x400 mm	each	649.55
17.25.5	Flat back wash basin of size 450x300 mm	each	481.10
17.25.6	Surgeon type wash basin of size 660x460 mm	each	1,433.55
17.26	Providing and fixing kitchen sink including making all connections excluding cost of fittings.		

Item Code	Description	Unit	Justified Rate
17.26.1	White glazed fire clay sink of size 600x450x250 mm	each	1,636.05
17.27	Providing and fixing white vitreous china laboratory sink including making all connections excluding cost of fittings :		
17.27.1	Size 450x300x150 mm	each	1,868.35
17.27.2	Size 600x450x200 mm	each	3,029.85
17.28	Providing and fixing P.V.C. waste pipe for sink or wash basin including P.V.C. waste fittings complete.		
17.28.1	Semi rigid pipe		
17.28.1.1	32 mm dia	each	78.95
17.28.1.2	40 mm dia	each	88.25
17.28.2	Flexible pipe		
17.28.2.1	32 mm dia	each	90.60
17.28.2.2	40 mm dia	each	90.60
17.29	Providing and fixing 100 mm sand cast Iron grating for gully trap.	each	39.30
17.30	Providing and fixing in position 25 mm diameter mosquito proof coupling of approved municipal design.	each	39.35
17.31	Providing and fixing 600x450 mm beveled edge mirror of superior glass (of approved quality) complete with 6 mm thick hard board ground fixed to wooden cleats with C.P. brass screws and washers complete.	each	1,126.55
17.32	Providing and fixing mirror of superior glass (of approved quality) and of required shape and size with plastic moulded frame of approved make and shade with 6 mm thick hard board backing :		
17.32.1	Circular shape 450 mm dia	each	996.90
17.32.2	Rectangular shape 453x357 mm	each	919.10
17.32.3	Oval shape 450x350 mm (outer dimensions)	each	917.75
17.32.4	Rectangular shape 1500x450 mm	each	1,490.55
17.33	Providing and fixing 600x120x5 mm glass shelf with edges round off, supported on anodised aluminium angle frame with C.P. brass brackets and guard rail complete fixed with 40 mm long screws, rawlplugs etc., complete.	each	751.95
17.34	Providing and fixing toilet paper holder:		
17.34.1	C.P. brass	each	553.65
17.34.2	Vitreous china	each	364.55
17.35	Providing and fixing soil, waste and vent pipes :		
17.35.1	100 mm dia		
17.35.1.1	Sand cast iron S&S pipe as per IS: 1729	metre	874.15
17.35.1.2	Centrifugally cast (spun) iron socket & spigot (S&S) pipe as per IS: 3989	metre	925.35
17.35.1.3	Hubless centrifugally cast (spun) iron pipes epoxy coated inside & outside IS: 15905	metre	911.95
17.35.2	75 mm diameter :		
17.35.2.1	Sand cast iron S&S pipe as per IS: 1729	metre	800.65
17.35.2.2	Centrifugally cast (spun) iron socketed pipe as per IS: 3989	metre	896.35
17.35.2.3	Hubless centrifugally cast (spun) iron pipes epoxy coated inside & outside IS: 15905	metre	745.35
17.36	Providing and filling the joints with spun yarn, cement slurry and cement mortar 1:2 (1 cement : 2 fine sand) in S.C.I./ C.I. Pipes :		
17.36.1	75 mm dia pipe	each	106.35
17.36.2	100 mm dia pipe	each	125.30
17.37	Providing and fixing M.S. holder-bat clamps of approved design to Sand Cast iron/cast iron (spun) pipe embedded in and including cement concrete blocks 10x10x10 cm of 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), including cost of cutting holes and making good the walls etc. :		

Item Code	Description	Unit	Justified Rate
17.37.1	For 100 mm dia pipe	each	234.10
17.37.2	For 75 mm dia pipe	each	230.60
17.38	Providing and fixing bend of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete.		
17.38.1	100 mm dia		
17.38.1.1	Sand cast iron S&S as per IS - 1729	each	460.70
17.38.1.2	Sand cast iron S&S as per IS - 3989	each	518.80
17.38.1.3	Hubless centrifugally cast (spun) iron epoxy coated inside & outside as per IS:15905	each	478.15
17.38.2	75 mm dia		
17.38.2.1	Sand cast iron S&S as per IS - 1729	each	382.00
17.38.2.2	Sand cast iron S&S as per IS- 3989	each	393.60
17.38.2.3	Hubless centrifugally cast (spun) iron epoxy coated inside & outside as per IS:15905	each	382.00
17.39	Providing and fixing plain bend of required degree.		
17.39.1	100 mm dia		
17.39.1.1	Sand cast iron S&S as per IS - 1729	each	358.50
17.39.1.2	Sand cast iron S&S as per IS : 3989	each	381.75
17.39.1.3	Hubless centrifugally cast (spun) iron pipes epoxy coated inside et outside 15:15905	each	300.45
17.39.2	75 mm dia		
17.39.2.1	Sand cast iron S&S as per IS -1729	each	270.50
17.39.2.2	Sand cast iron S&S as per IS - 3989	each	258.85
17.39.2.3	Hubless centrifugally cast (spun) iron pipes epoxy coated inside & outside 15:15905	each	212.40
17.40	Providing and fixing heel rest sanitary bend		
17.40.1	100 mm dia		
17.40.1.1	Sand cast iron S&S as per IS - 1729	each	445.65
17.40.1.2	Sand cast iron S&S as per IS - 3989	each	381.75
17.40.2	75 mm dia		
17.40.2.1	Sand cast iron S&S as per IS - 1729	each	375.00
17.40.2.2	Sand cast iron S&S as per IS -3989	each	351.80
17.41	Providing and fixing double equal junction of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete :		
17.41.1	100x100x100x100 mm		
17.41.1.1	Sand cast iron S&S as per IS - 1729	each	901.75
17.41.1.2	Sand cast iron S&S as per IS - 3989	each	785.60
17.41.2	75x75x75x75 mm		
17.41.2.1	Sand cast iron S&S as per IS - 1729	each	654.95
17.41.2.2	Sand cast iron S&S as per IS - 3989	each	625.90
17.42	Providing and fixing double equal plain junction of required degree.		
17.42.1	100x100x100x100 mm		
17.42.1.1	Sand cast iron S&S as per IS - 1729	each	747.60
17.42.1.2	Sand cast iron S&S as per IS - 3989	each	765.05
17.42.1.3	Hubless centrifugally cast (spun) iron pipes epoxy coated inside & outside IS:15905	each	625.65
17.42.2	75x75x75x75 mm		
17.42.2.1	Sand cast iron S&S as per IS - 1729	each	502.80
17.42.2.2	Sand cast iron S&S as per IS - 3989	each	572.45
17.42.2.3	Hubless centrifugally cast (spun) iron pipes epoxy coated inside & outside IS:15905	each	346.00

Item Code	Description	Unit	Justified Rate
17.43	Providing and fixing single equal plain junction of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete.		
17.43.1	100x100x100 mm		
17.43.1.1	Sand cast iron S&S as per IS - 1729	each	582.70
17.43.1.2	Sand cast iron S&S as per IS - 3989	each	634.95
17.43.2	75x75x75 mm		
17.43.2.1	Sand cast iron S&S as per IS - 1729	each	498.15
17.43.2.2	Sand cast iron S&S as per IS - 3989	each	498.15
17.44	Providing and fixing single equal plain junction of required degree		
17.44.1	100x100x 100 mm		
17.44.1.1	Sand cast iron S&S as per IS - 1729	each	503.70
17.44.1.2	Sand cast iron S&S as per IS - 3989	each	614.05
17.44.1.3	Hubless centrifugally cast (spun) iron epoxy coated inside & outside as per IS:15905	each	497.90
17.44.2	75x75x75 mm		
17.44.2.1	Sand cast iron S&S as per IS - 1729	each	392.45
17.44.2.2	Sand cast iron S&S as per IS - 3989	each	433.10
17.44.2.3	Hubless centrifugally cast (spun) iron epoxy coated inside & outside as per IS:15905	each	276.30
17.45	Providing and fixing double unequal junction of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete:		
17.45.1	100x100x75x75 mm		
17.45.1.1	Sand cast iron S&S as per IS - 1729	each	896.30
17.45.1.2	Sand cast iron S&S as per IS - 3989	each	1,099.55
17.46	Providing and fixing double unequal plain junction of required degree:		
17.46.1	100x100x75x75 mm		
17.46.1.1	Sand cast iron S&S as per IS - 1729	each	759.25
17.46.1.2	Sand cast iron S&S as per IS - 3989	each	962.50
17.46.1.3	Hubless centrifugally cast (spun) iron epoxy coated inside & outside as per IS:15905	each	497.90
17.47	Providing and fixing single unequal junction of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete :		
17.47.1	100x100x75 mm		
17.47.1.1	Sand cast iron S&S as per IS - 1729	each	722.05
17.47.1.2	Sand cast iron S&S as per IS - 3989	each	809.15
17.48	Providing and fixing single unequal plain junction of required degree :		
17.48.1	100x100x75 mm		
17.48.1.1	Sand cast iron S&S as per IS - 1729	each	643.10
17.48.1.2	Sand cast iron S&S as per IS - 3989	each	730.20
17.48.1.3	Hubless centrifugally cast (spun) iron epoxy coated inside & outside as per IS:15905	each	468.85
17.49	Providing and fixing double equal plain invert branch of required degree:		
17.49.1	100x100x100x100 mm		
17.49.1.1	Sand cast iron AS as per IS - 1729	each	672.10
17.49.1.2	Sand cast iron S&S as per IS 3989	each	660.50
17.49.1.3	Hubless centrifugally cast (spun) iron epoxy coated inside & outside as per IS:15905	each	759.25
17.49.2	75x75x75x75 mm		
17.49.2.1	Sand cast iron S&S as per IS - 1729	each	520.20

Item Code	Description	Unit	Justified Rate
17.49.2.2	Sand cast iron 584S as per 15 - 3989	each	549.25
17.50	Providing and fixing single equal plain invert branch of required degree :		
17.50.1	100x100x100 mm		
17.50.1.1	Sand cast iron S&S as per iron 1729	each	538.55
17.50.1.2	Sand cast iron S&S as per IS - 3989	each	532.75
17.50.1.3	Hubless centrifugally cast (spun) iron epoxy coated inside & outside as per IS:15905	each	486.30
17.50.2	75x75x75 mm		
17.50.2.1	Sand cast iron S&S as per IS - 1729	each	433.10
17.50.2.2	Sand cast iron S&S as per IS - 3989	each	409.85
17.50.2.3	Hubless centrifugally cast (spun) iron epoxy coated inside & outside as per IS:15905	each	328.55
17.51	Providing and fixing double unequal invert branch of required degree :		
17.51.1	100x100x75x75 mm		
17.51.1.1	Sand cast iron S&S as per IS - 1729	each	730.20
17.51.1.2	Sand cast iron S&S as per IS - 3989	each	881.20
17.52	Providing and fixing single unequal plain invert branch of required degree:		
17.52.1	140x100x75 mm		
17.52.1.1	Sand cast iron S&S as per IS - 1729	each	614.05
17.52.1.2	Sand cast iron S&S as per IS - 3989	each	672.10
17.52.1.3	Hubless centrifugally cast (spun) iron epoxy coated inside & outside as per IS:15905	each	532.75
17.53	Providing and fixing sand cast iron S&S off sets as per IS: 1729		
17.53.1	76 mm off sets		
17.53.1.1	With 75 mm dia pipe	each	282.10
17.53.1.2	With 100 mm dia pipe	each	444.70
17.53.2	114 mm off sets		
17.53.2.1	With 75 mm dia pipe	each	393.35
17.53.2.2	With 100 mm dia pipe	each	486.30
17.53.3	152 mm off sets		
17.53.3.1	With 75 mm dia pipe	each	462.30
17.53.3.2	With 100 mm dia pipe	each	578.45
17.53A	Providing and fixing Hubless centrifugally cast iron offsets epoxycoated inside & outside as per IS:15905		
17.53A.1	65 mm offsets		
17.53A.1.1	With 100 mm dia pipe	each	444.70
17.53A.1.2	With 75 mm dia pipe	each	369.20
17.54	Providing and fixing sand cast iron S&S off sets as per IS: 3989 :		
17.54.1	75 mm off sets		
17.54.1.1	With 75 mm dia pipe	each	293.70
17.54.2	150 mm off sets		
17.54.2.1	With 75 mm dia pipe	each	388.15
17.54.2.2	With 100 mm dia pipe	each	504.30
17.54A	Providing and fixing Hubless centrifugally cast iron offsets epoxycoated inside & outside as per IS:15905		
17.54A.1	130 mm offsets		
17.54A.1.1	With 100 mm dia	each	544.35
17.54A.1.2	With 75 mm dia	each	386.65
17.55	Providing and fixing door piece, insertion rubber washer 3mm thick, bolts & nuts complete :		
17.55.1	100 mm		

Item Code	Description	Unit	Justified Rate
17.55.1.1	Sand cast iron S&S as per IS - 1729	each	617.55
17.55.1.2	Sand cast iron S&S as per IS - 3989	each	530.40
17.55.2	75 mm		
17.55.2.1	Sand cast iron S&S as per IS - 1729	each	376.20
17.55.2.2	Sand cast iron S&S as per IS - 3989	each	393.60
17.56	Providing and fixing terminal guard :		
17.56.1	100 mm		
17.56.1.1	Sand cast iron S&S as per IS - 1729	each	341.10
17.56.1.2	Sand cast iron S&S as per IS - 3989	each	381.75
17.56.1.3	Hubless centrifugally cast (spun) iron epoxy coated inside & outside as per IS:15905	each	346.90
17.56.2	75 mm		
17.56.2.1	Sand cast iron S&S as per IS - 1729	each	276.30
17.56.2.2	Sand cast iron S&S as per IS - 3989	each	270.50
17.57	Providing and fixing collar :		
17.57.1	100 mm		
17.57.1.1	Sand cast iron S&S as per IS - 1729	each	346.90
17.57.1.2	Sand cast iron S&S as per IS - 3989	each	381.75
17.57.2	75 mm		
17.57.2.1	Sand cast iron S&S as per IS - 1729	each	235.65
17.57.2.2	Sand cast iron S&S as per IS - 3989	each	235.65
17.57A	Providing and fixing shielded coupling for Hubless centrifugally cast iron pipe		
17.57A.1	100 mm dia		
17.57A.1.1	SS 304 grade coupling with EPDM rubber gasket	each	352.70
17.57A.2	75 mm dia		
17.57A.2.1	SS 304 grade coupling with EPDM rubber gasket	each	316.95
17.58	Providing lead caulked joints to sand cast iron/centrifugally cast (spun) iron pipes and fittings of diameter :		
17.58.1	100 mm	each	449.30
17.58.2	75 mm	each	383.10
17.58.3	50 mm	each	311.65
17.59	Providing and fixing M.S. stays and clamps for sand cast iron/centrifugally cast (spun) iron pipes of diameter :		
17.59.1	100 mm	each	111.70
17.59.2	75 mm	each	69.55
17.59.3	50 mm	each	64.00
17.60	Providing and fixing trap of self cleansing design with screwed down or hinged grating with or without vent arm. complete, including cost of cutting and making good the walls and floors:		
17.60.1	100 mm inlet and 100 mm outlet		
17.60.1.1	Sand cast iron S&S as per IS: 3989	each	1,292.10
17.60.1.2	Sand Cast Iron S&S as per IS: 1729	each	1,117.90
17.60.1.3	Hubless centrifugally cast (spun) iron epoxy coated inside & outside as per IS:15905	each	660.50
17.60.2	100 mm inlet and 75 mm outlet		
17.60.2.1	Sand cast iron S&S as per IS - 3989	each	1,350.20
17.60.2.2	Sand Cast Iron S&S as per IS- 1729	each	1,024.95
17.60.2.3	Hubless centrifugally cast (spun) iron epoxy coated inside & outside as per IS:15905	each	480.45

Item Code	Description	Unit	Justified Rate
17.61	Cutting chases in brick masonry walls for following diameter sand cast iron/centrifugally cast (spun) iron pipes and making good the same with cement concrete 1:3:6 (1 cement : 3 coarse sand :6 graded stone aggregate 17.5 mm nominal size), including necessary plaster and pointing in cement mortar 1:4 (1 cement :4 coarse sand) :		
17.61.1	100 mm dia	metre	476.30
17.61.2	75 mm dia	metre	341.65
17.61.3	50 mm die ,	metre	221.30
17.62	Painting C.I. cistern with bitumastic or any other anti-corrosive paintinside and white paint over a coat of zinc chromate yellow primer (ofapproved quality) on the outside surface of the cistern, flush pipe,other fittings, etc. complete for new work.	each	631.70
17.63	Re-painting C.I. cistern with bitumastic or any other anti-corrosivepaint inside and white paint on the outside surface of the cistern,flush pipe, other fittings, etc. complete, including polishing of woodenseat and lid and cleaning of W.C. pan with acid wherever necessary.	each	426.80
17.64	Repainting C.I. cistern with synthetic enamel paint of approved colour,brand and manufacture on the outside surface of cistern, flush pipe,other fittings etc. complete.	each	183.80
17.65	Painting sand cast iron/ centrifugally cast (spun) iron soil, wastevent pipes and fittings with two coats of synthetic enamel paint ofany colour such as chocolate grey, or buff etc. over a coat of primer(of approved quality) for new work :		
17.65.1	100 mm diameter pipe	metre	53.25
17.65.2	75 mm diameter pipe	metre	40.60
17.66	Repainting sand cast iron/ centrifugally cast iron (spun) iron, soil,waste, vent pipes and fittings with one coat of synthetic enamelpaint of any colour such as chocolate, grey or buff etc :		
17.66.1	100 mm diameter pipe	metre	25.70
17.66.2	75 mm diameter pipe	metre	19.25
17.67	Repainting bath tub of size 1700x730x430 mm with enamel paint.	each	528.30
17.68	Providing and fixing vitreous china dual purpose closet suitable foruse as squatting pan or European type water closet (Anglo IndianW.C pan) with seat & lid fixed with C.P. brass hinges and rubberbuffers, 10 litre low level flushing cistern with fitting and brackets, 40mm flush bend, 20 mm over flow pipe, with specials of standardmake and mosquito proof coupling of approved municipal designcomplete, including painting of fittings and brackets, cutting andmaking good the walls and floors wherever required:		
17.68.1	White vitreous china dual purpose WC pan with whitesolid plastic seat and lid with white vitreous china flushingcistern and C.P. flush bend.	each	8,705.80
17.69	Providing and fixing PTMT Waste Coupling for wash basin and sink,of approved quality and colour.		
17.69.1	Waste coupling 31 mm dia of 79 mm length and 62mmbreadth weighing not less than 45 gms	each	89.40
17.69.2	Waste coupling 38 mm dia of 83 mm length and 77mmbreadth, weighing not less than 60 gms	each	95.25
17.70	Providing and fixing PTMT Bottle Trap for Wash basin and sink.		
17.70.1	Bottle trap 31mm single piece moulded with height of270 mm, effective length of tail pipe 260 mm from thecentre of the waste coupling, 77 mm breadth with 25 mmminimum water seal, weighing not less than 260 gms	each	282.25
17.70.2	Bottle trap 38 mm single piece moulded with height of270 mm, effective length of tail pipe 260 mm from thecentre of the waste coupling, 77 mm breadth with 25 mmminimum water seal, weighing not less than 263 gms	each	282.25
17.71	Providing and fixing PTMT liquid soap container 109 mm wide, 125 mm high and 112 mm distance from wall of standard shape with bracket of the same materials with snap fittings of approved quality and colour, weighing not less than 105 gms.	each	127.00

Item Code	Description	Unit	Justified Rate
17.72	Providing and fixing PTMT towel ring trapezoidal shape 215 mm long,200 mm wide with minimum distances of 37 mm from wall face with concealed fittings arrangement of approved quality and colour,weighing not less than 88 gms.	each	177.70
17.73	Providing and fixing PTMT towel rail complete with brackets fixed to wooden cleats with CP brass screws with concealed fittings arrangement of approved quality and colour.		
17.73.1	450 mm long towel rail with total length of 495 mm,78 mm wide and effective height of 88 mm, weighing not less than 170 gms	each	447.40
17.73.2	600 mm long towel rail with total length of 645 mm, width 78 mm and effective height of 88 mm, weighing not less than 190 gms.	each	470.60
17.74	Providing and fixing PTMT shelf 440 mm long, 124 mm width and 36mm height of approved quality and colour, weighing not less than 300 gms.	each	476.45
17.75	Providing and fixing PTMT 15 mm Urinal spreader size 95x69x100mm with 1/2" BSP thread and shapes, weighing not less than 60gms.	each	80.50
17.76	Providing and fixing PTMT urinal cock of approved quality and colour.		
17.76.1	15 mm nominal bore, 80 mm long, 42 mm high and 30mm wide with BSP female threads weighing not less than 48 gms	each	130.20
17.77	Providing and fixing M.S. holder bat clamp of approved design to sand cast iron/ cast iron (spun) pipes comprising of M.S. flat brackets made of 50x5 mm flat of specified shape, projecting 75 mm outside the wall surface and fixed on wall with 4 nos, 6mm dia expansion hold fasteners, including drilling necessary holes in brick wall/ CC/RCC surface and the cost of bolts etc. The pipes shall be fixed to the already fixed brackets with the help of 30 mm x 1.6 mm galvanised M.S. flats of specified shape and of total length 420 mm and shall be fixed with M.S. nuts, bolts, & washers of size 25x6 mm, one bolt on each side of the pipe.		
17.77.1	Total bracket length 580 mm of approved shape and design (for single 100 mm dia pipe)	each	204.45
17.77.2	Total bracket length 810 mm of approved shape and design (for two 100 mm dia pipes)	each	253.65
17.77.3	Total bracket length 1040 mm of approved shape and design (for three 100 mm dia pipes)	each	302.75
17.78	Providing and fixing white vitreous china extended wall mounting water closet of size 780x370x690 mm of approved shape including providing & fixing white vitreous china cistern with dual flush fitting, of flushing capacity 3 litre/ 6 litre (adjustable to 4 litre/ 8 litres), including seat cover, and cistern fittings, nuts, bolts and gasket etc complete.	each	11,058.35
17.79	Providing & fixing white vitreous china water less urinal of size 600 x 330 x 315 mm having antibacterial /germs free ceramic surface, fixed with cartridge having debris catcher and hygiene seat.	each	13,762.35
17.80	Providing and fixing white vitreous china battery based infrared sensor operated urinal of approx. size 610 x 390 x 370 mm having pre & post flushing with water (250 ml & 500 ml consumption), having water inlet from back side, including fixing to wall with suitable brackets all as per manufacturers specification and direction of Engineer-in-charge.	each	5,980.30
17.81	Providing and fixing floor mounted, white vitreous china single piece, double traps syphonic water closet of approved brand/make, shape, size and pattern including integrated white vitreous china cistern of capacity 10 litres with dual flushing system, including all fittings and fixtures with seat cover, cistern fittings, nuts, bolts and gasket etc including making connection with the existing P/S trap, complete in all respect as per directions of Engineer-in-Charge.	each	13,718.20
18	WATER SUPPLY		

Item Code	Description	Unit	Justified Rate
18.1	Providing and fixing Polyethelene-Aluminium-Polyethelene PE-AL- PE Composite Pressure Pipes conforming to IS - 15450, U.V. stabilized with carbon black having thermal stability for hot & cold water supply, capable to withstand temperature up to 80°C, including all special fittings of composite material (engineering plastic blend and brass inserts wherever required) e.g. elbows, tees, reducers, couplers & connectors etc., with clamps at 1.00 metre spacing. This includes testing of joints complete as per direction of the Engineer-in-charge. INTERNAL WORK - EXPOSED ON WALL		
18.1.1	1216 (16 mm OD) pipe	metre	236.40
18.1.2	1620 (20 mm OD) pipe	metre	262.80
18.1.3	2025 (25 mm OD) pipe	metre	349.65
18.1.4	2532 (32 mm OD) pipe	metre	429.80
18.1.5	3240 (40 mm OD) pipe	metre	624.45
18.1.6	4050 (50 mm OD) pipe	metre	745.25
18.2	Providing and fixing Polyethelene-Aluminium- Polyethelene PE- AL-PE Composite Pressure Pipes conforming to IS - 15450, U.V. stabilized with carbon black having thermal stability for hot & cold water supply, capable to withstand temperature up to 80T, including all special fittings of composite material (engineering plastic blend and brass inserts wherever required) e.g. elbows, tees, reducers, couplers & connectors etc., with clamps at 1.00 metre spacing. This includes the costs of cutting chases and including testing of joints complete as per direction of the engineer in charge. Concealed work, including cutting chases and making good the wall etc.		
18.2.1	1216 (16 mm OD) pipe	metre	399.20
18.2.2	1620 (20 mm OD) pipe	metre	419.55
18.2.3	2025 (25 mm OD) pipe	metre	521.20
18.2.4	2532(32 mm 00) pipe	metre	602.50
18.3	Providing and fixing Polyethelene-Aluminium- Polyethelene PE-AL- PE Composite Pressure Pipes conforming to IS - 15450, U.V. stabilized with carbon black having thermal stability for hot & cold water supply, capable to withstand temperature up to 80°C, including all special fittings of composite material (engineering plastic blend and brass inserts wherever required) e.g. elbows, tees, reducers, couplers & connectors etc., with trenching, refilling and testing of joints complete as per direction of the engineer in charge.		
18.3.1	1216 (16 mm OD) pipe	metre	217.35
18.3.2	1620 (20 mm OD) pipe	metre	232.45
18.3.3	2025 (25 mm OD) pipe	metre	307.95
18.3.4	2532 (32 mm OD) pipe	metre	368.35
18.3.5	3240 (40 mm OD) pipe	metre	536.45
18.3.6	4050 (50 mm OD) pipe	metre	657.25
18.4	Providing and fixing 3 layer PP-R (Poly propylene Random copolymer) pipes confirming to IS 15801, UV stabilized & anti - microbial fusion welded, having thermal stability for hot & cold water supply, including all PP - R plain & brass threaded polypropylene random fittings, i/c fixing the pipe with clamps at 1.00 m spacing. This includes testing of joints complete as per direction of Engineer in-Charge. Internal Exposed on walls		
18.4.1	PN - 16 Pipe, 20mm OD (SDR-7.4)	metre	200.10
18.4.2	PN - 16 Pipe, 25mm OD (SDR-7.4)	metre	251.25
18.4.3	PN - 16 Pipe, 32mm OD (SDR-7.4)	metre	288.40
18.4.4	PN - 16 Pipe, 40mm OD (SDR-7.4)	metre	418.05
18.4.5	PN - 10 Pipe, 50mm OD (SDR-11)	metre	542.30

Item Code	Description	Unit	Justified Rate
18.5	Providing and fixing 3 layer PP-It (Poly propylene Random copolymer) pipes conforming to 15:15801, UV stabilized & anti - microbial fusion welded, having thermal stability for hot & cold water supply, including all PP R plain & brass threaded polypropylene random fittings, i/c fixing the pipe with clamps at 1.00 m spacing. This includes the cost of cutting chases and making good the same including testing of joints complete as per direction of Engineer-in-Charge. Concealed work,including cutting chases and making good the		
18.5.1	PN - 16 Pipe, 20mm OD (50R-7.4)	metre	335.10
18.5.2	PN - 16 Pipe, 25mm OD (50-7.4)	metre	388.70
18.5.3	PN - 16 Pipe, 32mm OD (5013-7.4)	metre	423.85
18.6	Providing and fixing 3 layer PP-R (Poly propylene Random copolymer) pipes conforming to IS:15801 UV stabilized & anti - microbial fusion welded, having thermal stability for hot & cold water supply, including all PP - R plain & brass threaded polypropylene random fittings, including trenching, refilling & testing of joints complete as per direction of Engineer-in-Charge. External work		
18.6.1	PN - 16 Pipe, 20mm OD (SDR-7.4)	metre	164.10
18.6.2	PN - 16 Pipe, 25 mm OD (SDR-7.4)	metre	209.70
18.6.3	PN - 16 Pipe, 32 mm OD (SDR-7.4)	metre	255.20
18.6.4	PN - 16 Pipe, 40 mm OD (SDR-7.4)	metre	339.50
18.6.5	PN - 10 Pipe, 50 mm OD (SDR-11)	metre	469.10
18.6.6	PN - 10 Pipe, 63 mm OD (SDR-11)	metre	538.60
18.6.7	PN - 10 Pipe, 75 mm OD (SDR-11)	metre	733.75
18.6.8	PN - 10 Pipe, 90 mm OD (SDR-11)	metre	1,023.65
18.6.9	PN - 10 Pipe, 110 mm OD (SDR-11)	metre	1,427.85
18.6.10	PN - 10 Pipe, 160 mm OD (SDR-11)	metre	3,877.35
18.6A	Providing and fixing PPR Unions		
18.6A.1	PPR Union 20mm	each	234.65
18.6A.2	PPR Union 25mm	each	292.70
18.6A.3	PPR Union 32mm	each	339.20
18.6A.4	PPR Union 40mm	each	420.50
18.6A.5	PPR Union 50mm	each	641.15
18.6A.6	PPR Union 63mm	each	803.80
18.6A.7	PPR Union 75mm	each	1,442.60
18.7	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings, including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and testing of joints complete as per direction of Engineer in Charge. Internal work Exposed on wall		
18.7.1	15 mm nominal dia Pipes	metre	200.90
18.7.2	20 mm nominal dia Pipes	metre	259.05
18.7.3	25 mm nominal dia Pipes	metre	331.50
18.7.4	32 mm nominal dia Pipes	metre	407.15
18.7.5	40 mm nominal dia Pipes	metre	549.00
18.7.6	50 mm nominal dia Pipes	metre	768.30

Item Code	Description	Unit	Justified Rate
18.8	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings, i/c fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and the cost of cutting chases and making good the same including testing of joints complete as per direction of Engineer in Charge. Concealed work, including cutting chases and making good the walls etc.		
18.8.1	15 mm nominal dia Pipes	metre	336.20
18.8.2	20 mm nominal dia Pipes	metre	399.20
18.8.3	25 mm nominal dia Pipes	metre	496.75
18.8.4	32 mm nominal dia Pipes	metre	572.00
18.9	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings This includes jointing of pipes & fittings with one step CPVC solvent cement, trenching, refilling & testing of joints complete as per direction of Engineer in Charge. External work		
18.9.1	15 mm nominal dia Pipes	metre	170.55
18.9.2	20 mm nominal dia Pipes	metre	217.35
18.9.3	25 mm nominal dia Pipes	metre	298.65
18.9.4	32 mm nominal dia Pipes	metre	354.55
18.9.5	40 mm nominal dia Pipes	metre	460.95
18.9.6	50 mm nominal dia Pipes	metre	680.30
18.9.7	65 mm nominal dia Pipes	metre	1,339.20
18.9.8	80 mm nominal dia Pipes	metre	1,698.20
18.9.9	100 mm nominal dia Pipes	metre	2,402.10
18.9.10	150 mm nominal dia Pipes	metre	5,037.35
18.10	Providing and fixing G.I. pipes complete with G.I. fittings and clamps, i/c cutting and making good the walls etc. Internal work - Exposed on wall		
18.10.1	15 mm dia nominal bore	metre	244.70
18.10.2	20 mm dia nominal bore	metre	302.85
18.10.3	25 mm dia nominal bore	metre	403.20
18.10.4	32 mm dia nominal bore	metre	461.50
18.10.5	40 mm dia nominal bore	metre	593.10
18.10.6	50 mm dia nominal bore	metre	730.25
18.11	Providing and fixing G.I. Pipes complete with G.I. fittings and clamps, i/c making good the walls etc. concealed pipe, including painting with anti corrosive bitumastic paint, cutting chases and making good the wall :		
18.11.1	15 mm dia nominal bore	metre	373.35
18.11.2	20 mm dia nominal bore	metre	421.55
18.12	Providing and fixing G.I. pipes complete with G.I. fittings including trenching and refilling etc. External work		
18.12.1	15 mm dia nominal bore	metre	210.65
18.12.2	20 mm dia nominal bore	metre	252.15
18.12.3	25 mm dia nominal bore	metre	339.70
18.12.4	32 mm dia nominal bore	metre	374.20
18.12.5	40 mm dia nominal bore	metre	460.20
18.12.6	50 mm dia nominal bore	metre	543.40
18.12.7	65 mm dia nominal bore	metre	637.50
18.12.8	80 mm dia nominal bore	metre	768.15
18.13	Making connection of G.I. distribution branch with Cl. main of following sizes by providing and fixing tee, including cutting and threading the pipe etc. complete:		

Item Code	Description	Unit	Justified Rate
18.13.1	25 to 40 mm nominal bore	each	590.95
18.13.2	50 to 80 mm nominal bore	each	1,223.65
18.14	Fixing water meter and stop cock in G.I. pipe line including cutting and threading the pipe and making long screws etc. complete (cost of water meter and stop cock to be paid separately). BRASS FITTINGS	each	515.45
18.15	Providing and fixing brass bib cock of approved quality :		
18.15.1	15 mm nominal bore	each	263.75
18.15.2	20 mm nominal bore	each	284.70
18.16	Providing and fixing brass stop cock of approved quality :		
18.16.1	15 mm nominal bore	each	263.75
18.16.2	20 mm nominal bore	each	284.70
18.17	Providing and fixing gun metal gate valve with C.I. wheel of approved quality (screwed end) :		
18.17.1	25 mm nominal bore	each	462.15
18.17.1A	20 mm nominal bore	each	400.85
18.17.2	32 mm nominal bore.	each	512.10
18.17.3	40 mm nominal bore	each	614.05
18.17.4	50 mm nominal bore	each	762.45
18.17.5	65 mm nominal bore	each	1,294.10
18.17.6	80 mm nominal bore	each	1,933.85
18.18	Providing and fixing ball valve (brass) of approved quality, High or low pressure, with plastic floats complete :		
18.18.1	15 mm nominal bore	each	302.85
18.18.2	20 mm nominal bore	each	345.00
18.18.3	25 mm nominal bore	each	346.55
18.19	Providing and fixing gun metal non- return valve of approved quality (screwed end) :		
18.19.1	25 mm nominal bore		
18.19.1.1	Horizontal	each	439.80
18.19.1.2	Vertical	each	497.90
18.19.2	32 mm nominal bore		
18.19.2.1	Horizontal	each	588.20
18.19.2.2	Vertical	each	675.30
18.19.3	40 mm nominal bore		
18.19.3.1	Horizontal	each	707.55
18.19.3.2	Vertical	each	910.80
18.19.4	50 mm nominal bore		
18.19.4.1	Horizontal	each	1,018.90
18.19.4.2	Vertical	each	1,146.65
18.19.5	65 mm nominal bore		
18.19.5.1	Horizontal	each	1,817.70
18.19.5.2	Vertical	each	1,846.75
18.19.6	80 mm nominal bore		
18.19.6.1	Horizontal	each	2,721.40
18.19.6.2	Vertical	each	3,069.85
18.20	Providing and fixing brass ferrule with C.I. mouth cover including boring and tapping the main :		
18.20.1	15 mm nominal bore	each	261.85
18.20.2	20 mm nominal bore	each	302.05
18.20.3	25 mm nominal bore	each	388.05
18.21	Providing and fixing uplasticised PVC connection pipe with brass unions :		

Item Code	Description	Unit	Justified Rate
18.21.1	30 cm length		
18.21.1.1	15 mm nominal bore	each	64.95
18.21.1.2	20 mm nominal bore	each	70.75
18.21.2	45 cm length		
18.21.2.1	15 mm nominal bore	each	73.95
18.21.2.2	20 mm nominal bore	each	89.05
18.22	Providing and fixing C.P. brass shower rose with 15 or 20 mm inlet :		
18.22.1	100 mm diameter	each	144.40
18.22.2	150 mm diameter	each	165.05
18.23	Laying in position centrifugally cast (spun) iron S&S or flanged pipes (excluding cost of pipe).	quintal	216.25
18.24	Laying in position S&S or flanged C.I. special such as tees, bends, collars, tapers and caps etc.(excluding cost of specials).	quintal	404.95
18.25	Providing and laying S&S C.I. standard specials such as tees, bends, collars, tapers, caps etc. (Heavy class):		
18.25.1	Up to 300 mm dia	quintal	4,835.60
18.25.2	Over 300 mm dia	quintal	4,835.60
18.26	Providing and laying flanged C.I. standard specials such as tees, bends, collars, tapers, caps etc., suitable for flanged jointing as per IS : 1538 :		
18.26.1	Up to 300 mm dia	quintal	7,042.45
18.26.2	Over 300 mm dia	quintal	6,519.75
18.27	Providing and laying S&S centrifugally cast (spun) iron pipes (Class LA) conforming to IS - 1536 :		
18.27.1	100 mm dia pipe	metre	1,042.40
18.27.2	125 mm dia pipe	metre	1,300.65
18.27.3	150 mm dia pipe	metre	1,570.25
18.27.4	200 mm dia pipe	metre	2,656.80
18.27.5	250 mm dia pipe	metre	3,471.75
18.27.6	300 mm dia pipe	metre	4,676.60
18.27.7	350 mm dia pipe	metre	5,615.65
18.27.8	400 mm dia pipe	metre	7,388.55
18.27.9	450 mm dia pipe	metre	8,946.45
18.27.10	500 mm dia pipe	metre	10,384.45
18.27.11	600 mm dia pipe	metre	14,511.90
18.28	Providing lead caulked joints to spun iron or C.I. pipes and specials, including testing of joints but excluding the cost of pig lead :		
18.28.1	100 mm diameter pipe	each	309.65
18.28.2	125 mm diameter pipe	each	459.40
18.28.3	150 mm diameter pipe	each	464.85
18.28.4	200 mm diameter pipe	each	617.50
18.28.5	250 mm diameter pipe	each	772.00
18.28.6	300 mm diameter pipe	each	928.95
18.28.7	350 mm diameter pipe	each	947.50
18.28.8	400 mm diameter pipe	each	1,244.90
18.28.9	450 mm diameter pipe	each	1,397.35
18.28.10	500 mm diameter pipe	each	1,477.65
18.28.11	600 mm diameter pipe	each	2,001.95
18.29	Supplying pig lead at site of work.	quintal	24,408.45
18.30	Providing flanged joints to double flanged C.I./ D.I. pipes and specials, including testing of joints :		
18.30.1	80 mm diameter pipe	each	144.60

Item Code	Description	Unit	Justified Rate
18.30.2	100 mm diameter pipe	each	228.45
18.30.3	125 mm diameter pipe	each	244.70
18.30.4	150 mm diameter pipe	each	277.15
18.30.5	200 mm diameter pipe	each	306.20
18.30.6	250 mm diameter pipe	each	426.00
18.30.7	300 mm diameter pipe	each	431.80
18.30.8	350 mm diameter pipe	each	544.30
18.30.9	400 mm diameter pipe	each	757.55
18.30.10	450 mm diameter pipe	each	932.80
18.30.11	500 mm diameter pipe	each	1,060.50
18.30.12	600 mm diameter pipe	each	1,245.35
18.31	Providing and fixing C.I. sluice valves (with cap) complete with bolts, nuts, rubber insertions etc. (the tail pieces if required will be paid separately) :		
18.31.1	100 mm diameter		
18.31.1.1	Class I	each	3,489.40
18.31.1.2	Class II	each	3,830.40
18.31.2	125 mm diameter		
18.31.2.1	Class I	each	3,758.40
18.31.2.2	Class II	each	4,610.45
18.31.3	150 mm diameter		
18.31.3.1	Class I	each	5,099.55
18.31.3.2	Class II	each	5,681.35
18.31.4	200 mm diameter		
18.31.4.1	Class I	each	9,952.45
18.31.4.2	Class II	each	11,584.60
18.31.5	250 mm diameter		
18.31.5.1	Class I	each	14,364.25
18.31.5.2	Class II	each	19,244.40
18.31.6	300 mm diameter		
18.31.6.1	Class I	each	19,889.40
18.31.6.2	Class II	each	23,631.25
18.32	Constructing masonry Chamber 30x30x50 cm inside, in brick work in cement mortar 1:4 (1 cement :4 coarse sand) for stop cock, with C. I. surface box 100x100 x75 mm (inside) with hinged cover fixed in reinforced cement concrete slab 1:1.5:3 mix (1 cement : 1.5 coarse sand : 3 graded stone aggregate 20 mm nominal size), i/c necessary excavation, foundation concrete 1:5:10) 1 cement :5 fine sand : 10 graded stone aggregate 40mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12mm thick, finished with a floating coat of neat cement complete as per standard design :		
18.32.1	With common burnt clay F.P.S.(non modular) bricks of class designation 7.5	each	1,481.00
18.33	Constructing masonry Chamber 60x60x75 cm inside, in brick work in cement mortar 1:4 (1 cement : 4 coarse sand) for sluice valve, with C.I. surface box 100mm top diameter, 160 mm bottom diameter and 180 mm deep (inside) with chained lid and RCC top slab 1:1.5:3 mix (1 cement : 1.5 coarse sand : 3 graded stone aggregate 20mm nominal size) , i/c necessary excavation, foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm thick, finished with a floating coat of neat cement complete as per standard design :		

Item Code	Description	Unit	Justified Rate
18.33.1	With common burnt clay F.P.S.(non modular) bricks of class designation 7.5	each	8,024.55
18.34	Constructing masonry Chamber 90x90x100 cm inside, in brick work in cement mortar 1:4 (1 cement : 4 coarse sand) for sluice valve, with CL surface box 100 mm top diameter, 160 mm bottom diameter and 180 mm deep (inside) with chained lid and RCC top slab 1:1.5:3 mix (1 cement : 1.5 coarse sand : 3 graded stone aggregate 20 mm nominal size), i/c necessary excavation, foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm thick, finished with a floating coat of neat cement complete as per standard design .		
18.34.1	With common burnt clay F.P.S.(non modular) bricks of class designation 7.5	each	13,884.30
18.35	Constructing masonry Chamber 120x120x100 cm inside, in brick work in cement mortar 1:4 (1 cement : 4 coarse sand) for sluice valve, with C.I. surface box 100 mm top diameter, 160 mm bottom diameter and 180 mm deep (inside) with chained lid and RCC top slab 1:1.5:3 mix (1 cement : 1.5 coarse sand : 3 graded stone aggregate 20 mm nominal size), i/c necessary excavation, foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm thick, finished with a floating coat of neat cement complete as per standard design :		
18.35.1	With common burnt clay F.P.S.(non modular) bricks of class designation 7.5	each	19,182.75
18.36	Constructing masonry Chamber 60x60x75 cm, inside in brick work in cement mortar 1:4 (1 cement : 4 coarse sand) for fire hydrants, with C.I. surface box 350x350 mm top and 165 mm deep (inside) with chained lid and RCC top slab 1:1.5:3 mix (1 cement : 1.5 coarse sand : 3 graded stone aggregate 20 mm nominal size) , i/c necessary excavation, foundation concrete 1:5:10(1 cement :5 fine sand:10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm thick, finished with a floating coat of neat cement complete as per standard design .		
18.36.1	With common burnt clay F.P.S.(non modular) bricks of class designation 7.5	each	8,393.20
18.37	Constructing masonry Chamber 60x45x50 cm inside, in brick work in cement mortar 1:4 (1 cement : 4 coarse sand) for water meter complete with C.I. double flap surface box 400x200x200 mm (inside) with locking arrangement and RCC top slab 1:1.5:3 mix (1 cement : 1.5 coarse sand : 3 graded stone aggregate 20 mm nominal size) , i/c necessary excavation, foundation concrete 1:5:10 (1 cement : 5 fine sand:10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm thick, finished with a floating coat of neat cement complete as per standard design :		
18.37.1	With common burnt clay F.P.S.(non modular) bricks of class designation 7.5	each	7,222.65
18.38	Painting G.I. pipes and fittings with synthetic enamel white paint with two coats over a ready mixed priming coat, both of approved quality for new work :		
18.38.1	15 mm diameter pipe	metre	12.85
18.38.2	20 mm diameter pipe	metre	15.30
18.38.3	25 mm diameter pipe	metre	20.05
18.38.4	32 mm diameter pipe	metre	23.90
18.38.5	40 mm diameter pipe	metre	28.15
18.38.6	50 mm diameter pipe	metre	33.45
18.39	Repainting G.I. pipes and fittings with synthetic enamel white paint with one coat of approved quality :		
18.39.1	15 mm diameter pipe	metre	6.40

Item Code	Description	Unit	Justified Rate
18.39.2	20 mm diameter pipe	metre	7.55
18.39.3	25 mm diameter pipe	metre	9.60
18.39.4	32 mm diameter pipe	metre	11.45
18.39.5	40 mm diameter pipe	metre	13.30
18.39.6	50 mm diameter pipe	metre	15.75
18.40	Painting G.I. pipes and fittings with two coats of anti-corrosive bitumastic paint of approved quality :		
18.40.1	15 mm diameter pipe	metre	7.75
18.40.2	20 mm diameter pipe	metre	9.25
18.40.3	25 mm diameter pipe	metre	11.75
18.40.4	32 mm diameter pipe	metre	14.10
18.40.5	40 mm diameter pipe	metre	16.05
18.40.6	50 mm diameter pipe	metre	19.25
18.40.7	65 mm diameter pipe	metre	23.80
18.40.8	80 mm diameter pipe	metre	27.60
18.41	Providing and filling sand of grading zone V or coarser grade, allround the G.I. pipes in external work :		
18.41.1	15 mm diameter pipe	metre	134.80
18.41.2	20 mm diameter pipe	metre	136.60
18.41.3	25 mm diameter pipe	metre	140.25
18.41.4	32 mm diameter pipe	metre	143.90
18.41.5	40 mm diameter pipe	metre	145.75
18.41.6	50 mm diameter pipe	metre	151.20
18.41.7	65 mm diameter pipe	metre	238.65
18.41.8	80 mm diameter pipe	metre	245.90
18.41.9	100 mm diameter pipe	metre	260.50
18.41.10	150 mm diameter pipe	metre	388.00
18.42	Boring with 100 mm diameter casing pipe for hand pump / tubewell, in all soils except ordinary hard rocks requiring blasting, including removing the casing pipe after the hand pump / tube well is lowered and tested :		
18.42.1	Up to 6 metres depth	metre	460.25
18.42.2	Beyond 6 m and up to 12 m depth	metre	545.25
18.42.3	Beyond 12 m and up to 18 m depth	metre	633.10
18.43	Providing and placing in position filters of 40 mm diameter G.I. pipe with brass strainer of approved quality.	metre	683.20
18.44	Providing and fixing to filter and lowering to proper levels 40 mm G.I. pipe for tube well including cleaning and priming the tube well.	metre	421.25
18.45	Providing and placing in position hand pump of approved quality for 40 mm diameter G.I. pipe complete with all accessories.	each	1,003.10
18.46	Providing and fixing G.I. Union in G.I. pipe including cutting and threading the pipe and making long screws etc. complete (New work) :		
18.46.1	15 mm nominal bore	each	205.60
18.46.2	20 mm nominal bore	each	228.85
18.46.3	25 mm nominal bore	each	298.55
18.46.4	32 mm nominal bore	each	333.35
18.46.5	40 mm nominal bore	each	432.10
18.46.6	50 mm nominal bore	each	583.35
18.46.7	65 mm nominal bore	each	833.10
18.46.8	80 mm nominal bore	each	891.15

Item Code	Description	Unit	Justified Rate
18.47	Providing and fixing G.I. Union in existing G.I. pipe line, cutting and threading the pipe and making long screws, including excavation, refilling the earth or cutting of wall and making good the same complete wherever required :		
18.47.1	15 mm nominal bore	each	526.55
18.47.2	20 mm nominal bore	each	549.80
18.47.3	25 mm nominal bore	each	619.45
18.47.4	32 mm nominal bore	each	654.30
18.47.5	40 mm nominal bore	each	753.05
18.47.6	50 mm nominal bore	each	1,021.05
18.47.7	65 mm nominal bore	each	1,270.75
18.47.8	80 mm nominal bore	each	1,328.85
18.48	Providing and placing on terrace (at all floor levels) polyethylene water storage tank, IS : 12701 marked, with cover and suitable locking arrangement and making necessary holes for inlet, outlet and overflow pipes but without fittings and the base support for tank.	per litre	8.40
18.48A	Providing and fixing rectangular high density polyethylene water storage loft tank with cover, conforming to ISI : 12701, colour of opaque white or as approved by Engineer-in-charge. The rate includes making necessary holes for inlet, outlet & over flow pipes. The base support i/c fittings & fixtures for tank shall be paid separately.	per litre	8.40
18.49	Providing and fixing C.P. brass bib cock of approved quality conforming to IS:8931 :		
18.49.1	15 mm nominal bore	each	376.95
18.5	Providing and fixing C.P. brass long nose bib cock of approved quality conforming to IS standards and weighing not less than 810 gms.		
18.50.1	15 mm nominal bore	each	620.75
18.51	Providing and fixing C.P. brass long body bib cock of approved quality conforming to IS standards and weighing not less than 690 gms.		
18.51.1	15 mm nominal bore	each	615.00
18.52	Providing and fixing C.P. brass stop cock (concealed) of standard design and of approved make conforming to IS:8931.		
18.52.1	15 mm nominal bore	each	516.35
18.53	Providing and fixing C.P. brass angle valve for basin mixer and geyser points of approved quality conforming to IS:8931		
18.53.1	15mm nominal bore	each	434.40
18.53A	Providing and fixing C.P. Brass extension nipple (size 15mmx50mm) of approved make and quality as per direction of Engineer-in-charge.	each	53.60
18.54	Providing and fixing PTMT bib cock of approved quality and colour.		
18.54.1	15mm nominal bore, 86 mm long, weighing not less than 88 gms	each	95.35
18.54.2	15 mm nominal bore, 122mm long, weighing not less than 99 gms	each	124.40
18.54.3	15 mm nominal bore, 165 mm long, weighing not less than 110 gms	each	136.00
18.54.4	15 mm nominal bore, 90 mm long, weighing not less than 93 gms	each	147.60
18.55	Providing and fixing PTMT stop cock of approved quality and colour.		
18.55.1	15 mm nominal bore, 86 mm long, weighing not less than 88 gms	each	89.55
18.55.2	20 mm nominal bore, 89 mm long, weighing not less than 88 gms	each	98.85
18.55.3	Concealed stop cock, 15 mm nominal bore, 108 mm long, weighing not less than 108 gms	each	159.25
18.56	Providing and fixing PTMT pillar cock of approved quality and colour.		
18.56.1	15 mm nominal bore, 107 mm long, weighing not less than 110 gms	each	156.95

Item Code	Description	Unit	Justified Rate
18.56.2	15 mm nominal bore, 125 mm long foam flow, weighing not less than 120 gms	each	168.55
18.57	Providing and fixing PTMT, push cock of approved quality and colour.		
18.57.1	15 mm nominal bore, 98 mm long, weighing not less than 75 gms	each	83.75
18.57.2	15 mm nominal bore, 80 mm long, weighing not less than 46 gms	each	72.10
18.58	Providing and fixing PTMT grating of approved quality and colour.		
18.58.1	Circular type		
18.58.1.1	100 mm nominal dia	each	28.85
18.58.1.2	125 mm nominal dia with 25 mm waste hole	each	39.30
18.58.2	Rectangular type with openable circular lid		
18.58.2.1	150 mm nominal size square 100 mm diameter of the inner hinged round grating	each	147.30
18.59	Providing and fixing C.I. double acting air valve of approved quality with bolts, nuts, rubber insertions etc. complete (The tail pieces, tapers etc if required will be paid separately) :		
18.59.1	50 mm dia	each	4,475.60
18.59.2	80 mm dia	each	5,416.40
18.59.3	100 mm dia	each	7,112.10
18.60	Providing and fixing enclosed type water meter (bulk type) conforming to IS : 2373 and tested by Municipal Board complete with bolts, nuts, rubber insertions etc. (The tail pieces if required will be paid separately) :		
18.60.1	80 mm dia nominal bore	each	2,807.10
18.60.2	100 mm dia nominal bore	each	4,299.55
18.60.3	150 mm dia nominal bore	each	6,344.95
18.60.4	200 mm dia nominal bore	each	6,972.45
18.61	Providing and fixing C.I. dirt box strainer for bulk type water meter with nuts, bolts, rubber insertions etc. complete conforming to IS : 2373 :		
18.61.1	80 mm dia	each	3,562.10
18.61.2	100 mm dia	each	5,724.70
18.61.3	150 mm dia	each	7,245.10
18.61.4	200 mm dia	each	10,125.90
18.62	Providing and fixing PTMT Ball cock of approved quality, colour and make complete with Epoxy coated aluminium rod with L.P./ H.P.H.D. plastic ball.		
18.62.1	15 mm nominal bore, 105 mm long, weighing not less than 138 gms	each	140.25
18.62.2	20 mm nominal bore, 120 mm long, weighing not less than 198 gms	each	194.05
18.62.3	25 mm nominal bore, 152mm long, weighing not less than 440 gms	each	398.80
18.62.4	40 mm nominal bore, 206mm long, weighing not less than 690 gms	each	567.20
18.62.5	50 mm nominal bore, 242mm long, weighing not less than 1240 gms	each	1,031.80
18.63	Providing and fixing PTMT angle stop cock 15 mm nominal bore, weighing not less than 85 gms	each	118.60
18.64	Providing and fixing PTMT swivelling shower, 15 mm nominal bore, weighing not less than 40 gms	each	92.15
18.65	Providing and fixing PTMT soap Dish Holder having length of 138mm, breadth 102mm, height of 75mm with concealed fitting arrangements, weighing not less than 106 gms.	each	84.00
18.66	Providing and laying S&S C.I. Standard specials such as tees, bends, collars tapers and caps etc, suitable for flanged jointing as per IS : 1538 :		
18.66.1	Up to 300 mm dia	quintal	6,450.05
18.66.2	Above 300 mm dia	quintal	7,623.20
18.67	Providing and laying S&S C.I. Standard specials suitable for mechanical jointing as per IS : 13382 :		

Item Code	Description	Unit	Justified Rate
18.67.1	Up to 300 mm dia	quintal	10,377.10
18.67.2	Above 300 mm dia	quintal	10,931.15
18.68	Providing and laying D.I. specials of class K-12 suitable for push-on jointing as per IS : 9523 :		
18.68.1	Up to 600 mm dia	quintal	14,824.50
18.68.2	Above 600 mm dia	quintal	20,399.70
18.68A	Providing and laying Class K-12 Ductile Iron double chamber restrained joint (bolt less) specials such as tees, bends, collars, tapers and caps etc. conforming to IS 9523 including testing of joints all complete		
18.68A.1	Up to 600 mm dia	quintal	421.90
18.68A.2	Above 600 mm dia	quintal	421.90
18.69	Providing and laying D.I. Specials of Class K - 12 suitable for mechanical jointing as per IS : 9523 :		
18.69.1	Up to 600 mm dia	quintal	15,579.45
18.69.2	Above 600 mm dia	quintal	22,200.00
18.70	Providing push-on-joints to Centrifugally (Spun) Cast Iron Pipes or Ductile Iron Pipes including testing of joints and the cost of rubber gasket ,		
18.70.1	100 mm dia pipes	joint	77.05
18.70.2	150 mm dia pipes	joint	121.55
18.70.3	200 mm dia pipes	joint	180.65
18.70.4	250 mm dia pipes	joint	220.00
18.70.5	300 mm dia pipes	joint	282.55
18.70.6	350 mm dia pipes	joint	328.90
18.70.7	400 mm dia pipes	joint	465.80
18.70.8	450 mm dia pipes	joint	540.00
18.70.9	500 mm dia pipes	joint	577.10
18.70.10	600 mm dia pipes	joint	774.05
18.70.11	700 mm dia pipes	joint	1,019.50
18.70.12	750 mm dia pipes	joint	1,124.05
18.70.13	800 mm dia pipes	joint	1,290.40
18.70.14	900 mm dia pipes	joint	1,611.70
18.70.15	1000 mm dia pipes	joint	1,864.65
18.71	Providing and laying Double Flanged (screwed / welded) Centrifugally (Spun) Cast Iron, Class B (IS : 1536) :		
18.71.1	100 mm dia C.I. Double Flanged Pipe	metre	1,584.10
18.71.2	150 mm dia C.I. Double Flanged Pipe	metre	2,481.25
18.71.3	200 mm dia C.I. Double Flanged Pipe	metre	3,909.75
18.71.4	250 mm dia C.I. Double Flanged Pipe	metre	4,736.35
18.71.5	300 mm dia C.I. Double Flanged Pipe	metre	6,053.60
18.71.6	350 mm dia C.I. Double Flanged Pipe	metre	7,622.60
18.71.7	400 mm dia C.I. Double Flanged Pipe	metre	9,856.65
18.71.8	450 mm dia C.I. Double Flanged Pipe	metre	12,539.75
18.71.9	500 mm dia C.I. Double Flanged Pipe	metre	15,553.60
18.71.10	600 mm dia C.I. Double Flanged Pipe	metre	21,548.10
18.72	Providing and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to IS : 8329 :		
18.72.1	100 mm dia Ductile Iron Class K-7 pipes	metre	966.65
18.72.2	150 mm dia Ductile Iron Class K-7 pipes	metre	1,380.35
18.72.3	200 mm dia Ductile Iron Class K-7 pipes	metre	1,702.50
18.72.4	250 mm dia Ductile Iron Class K-7 pipes	metre	2,191.70
18.72.5	300 mm dia Ductile Iron Class K-7 pipes	metre	2,737.85

Item Code	Description	Unit	Justified Rate
18.72.6	350 mm dia Ductile Iron Class K-7 pipes	metre	3,248.45
18.72.7	400 mm dia Ductile Iron Class K-7 pipes	metre	3,894.90
18.72.8	450 mm dia Ductile Iron Class K-7 pipes	metre	4,718.00
18.72.9	500 mm dia Ductile Iron Class K-7 pipes	metre	5,329.30
18.72.10	600 mm dia Ductile Iron Class K-7 pipes	metre	6,873.50
18.72.11	700 mm dia Ductile Iron Class K-7 pipes	metre	8,956.80
18.72.12	800 mm dia Ductile Iron Class K-7 pipes	metre	11,165.60
18.72.13	900 mm dia Ductile Iron Class K-7 pipes	metre	14,421.10
18.72.14	1000 mm dia Ductile Iron Class K-7 pipes	metre	15,178.15
18.72.15	100 mm dia Ductile Iron Class K-9 pipes	metre	931.10
18.72.16	150 mm dia Ductile Iron Class K-9 pipes	metre	1,399.45
18.72.17	200 mm dia Ductile Iron Class K-9 pipes	metre	1,918.80
18.72.18	250 mm dia Ductile Iron Class K-9 pipes	metre	2,675.15
18.72.19	300 mm dia Ductile Iron Class K-9 pipes	metre	3,344.75
18.72.20	350 mm dia Ductile Iron Class K-9 pipes	metre	4,091.20
18.72.21	400 mm dia Ductile Iron Class K-9 pipes	metre	5,237.30
18.72.22	450 mm dia Ductile Iron Class K-9 pipes	metre	6,093.70
18.72.23	500 mm dia Ductile Iron Class K-9 pipes	metre	7,608.85
18.72.24	600 mm dia Ductile Iron Class K-9 pipes	metre	9,215.10
18.72.25	700 mm dia Ductile Iron Class K-9 pipes	metre	12,712.40
18.72.26	750 mm dia Ductile Iron Class K-9 pipes	metre	13,811.70
18.72.27	800 mm dia Ductile Iron Class K-9 pipes	metre	14,015.50
18.72.28	900 mm dia Ductile Iron Class K-9 pipes	metre	16,978.35
18.72.29	1000 mm dia Ductile Iron Class K-9 pipes	metre	19,022.20
18.72A	Providing, laying, jointing and testing S8i5 Centrifugally Cast Ductile Iron double chamber Class K-9 pressure pipes conforming to IS 8329:2000 with restrained joints (bolt less), all complete.		
18.72A.1	100 mm nominal dia pipe	metre	49.40
18.72A.2	150 mm nominal dia pipe	metre	63.65
18.72A.3	209 mm nominal dia .1pe	metre	81.80
18.72A.4	250 mm nominal dia pipe	metre	104.55
18.72A.5	300 mm nominal dia pipe	metre	129.50
18.72A.6	350 mm nominal dia pipe	metre	165.50
18.72A.7	400 mm nominal dia pipe	metre	209.45
18.72A.8	450 mm nominal dia pipe	metre	261.15
18.72A.9	500 mm nominal dia pipe	metre	315.70
18.72A.10	600 mm nominal dia pipe	metre	405.40
18.72A.11	700 mm nominal dia pipe	metre	490.55
18.72A.12	750 mm nominal dia pipe	metre	596.60
18.72A.13	800 mm nominal dia pipe	metre	727.65
18.72A.14	900 mm nominal dia pipe	metre	926.75
18.72A.15	1000 mm nominal dia pipe	metre	1,167.70
18.73	Providing and laying Double Flanged (Screwed/ Welded) Centrifugally (Spun) Ductile Iron Pipes of Class K - 9 conforming to IS : 8329 :		
18.73.1	100 mm dia Ductile Iron Double Flanged	metre	1,328.95
18.73.2	150 mm dia Ductile Iron Double Flanged	metre	1,993.90
18.73.3	200 mm dia Ductile Iron Double Flanged	metre	2,517.00
18.73.4	250 mm dia Ductile Iron Double Flanged	metre	3,570.90
18.73.5	300 mm dia Ductile Iron Double Flanged	metre	4,587.10

Item Code	Description	Unit	Justified Rate
18.73.6	350 mm dia Ductile Iron Double Flanged	metre	5,777.35
18.73.7	400 mm dia Ductile Iron Double Flanged	metre	7,414.60
18.73.8	450 mm dia Ductile Iron Double Flanged	metre	6,063.90
18.73.9	500 mm dia Ductile Iron Double Flanged	metre	11,028.85
18.73.10	600 mm dia Ductile Iron Double Flanged	metre	14,611.95
18.73.11	700 mm dia Ductile Iron Double Flanged	metre	17,288.45
18.74	Providing and fixing unplasticised P.V.C. connection pipe with PTMT Nuts, collar and bush of approved quality and colour.		
18.74.1	15 mm nominal bore with 30cm length	each	74.25
18.74.2	15 mm nominal bore with 45 cm length	each	93.70
18.75	Providing and fixing PTMT extension nipple for water tank pipe, fittings of approved quality and colour.		
18.75.1	15 mm nominal bore, weighing not less than 32 gms	each	37.35
18.75.2	20 mm nominal bore, weighing not less than 40 gms	each	66.40
18.75.3	25mm nominal bore, weighing not less than 62 gms	each	87.30
18.76	Cutting holes up to 30x30 cm in walls including making good the same:		
18.76.1	With common burnt clay F.P.S. (non modular) bricks	each	275.70
18.77	Cutting holes up to 15x15 cm in R.C.C. floors and roofs for passing drain pipe etc. and repairing the hole after insertion of drain pipe etc. with cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), including finishing complete so as to make it leak proof.	each	288.85
18.78	Making chases up to 7.5x7.5 cm in walls including making good and finishing with matching surface after housing GI pipe etc.	metre	128.25
18.79	Making hole up to 20x20 cm and embedding pipes up to 150 mm diameter in masonry and filling with cement concrete 1:3:6 (1 cement : 3 coarse sand: 6 graded stone aggregate 20 mm nominal size) including disposal of malba.	metre	160.70
18.80	Disinfecting C.I. water mains by flushing with water containing bleaching powder @ 0.5 gms per litre of water and cleaning the same with fresh water, operation to be repeated three times including getting the sample of water from the disinfected main tested in the municipal laboratory.		
18.80.1	80 mm diameter C.I. pipe	100 metre	1,116.65
18.80.2	100 mm diameter C.I. pipe	100 metre	1,470.45
18.80.3	125 mm diameter C.I. pipe	100 metre	1,838.90
18.80.4	150 mm diameter C.I. pipe	100 metre	2,206.40
18.80.5	200 mm diameter C.I. pipe	100 metre	2,944.75
18.80.6	250 mm diameter C.I. pipe	100 metre	3,704.45
18.80.7	300 mm diameter C.I. pipe	100 metre	4,118.10
18.80.8	350 mm diameter C.I. pipe	100 metre	4,543.65
18.80.9	400 mm diameter C.I. pipe	100 metre	4,990.10
18.80.10	450 mm diameter C.I. pipe	100 metre	5,442.00
18.80.11	560 mm diameter C.I. pipe	each	5,917.55
18.80.12	600 mm diameter C.I. pipe	100 metre	6,879.10
18.81	Extra for every operation of disinfecting the C.I. main by flushing with water containing bleaching powder @ 0.5 gms per litre of water and cleaning the same with fresh water, including getting the samples of water tested in the municipal laboratory :		
18.81.1	80 mm diameter C.I. pipe	100 metre	408.00
18.81.2	100 mm diameter C.I. pipe	100 metre	501.25
18.81.3	125 mm diameter C.I. pipe	100 metre	613.70
18.81.4	150 mm diameter C.I. pipe	100 metre	715.30
18.81.5	200 mm diameter C.I. pipe	100 metre	1,097.95
18.81.6	250 mm diameter C.I. pipe	100 metre	1,257.30

Item Code	Description	Unit	Justified Rate
18.81.7	300 mm diameter C.I. pipe	100 metre	1,406.20
18.81.8	350 mm diameter C.I. pipe	100 metre	1,646.25
18.81.9	400 mm diameter C.I. pipe	100 metre	1,888.65
18.81.10	450 mm diameter C.I. pipe	100 metre	2,137.40
18.81.11	500 mm diameter C.I. pipe	100 metre	2,387.95
18.81.12	600 mm diameter C.I. pipe	100 metre	2,897.60
18.82	Dismantling old C.I. pipes including excavation and refilling trenches after taking out the pipes, breaking lead caulked joints, melting of lead and making into blocks, including stacking of pipes at site lead up to 50 metre:		
18.82.1	80 mm diameter C.I. pipe	metre	200.95
18.82.2	1011 mm diameter C.I. pipe	metre	211.05
18.82.3	125 mm diameter C.I. pipe	metre	220.75
18.82.4	150 mm diameter C.I. pipe	metre	230.75
18.82.5	200 mm diameter C.I. pipe	metre	259.15
18.82.6	250 mm diameter C.I. pipe	metre	287.05
18.82.7	300 mm diameter C.I. pipe	metre	312.25
18.82.8	350 mm diameter C.I. pipe	metre	336.60
18.82.9	400 mm diameter C.I. pipe	metre	359.45
18.82.10	450 mm diameter C.I. pipe	metre	382.75
18.82.11	500 mm diameter C.I. pipe	metre	403.85
18.82.12	600 mm diameter C.I. pipe	metre	442.20
18.83	Labour for cutting C.I. pipe with steel saw.		
18.83.1	80 mm diameter C.I. pipe	each cut	92.00
18.83.2	100 mm diameter C.I. pipe	each cut	123.45
18.83.3	125 mm diameter C.I. pipe	each cut	171.35
18.83.4	150 mm diameter C.I. pipe	each cut	231.95
18.83.5	200 mm diameter C.I. pipe	each cut	309.35
18.83.6	250 mm diameter C.I. pipe	each cut	384.55
18.83.7	300 mm diameter C.I. pipe	each cut	462.00
18.83.8	350 mm diameter C.I. pipe	each cut	537.15
18.83.9	400 mm diameter C.I. pipe	each cut	614.25
18.83.10	450 mm diameter C.I. pipe	each cut	689.75
18.83.11	500 mm diameter C.I. pipe	each cut	766.90
18.83.12	600 mm diameter C.I. pipe	each cut	915.00
18.84	Providing & fixing chrome plated brass battery based infrared sensor operated pillar cock, having foam flow technology.		
18.84.1	15 mm nominal bore	each	6,988.85
18.85	Providing and fixing Stainless Steel pipe and fitting of grade AISI 304 as per JIS standard 3448 complete with press type fitting (fitting shall be paid for separately) i/c fixing of the pipe with clamps at 1.00 m spacing including cutting and making good the walls including testing of joints complete as per direction of Engineer-in-charge. (The pipe length inserted in the fitting shall not be measured for payment)		
18.85.1	15.88 mm outer dia pipe	metre	286.40
18.85.2	22.22 mm outer dia Pipe	metre	420.55
18.85.3	28.58 mm outer dia Pipe	metre	494.10
18.85.4	34.00 mm outer dia Pipe	metre	652.10
18.85.5	42.70 mm outer dia Pipe	metre	665.25
18.85.6	48.60 mm outer dia Pipe	metre	872.60

Item Code	Description	Unit	Justified Rate
18.85A	Providing and fixing Stainless Steel pipe and fitting of grade 316L as per IS 6911:2017 and conforming to EN-10312 standards complete with press type fitting (fitting shall be paid for separately) i/c fixing of the pipe with clamps at 1.00 m spacing including cutting and making good the walls including testing of joints complete as per direction of Engineer-in-charge. (The pipe length inserted in the fitting shall not be measured for payment) Internal work - Exposed on wall		
18.85A.1	15 mm outer dia pipe	metre	493.70
18.85A.2	22 mm outer dia Pipe	metre	725.45
18.85A.3	28 mm outer dia Pipe	metre	908.80
18.85A.4	35 mm outer dia Pipe	metre	1,268.65
18.85A.5	42 mm outer dia Pipe	metre	1,531.20
18.85A.6	54 mm outer dia Pipe	metre	1,945.90
18.86	Providing and fixing Stainless Steel pipe and fitting of grade AISI 304 as per JIS standard 3448 complete with press type fitting (fitting shall be paid for separately) i/c fixing of the pipe with clamps at 1.00m spacing and also including cutting of chases and making good the walls including testing of joints complete as per direction of Engineer -in-charge. (The pipe length inserted in the fitting shall not be measured for payment) Internal work - Concealed Pipe		
18.86.1	15.88 mm outer dia Pipe.	metre	413.95
18.86.2	22.22 mm Outer dia pipe	metre	548.15
18.86A	Providing and fixing Stainless Steel pipe and fitting of grade 316L as per IS 6911:2017 and conforming to EN-10312 standards complete with press type fitting (fitting shall be paid for separately) i/c fixing of the pipe with clamps at 1.00m spacing and also including cutting of chases and making good the walls including testing of joints complete as per direction of Engineer - in-charge. (The pipe length inserted in the fitting shall not be measured for payment) Internal work - Concealed Pipe		
18.86A.1	15 mm outer dia Pipe.	metre	621.30
18.86A.2	22 mm Outer dia pipes	metre	853.05
18.87	Providing and fixing required Stainless Steel Fitting of press fit design of grade AISI 304 conforming to .IWWA G116 standard with V-profile or M-profile and with O-ring sealing gasket of EPDM. Coupling/Socket material of required dia as per direction of Engineer-in-charge. Coupling/Socket		
18.87.1	For 15.88 mm outer dia pipe	each	69.70
18.87.2	For 22.22 mm outer dia pipe	each	81.30
18.87.3	For 28.58 mm outer dia pipe	each	111.80
18.87.4	For 34.00 mm outer dia pipe	each	156.80
18.87.5	For 42.70 mm outer dia pipe	each	185.85
18.87.6	For 48.60 mm outer dia pipe	each	209.05
18.87A	Providing and fixing required Stainless Steel Fitting of press fit design of grade 316L as per IS 6911:2017 and conforming to EN-10312 standards with V-profile and with O-ring sealing gasket of EPDM material of required dia as per direction of Engineer-in-charge. Coupling/Socket		
18.87A.1	For 15 mm outer dia pipe	each	249.70
18.87A.2	For 22 mm outer dia pipe	each	313.60
18.87A.3	For 28 mm outer dia pipe	each	365.85
18.87A.4	For 35 mm outer dia pipe	each	458.80
18.87A.5	For 42 mm outer dia pipe	each	621.40
18.87A.6	For 54 mm outer dia pipe	each	743.35

Item Code	Description	Unit	Justified Rate
18.88	Providing and fixing required Stainless Steel Fitting of press fit design of grade 4151 304 conforming to JWWA 6116 standard with V-profile or M-profile and with O-ring sealing gasket of EPDM material of providing and fixing required Stainless Steel Fitting of press fit design of grade AISI 304 conforming to 1WW4 6116 standard with V-profile or M-profile and with O-ring sealing gasket of EPDM material of required dia as per direction of Engineer-in-charge. Reducer		
18.88.1	For 22.22 mm x 15.88 mm outer dia pipe	each	126.05
18.88.2	For 28.58 mm x 15.88 mm outer dia pipe	each	177.15
18.88.3	For 28.58 mm x 22.22 mm outer dia pipe	each	187.60
18.88.4	For 34.00 mm x 15.88 mm outer dia pipe	each	232.30
18.88.5	For 34.00 mm x 22.22 mm outer dia pipe	each	243.90
18.88.6	For 34.00 mm x 28.58 mm outer dia pipe	each	243.90
18.88.7	For 42.70 mm x 15.88 mm outer dia pipe	each	435.55
18.88.8	For 42.70 mm x 22.22 mm outer dia pipe	each	435.55
18.88.9	For 42.70 mm x 28.58 mm outer dia pipe	each	453.00
18.88.10	For 42.70 mm x 34.00 mm outer dia pipe	each	453.00
18.88.11	For 48.60 mm x 15.88 mm outer dia pipe	each	493.65
18.88.12	For 48.60 mm x 22.22 mm outer dia pipe	each	493.65
18.88.13	For 48.60 mm x 28.58 mm outer dia pipe	each	493.65
18.88.14	For 48.60 mm x 34.00 mm outer dia pipe	each	493.65
18.88.15	For 48.60 mm x 42.70 mm outer dia pipe	each	493.65
18.88A	Providing and fixing required Stainless Steel Fitting of press fit design of grade 3161 as per IS 6911:2017 and conforming to EN- 10312 standards with V-profile and with O-ring sealing gasket of EPDM material of required dia as per direction of Engineer-in-charge. Reducer		
18.88A.1	For 22mm a 15 mm outer dia pipe	each	296.20
18.88A.2	For 28 mm x 15 mm outer dia pipe	each	360.05
18.88A.3	For 28 mm x 22 mm outer dia pipe	each	435.55
18.88A.4	For 35 mm x 22 mm outer dia pipe	each	441.35
18.88A.5	For 35 mm x 28 mm outer dia pipe	each	545.90
18.88A.6	For 42 mm x 22 mm outer dia pipe	each	702.70
18.88A.7	For 42 mm x 28 mm outer dia pipe	each	801.45
18.88A.8	For 42 mm x 35 mm outer dia pipe	each	836.30
18.88A.9	For 54 mm x 28 mm outer dia pipe	each	969.85
18.88A.10	For 54 mm x 35 mm outer dia pipe	each	1,149.90
18.88A.11	For 54 mm x 42 mm outer dia pipe	each	1,196.35
18.89	Providing and fixing required Stainless Steel Fitting of press fit design of grade AISI 304 conforming to .1WW.4 6116 standard with V-profile or M-profile and with O-ring sealing gasket of EPDM material of required dia as per direction of Engineer-in-charge. Slip Coupling/ Socket		
18.89.1	For 15.88 mm outer dia pipe	each	63.90
18.89.2	For 22.22 mm outer dia pipe	each	81.30
18.89.3	For 28.58 mm outer dia pipe	each	110.35
18.89.4	For 34.00 mm outer dia pipe	each	156.80
18.89.5	For 42.70 mm outer dia pipe	each	185.85
18.89.6	For 48.60 mm outer dia pipe	each	203.25
18.89A	Providing and fixing required Stainless Steel Fitting of press fit design of grade 3161 as per IS 6911:2017 and conforming to EN- 10312 standards with V-profile and with O-ring sealing gasket of EPDM material of required dia as per direction of Engineer-in-charge. Sleeve/Slip Coupling/ Socket		

Item Code	Description	Unit	Justified Rate
18.89A.1	For 15 mm outer dia pipe	each	435.55
18.89A.2	For 22 mm outer dia pipe	each	522.70
18.89A.3	For 28 mm outer dia pipe	each	604.00
18.89A.4	For 35 mm outer dia pipe	each	673.65
18.89A.5	For 42 mm outer dia pipe	each	778.20
18.89A.6	For 54 mm outer dia pipe	each	1,109.25
18.90	Providing and fixing required Stainless Steel Fitting of press fit design of grade AISI 304 conforming to JWWA G116 standard with V-profile or M-profile and with O-ring sealing gasket of EPDM material of required dia as per direction of Engineer-in-charge. Elbow 90°		
18.90.1	For 15.88mm outer dia pipe	each	75.50
18.90.2	For 22.22 mm outer dia pipe	each	81.30
18.90.3	For 28.58 mm outer dia pipe	each	121.95
18.90.4	For 34.00 mm outer dia pipe	each	139.40
18.90.5	For 42.70 mm outer dia pipe	each	151.00
18.90.6	For 48.60 mm outer dia pipe	each	185.85
18.90A	Providing and fixing required Stainless Steel Fitting of press fit design of grade 316L as per IS 6911:2017 and conforming to EN- 10312 standards with V-profile and with O-ring sealing gasket of EPDM material of required dia as per direction of Engineer-in- charge. Elbow 90°		
18.90A.1	For 15 mm outer dia pipe	each	354.25
18.90A.2	For 22 mm outer dia pipe	each	499.45
18.90A.3	For 28 mm outer dia pipe	each	667.85
18.90A.4	For 35 mm outer dia pipe	each	1,091.80
18.90A.5	For 42 mm outer dia pipe	each	1,765.50
18.90A.6	For 54 mm outer dia pipe	each	2,334.60
18.91	Providing and fixing required Stainless Steel Fitting of press fit design of grade AISI 304 conforming to JWWA G116 standard with V-profile or M-profile and with O-ring sealing gasket of EPDM material of required dia as per direction of Engineer-in-charge. Reducing Elbow 90°		
18.91.1	For 22.22 mm x 15.88 mm outer dia pipe	each	174.25
18.91.2	For 28.58 mm x 15.88 mm outer dia pipe	each	243.90
18.91.3	For 28.58 mm x 22.22 mm outer dia pipe	each	290.40
18.91.4	For 34.00 mm x 22.22 mm outer dia pipe	each	342.65
18.91.5	For 34.00 mm x 28.58 mm outer dia pipe	each	406.55
18.91.6	For 42.70 mm x 34.00 mm outer dia pipe	each	220.70
18.92	Providing and fixing required Stainless Steel Fitting of press fit design of grade AISI 304 conforming to JWWA G116 standard with V-profile or M-profile and with O-ring sealing gasket of EPDM material of required dia as per direction of Engineer-in-charge. Equal Tee		
18.92.1	For 15.88 mm outer dia pipe	each	203.25
18.92.2	For 22.22 mm outer dia pipe	each	290.40
18.92.3	For 28.58 mm outer dia pipe	each	342.65
18.92.4	For 34.00 mm outer dia pipe	each	511.05
18.92.5	For 42.70 mm outer dia pipe	each	807.25
18.92.6	For 48.60 mm outer dia pipe	each	1,062.75
18.92A	Providing and fixing required Stainless Steel Fitting of press fit design of grade 316L as per IS 6911:2017 and conforming to EN-10312 standards with V-profile and with O-ring sealing gasket of EPDM material of required dia as per direction of Engineer-in-charge. Equal Tee		

Item Code	Description	Unit	Justified Rate
18.92A.1	For 15 mm outer dia pipe	each	580.75
18.92A.2	For 22 mm outer dia pipe	each	679.50
18.92A.3	For 28 mm outer dia pipe	each	836.30
18.92A.4	For 35 mm outer dia pipe	each	1,039.55
18.92A.5	For 42 mm outer dia pipe	each	1,451.90
18.92A.6	For 54 mm outer dia pipe	each	1,742.25
18.93	Providing and fixing required Stainless Steel Fitting of press fit design of grade AISI 304 conforming to P.VVVA 6116 standard with V-profile or M-profile and with O-ring sealing gasket of EPDM material of required dia as per direction of Engineer-in-charge. Reducing Tee		
18.93.1	For 22.22 mm x 15.88 mm outer dia pipe	each	214.90
18.93.2	For 28.58 mm x 15.88 mm outer dia pipe	each	336.85
18.93.3	For 28.58 mm x 22.22 mm outer dia pipe	each	336.85
18.93.4	For 34.00 mm x 15.88 mm outer dia pipe	each	511.05
18.93.5	For 34.00 mm x 22.22 mm outer dia pipe	each	511.05
18.93.6	For 34.00 mm x 28.58 mm outer dia pipe	each	511.05
18.93.7	For 42.70 mm x 15.88 mm outer dia pipe	each	801.45
18.93.8	For 42.70 mm x 22.22 mm outer dia pipe	each	801.45
18.93.9	For 42.70 mm x 28.58 mm outer die pipe	each	801.45
18.93.10	For 42.70 mm x 34.00 mm outer dia pipe	each	801.45
18.93.11	For 48.60 mm x 15.88 mm outer dia pipe	each	1,039.55
18.93.12	For 48.60 mm x 22.22 mm outer dia pipe	each	1,039.55
18.93.13	For 48.60 mm x 28.58 mm outer dia pipe	each	1,039.55
18.93.14	For 48.60 mm x 34.00 mm outer dia pipe	each	1,039.55
18.93.15	For 48.60 mm x 42.70 mm outer dia pipe	each	1,039.55
18.93A	Providing and fixing required Stainless Steel Fitting of press fit design of grade 3161 as per IS 6911:2017 and conforming to EN- 10312 standards with V-profile and with O-ring sealing gasket of EPDM material of required dia as per direction of Engineer-in- charge. Reducing Tee		
18.93A.1	For 22 mm x 15 mm outer dia pipe	each	667.85
18.93A.2	For 28 mm x 15mm outer dia pipe	each	830.45
18.93A.3	For 28 mm x 22 mm outer dia pipe	each	824.65
18.93A.4	For 35 mm x 15 mm outer dia pipe	each	1,045.35
18.93A.5	For 35 mm x 22 mm outer dia pipe	each	1,051.15
18.93A.6	For 35 mm x 28 mm outer dia pipe	each	1,062.75
18.93A.7	For 42 mm x 22 mm outer dia pipe	each	1,486.70
18.93A.8	For 42 mm x 28 mm outer dia pipe	each	1,469.30
18.93A.9	For 42 mm x 35 mm outer dia pipe	each	1,498.35
18.93A.10	For 54 mm x 22 mm outer dia pipe	each	1,742.25
18.93A.11	For 54 mm x 28 mm outer dia pipe	each	1,788.70
18.93A.12	For 54 mm x 35 mm outer dia pipe	each	1,800.35
18.93A.13	For 54 mm x 42 mm outer dia pipe	each	1,823.55
18.94	Providing and fixing required Stainless Steel Fitting of press fit design of grade AISI 304 conforming to JWVA G116 standard with V-profile or M-profile and with O-ring sealing gasket of EPDM material of required dia as per direction of Engineer-in-charge. Male Thread Tee		
18.94.1	For 15.88 mm outer dia x 15 mm nominal dia threaded	each	214.90
18.94.2	For 22.22 mm outer dia x 15 mm nominal dia threaded	each	249.70
18.94.3	For 22.22 mm outer dia x 20 mm nominal dia threaded	each	249.70
18.94.4	For 28.58 mm outer dia x 15 mm nominal dia threaded	each	342.65

Item Code	Description	Unit	Justified Rate
18.94.5	For 28.58 mm outer dia x 20 mm nominal dia threaded	each	342.65
18.94.6	For 28.58 mm outer dia x 25 mm nominal dia threaded	each	342.65
18.94.7	For 34.00 mm outer dia x 15 mm nominal dia threaded	each	540.10
18.94.8	For 34.00 mm outer dia x 20 mm nominal dia threaded	each	540.10
18.94.9	For 34.00 mm outer dia x 25 mm nominal dia threaded	each	540.10
18.94.10	For 34.00 mm outer dia x 32 mm nominal dia threaded	each	540.10
18.94.11	For 42.70 mm outer dia x 15 mm nominal dia threaded	each	824.65
18.94.12	For 42.70 mm outer dia x 20 mm nominal dia threaded	each	824.65
18.94.13	For 42.70 mm outer dia x 25 mm nominal dia threaded	each	824.65
18.94.14	For 42.70 mm outer dia x 32 mm nominal dia threaded	each	824.65
18.94.15	For 42.70 mm outer dia x 40 mm nominal dia threaded	each	824.65
18.94.16	For 48.60 mm outer dia x 15 mm nominal dia threaded	each	1,039.55
18.94.17	For 48.60 mm outer dia x 20 mm nominal dia threaded	each	1,039.55
18.94.18	For 48.60 mm outer dia x 25 mm nominal dia threaded	each	1,039.55
18.94.19	For 48.60 mm outer dia x 32 mm nominal dia threaded	each	1,039.55
18.94.20	For 48.60 mm outer dia x 40 mm nominal dia threaded	each	1,039.55
18.94.21	For 48.60 mm outer dia x 50 mm nominal dia threaded	each	1,039.55
18.95	Providing and fixing required Stainless Steel Fitting of press fit design of grade AISI 304 conforming to JWWA G116 standard with V-profile or M-profile and with O-ring sealing gasket of EPDM material of required dia as per direction of Engineer-in-charge. Female Thread Tee		
18.95.1	For 15.88 mm outer dia x15 mm nominal dia threaded	each	214.90
18.95.2	For 22.22 mm outer dia x 15 mm nominal dia threaded	each	238.10
18.95.3	For 22.22 mm outer dia x 20 mm nominal dia threaded	each	238.10
18.95.4	For 28.58 mm outer dia x 15 mm nominal dia threaded	each	319.40
18.95.5	For 28.58 mm outer dia x 20 mm nominal dia threaded	each	319.40
18.95.6	For 28.58 mm outer dia x 25 mm nominal dia threaded	each	319.40
18.95.7	For 34.00 mm outer dia x 15 mm nominal dia threaded	each	516.85
18.95.8	For 34.00 mm outer dia x 20 mm nominal dia threaded	each	516.85
18.95.9	For 34.00 mm outer dia x 25 mm nominal dia threaded	each	516.85
18.95.10	For 34.00 mm outer dia x 32 mm nominal dia threaded	each	516.85
18.95.11	For 42.70 mm outer dia x 15 mm nominal dia threaded	each	813.05
18.95.12	For 42.70 mm outer dia x 20 mm nominal dia threaded	each	813.05
18.95.13	For 42.70 mm outer dia x 25 mm nominal dia threaded	each	813.05
18.95.14	For 42.70 mm outer dia x 32 mm nominal dia threaded	each	813.05
18.95.15	For 42.70 mm outer dia x 40 mm nominal dia threaded	each	813.05
18.95.16	For 48.60 mm outer dia x 15 mm nominal dia threaded	each	1,051.15
18.95.17	For 48.60 mm outer dia x 20 mm nominal dia threaded	each	1,051.15
18.95.18	For 48.60 mm outer dia x 25 mm nominal dia threaded	each	1,051.15
18.95.19	For 48.60 mm outer dia x 32 mm nominal dia threaded	each	1,051.15
18.95.20	For 48.60 mm outer dia x 40 mm nominal dia threaded	each	1,051.15
18.95.21	For 48.60 mm outer dia x 50 mm nominal dia threaded	each	1,051.15
18.95A	Providing and fixing required Stainless Steel Fitting of press fit design of grade 3161 as per IS 6911:2017 and conforming to EN- 10312 standards with V-profile and with O-ring sealing gasket of EPDM material of required dia as per direction of Engineer-in- charge. Female Thread Tee		
18.95A.1	For 15 mm outer dia x 1/2" nominal dia threaded	each	650.45
18.95A.2	For 22mm outer dia x 1/2" nominal dia threaded	each	714.30
18.95A.3	For 22mm outer dia x 3/4" nominal dia threaded	each	801.45

Item Code	Description	Unit	Justified Rate
18.95A.4	For 28 mm outer dia x 1/2" nominal dia threaded	each	847.90
18.95A.5	For 28 mm outer dia x 3/4" nominal dia threaded	each	876.95
18.95A.6	For 28 mm outer dia x 1" nominal dia threaded	each	975.65
18.95A.7	For 35 mm outer dia x 1/2" nominal dia threaded	each	981.45
18.95A.8	For 35 mm outer dia x 1-1/4" nominal dia threaded	each	1,346.20
18.95A.9	For 42 mm outer dia x 1-1/4" nominal dia threaded	each	1,563.40
18.95A.10	For 54 mm outer dia x 1-1/2" nominal dia threaded	each	2,230.10
18.95A.11	For 54 mm outer dia x 2" nominal dia threaded	each	2,679.60
18.96	Providing and fixing required Stainless Steel Fitting of press fit design of grade AISI 304 conforming to JWWA G116 standard with V-profile or M-profile and with O-ring sealing gasket of EPDM material of required dia as per direction of Engineer-in-charge. Female Thread Connector/ Adapter		
18.96.1	For 15.88 mm outer dia x 15 mm nominal dia threaded	each	226.50
18.96.2	For 22.22 mm outer dia x 15 mm nominal dia threaded	each	267.15
18.96.3	For 22.22 mm outer dia x 20 mm nominal dia threaded	each	278.75
18.96.4	For 28.58 mm outer dia x 15 mm nominal dia threaded	each	321.75
18.96.5	For 28.58 mm outer dia x 20 mm nominal dia threaded	each	336.85
18.96.6	For 28.58 mm outer dia x 25 mm nominal dia threaded	each	412.35
18.96.7	For 34.00 mm outer dia x 25 mm nominal dia threaded	each	476.20
18.96.8	For 34.00 mm outer dia x 32 mm nominal dia threaded	each	627.20
18.96.9	For 42.70 mm outer dia x 32 mm nominal dia threaded	each	691.10
18.96.10	For 42.70 mm outer dia x 40 mm nominal dia threaded	each	807.25
18.96.11	For 48.60 mm outer dia x 40 mm nominal dia threaded	each	981.45
18.96.12	For 48.60 mm outer dia x 50 mm nominal dia threaded	each	1,132.45
18.96A	Providing and fixing required Stainless Steel Fitting of press fit design of grade 316L as per IS 6911:2017 and conforming to EN-10312 standards with V-profile and with O-ring sealing gasket of EPDM material of required dia as per direction of Engineer-in-charge. Female Thread Connector/ Adapter		
18.96A.1	For 15 mm outer dia x 1/2" mm nominal dia threaded	each	511.05
18.96A.2	For 22 mm outer dia x 1/2" mm nominal dia threaded	each	574.95
18.96A.3	For 22 mm outer dia x 3/4" mm nominal dia threaded	each	673.65
18.96A.4	For 28 mm outer dia X 1" nominal dia threaded	each	1,109.25
18.96A.5	For 35 mm outer dia X 1-1/4" nominal dia threaded	each	1,184.75
18.96A.6	For 42 mm outer dia X 1-1/2" nominal dia threaded	each	1,817.75
18.96A.7	For 54 mm outer dia X 2" nominal dia threaded	each	2,787.60
18.97	Providing and fixing required Stainless Steel Fitting of press fit design of grade 4151304 conforming to JWWA G116 standard with V-profile or M-profile and with O-ring sealing gasket of EPDM material of required dia as per direction of Engineer-in-charge. Male Thread Connector/ Adapter		
18.97.1	For 15.88 mm outer dia x 15 mm nominal dia threaded	each	226.50
18.97.2	For 22.22 mm outer dia x 15 mm nominal dia threaded	each	267.15
18.97.3	For 22.22 mm outer dia x 20 mm nominal dia threaded	each	296.20
18.97.4	For 28.58 mm outer dia x 20 mm nominal dia threaded	each	377.50
18.97.5	For 28.58 mm outer dia x 25 mm nominal dia threaded	each	377.50
18.97.6	For 34.00 mm outer dia x 25 mm nominal dia threaded	each	551.70
18.97.7	For 34.00 mm outer dia x 32 mm nominal dia threaded	each	656.25
18.97.8	For 42.70 mm outer dia x 32 mm nominal dia threaded	each	753.80
18.97.9	For 42.70 mm outer dia x 40 mm nominal dia threaded	each	847.90
18.97.10	For 48.60 mm outer dia x 40 mm nominal dia threaded	each	987.30
18.97.11	For 48.60 mm outer dia x 50 mm nominal dia threaded	each	1,324.10

Item Code	Description	Unit	Justified Rate
18.97A	Providing and fixing required Stainless Steel Fitting of press fit design of grade 316L as per IS 6911:2017 and conforming to EN-10312 standard with V-profile and with O-ring sealing gasket of EPDM material of required dia as per direction of Engineer-in-charge. Male Thread Connector/ Adapter		
18.97A.1	For 15 mm outer dia X 1/2" nominal dia threaded	each	470.40
18.97A.2	For 22 mm outer dia X 1/2" nominal dia threaded	each	557.50
18.97A.3	For 22 mm outer dia X 3/4" nominal dia threaded	each	586.55
18.97A.4	For 28 mm outer dia X 1" nominal dia threaded	each	772.40
18.97A.5	For 35 mm outer dia X 1-1/4" nominal dia threaded	each	1,126.65
18.97A.6	For 42 mm outer dia X 1-1/2" nominal dia threaded	each	1,643.50
18.97A.7	For 54 mm outer dia X 2" nominal dia threaded	each	2,201.05
18.98	Providing and fixing required Stainless Steel Fitting of press fit design of grade AISI 304 conforming to JWWA G116 standard with V-profile or M-profile and with O-ring sealing gasket of EPDM material of required dia as per direction of Engineer-in-charge. Valve Connector		
18.98.1	For 15.88 mm outer dia x 15 mm nominal dia threaded	each	272.95
18.98.2	For 22.22 mm outer dia x 15 mm nominal dia threaded	each	325.20
18.98.3	For 22.22 mm outer dia x 20 mm nominal dia threaded	each	360.05
18.98.4	For 28.58 mm outer dia x 25 mm nominal dia threaded	each	493.65
18.98.5	For 34.00 mm outer dia x 32 mm nominal dia threaded	each	573.80
18.98.6	For 42.70 mm outer dia x 40 mm nominal dia threaded	each	1,022.10
18.98.7	For 48.60 mm outer dia x 50 mm nominal dia threaded	each	1,405.40
18.99	Providing and fixing required Stainless Steel Fitting of press fit design of grade AISI 304 conforming to JWWA G116 standard with V-profile or M-profile and with O-ring sealing gasket of EPDM material of required dia as per direction of Engineer-in-charge. Female Threaded Elbow 90°		
18.99.1	For 15.88 mm outer dia x 15 mm nominal dia threaded	each	185.85
18.99.2	For 22.22 mm outer dia x 15 mm nominal dia threaded	each	249.70
18.99.3	For 22.22 mm outer dia x 20 mm nominal dia threaded	each	249.70
18.99.4	For 25.58 mm outer dia x 25 mm nominal dia threaded	each	249.70
18.99.5	For 34.00 mm outer dia x 32 mm nominal dia threaded	each	342.65
18.99.6	For 42.70 mm outer dia x 32 mm nominal dia threaded	each	557.50
18.99.7	For 42.70 mm outer dia x 40 mm nominal dia threaded	each	557.50
18.99.8	For 48.60 mm outer dia x 40 mm nominal dia threaded	each	824.65
18.99.9	For 48.60 mm outer dia x 50 mm nominal dia threaded	each	824.65
18.99A	Providing and fixing required Stainless Steel Fitting of press fit design of grade 316L as per IS 6911:2017 and conforming to EN- 10312 standard with V-profile and with O-ring sealing gasket of EPDM material of required dia as per direction of Engineer-in- charge. Female Threaded Elbow 90°		
18.99A.1	For 15 mm outer dia X 1/2" nominal dia threaded	each	743.35
18.99A.2	For 22 mm outer dia X 3/4" nominal dia threaded	each	998.90
18.99A.3	For 28mm outer dia X 1" nominal dia threaded	each	1,370.55
18.99A.4	For 35mm outer dia X 1-1/4" nominal dia threaded	each	2,226.60
18.99A.5	For 42mm outer dia X 1-1/2" nominal dia threaded	each	2,425.20
18.99A.6	For 54mm outer dia X 2" nominal dia threaded	each	3,748.15
18.100	Providing and fixing required Stainless Steel Fitting of press fit design of grade AISI 304 conforming to JWWA G116 standard with V-profile or M-profile and with O-ring sealing gasket of EPDM material of required dia as per direction of Engineer-in-charge. Male Threaded Elbow 90°		
18.100.1	For 15.88 mm outer dia x 15 mm nominal dia threaded	each	226.50

Item Code	Description	Unit	Justified Rate
18.100.2	For 22.22 mm outer dia x 15 mm nominal dia threaded	each	261.35
18.100.3	For 22.22 mm outer dia x 20 mm nominal dia threaded	each	261.35
18.100.4	For 28.58 mm outer dia x 25 mm nominal dia threaded	each	261.35
18.100.5	For 34.00 mm outer dia x 25 mm nominal dia threaded	each	336.85
18.100.6	For 34.00 mm outer dia x 32 mm nominal dia threaded	each	336.85
18.100.7	For 42.70 mm outer dia x 32 mm nominal dia threaded	each	557.50
18.100.8	For 42.70 mm outer dia x 40 mm nominal dia threaded	each	557.50
18.100.9	For 48.60 mm outer dia x 40 mm nominal dia threaded	each	807.25
18.100.10	For 48.60 mm outer dia x 50 mm nominal dia threaded	each	807.25
18.100A.1	For 15mm outer dia X 1/2" nominal dia threaded	each	609.80
18.100A.2	For 22mm outer dia X 3/4" nominal dia threaded	each	917.60
18.100A.3	For 28mm outer dia X 1" nominal dia threaded	each	1,213.75
18.100A.4	For 35mm outer dia X 1-1/4" nominal dia threaded	each	1,672.55
18.100A.5	For 42mm outer dia X 1-1/2" nominal dia threaded	each	3,060.55
18.100A.6	For 54mm outer dia X 2" mm nominal dia threaded	each	3,482.20
18.101	Providing and fixing required Stainless Steel Fitting of press fit design of grade AISI 304 conforming to JWWA G116 standard with V-profile or M-profile and with O-ring sealing gasket of EPDM material of required dia as per direction of Engineer-in-charge. Cap		
18.101.1	For 15.88 mm outer dia pipe	each	55.75
18.101.2	For 22.22 mm outer dia pipe	each	81.30
18.101.3	For 28.58 mm outer dia pipe	each	104.55
18.101.4	For 34.00 mm outer dia pipe	each	203.25
18.101.5	For 42.70 mm outer dia pipe	each	290.40
18.101.6	For 48.60 mm outer dia pipe	each	377.50
18.101A	Providing and fixing required Stainless Steel Fitting of press fit design of grade 316L as per IS 6911:2017 and conforming to EN-10312 standard with V-profile and with O-ring sealing gasket of EPDM material of required dia as per direction of Engineer-in-charge. Cap		
18.101A.1	For 15 mm outer dia pipe	each	371.70
18.101A.2	For 22 mm outer dia pipe	each	482.00
18.101A.3	For 28 mm outer dia pipe	each	598.15
18.101A.4	For 35 mm outer dia pipe	each	836.30
18.101A.5	For 42 mm outer dia pipe	each	1,817.75
18.101A.6	For 54 mm outer dia pipe	each	1,997.80
18.102	Providing and fixing required Stainless Steel Fitting of press fit design of grade AISI 304 conforming to JWWA G116 standard with V-profile or M-profile and with O-ring sealing gasket of EPDM material of required dia as per direction of Engineer-in-charge. Pipe Bridge		
18.102.1	For 15.88 mm outer dia pipe	each	255.55
18.102.2	For 22.22 mm outer dia pipe	each	336.85
18.102.3	For 28.58 mm outer dia pipe	each	482.00
18.102A	Providing and fixing required Stainless Steel Fitting of press fit design of grade 316L as per IS 6911:2017 and conforming to EN-10312 standard with V-profile and with O-ring sealing gasket of EPDM material of required dia as per direction of Engineer-in-charge. Pipe Bridge		
18.102A.1	For 15 mm outer dia pipe	each	482.00
18.102A.2	For 22 mm outer dia pipe	each	1,289.25
18.102A.3	For 28 mm outer dia pipe	each	1,772.45

Item Code	Description	Unit	Justified Rate
18.103	Providing arid fixing required Stainless Steel Fitting of press fit design of grade 3161 as per 15 6911:2017 and conforming to EN- 10312 standard with V-profile and with O-ring sealing gasket of EPDM material of required dia as per direction of Engineer-in- charge. Male Union		
18.103.1	for 15mm outer dia X 1/2" nominal dia threaded	each	1,027.95
18.103.2	For 22mm outer dia X 1/2" nominal dia threaded	each	1,039.55
18.103.3	For 22mm outer dia X 3/4" nominal dia threaded	each	1,190.55
18.103.4	For 28mm outer dia X 1" nominal dia threaded	each	2,096.50
18.103.5	For 35mm outer dia X 1-1/4" nominal dia threaded	each	2,189.45
18.103.6	For 42mm outer dia X 1-1/2" nominal dia threaded	each	2,474.00
18.103.7	For 54mm outer dia X 2" nominal dia threaded	each	4,274.30
18.104	Providing and fixing required Stainless Steel Fitting of press fit design of grade 316L as per IS 6911:2017 and conforming to EN-10312 standard with V-profile and with O-ring sealing gasket of EPDM material of required dia as per direction of Engineer-in-charge. Female Union		
18.104.1	For 22 mm outer dia X 3/4" nominal dia threaded	each	1,103.45
18.104.2	For 28mm outer dia X 1" nominal dia threaded	each	1,486.70
18.105	Providing and fixing required Stainless Steel Fitting of press fit design of grade 3161 as per 15 6911:2017 and conforming to EN- 10312 standard with V-profile and with O-ring sealing gasket of EPDM material of required dia as per direction of Engineer-in- charge. Female Transition Elbow / FTE		
18.105.1	For 15mm outer dia X 1/2" nominal dia threaded	each	753.80
18.105.2	For 22mm outer dia X 1/2" nominal dia threaded	each	1,045.35
18.105.3	For 22mm outer dia X 3/4" nominal dia threaded	each	1,010.50
19	DRAINAGE		
19.1	Providing, laying and jointing glazed stoneware pipes class SP-1 with stiff mixture of cement mortar in the proportion of 1:1 (1 cement : 1 fine sand) including testing of joints etc. complete :		
19.1.1	100 mm diameter	metre	302.60
19.1.2	150 mm diameter	metre	482.70
19.1.3	200 mm diameter	metre	685.95
19.1.4	250 mm diameter	metre	1,081.10
19.1.5	300 mm diameter	metre	1,495.55
19.2	Providing and laying cement concrete 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size) all-round S.W. pipes including bed concrete as per standard design :		
19.2.1	100 mm diameter S.W. pipe	metre	722.55
19.2.2	150 mm diameter S.W. pipe	metre	883.70
19.2.3	200 mm diameter S.W. pipe	metre	1,030.15
19.2.4	250 mm diameter S.W. pipe	metre	1,191.25
19.3	Providing and laying cement concrete 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size) up to haunches of S.W. pipes including bed concrete as per standard design :		
19.3.1	100 mm diameter S.W. pipe	metre	343.40
19.3.2	150 mm diameter S.W. pipe	metre	556.55
19.3.3	200 mm diameter S.W. pipe	metre	654.20
19.3.4	250 mm diameter S.W. pipe	metre	761.60
19.3.5	300 mm diameter S.W. pipe	metre	878.80
19.4	Providing and fixing square-mouth S.W. gully trap class SP-1 complete with C.I. grating brick masonry chamber with water tight C.I. cover with frame of 300 x300 mm size (inside) the weight of cover to be not less than 4.50 kg and frame to be not less than 2.70 kg as per standard design:		

Item Code	Description	Unit	Justified Rate
19.4.1	100x100 mm size P type		
19.4.1.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	each	2,047.45
19.4.1.2	With Sewer bricks conforming to IS :4885	each	2,017.60
19.4.2	150x 100 mm size P type		
19.4.2.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	each	2,065.60
19.4.2.2	With sewer bricks conforming to IS : 4885	each	2,035.75
19.4.3	180x150 mm size P type		
19.4.3.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	each	2,122.60
19.4.3.2	With Sewer bricks conforming to 15 : 4885	each	2,092.75
19.5	Dismantling of old S.W. pipes including breaking of joints and bed concrete stacking of useful materials near the site within 50 m lead and disposal of <u>unserviceable materials into municipal dumps</u>		
19.5.1	100 mm diameter	metre	51.55
19.5.2	150 mm diameter	metre	57.00
19.5.3	200 mm diameter	metre	60.65
19.5.4	250 mm diameter	metre	64.25
19.5.5	300 mm diameter	metre	67.90
19.5.6	350 mm diameter	metre	78.20
19.5.7	400 mm diameter	metre	85.50
19.5.8	450 mm diameter	metre	89.15
19.6	Providing and laying non-pressure NP2 class (light duty) R.C.C. pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement : 2 fine sand) including testing of joints etc. complete :		
19.6.1	100 mm dia. R.C.C. pipe	metre	372.15
19.6.2	150 mm dia. R.C.C. pipe	metre	408.65
19.6.3	250 mm dia. R.C.C. pipe	metre	671.25
19.6.4	300 mm dia. R.C.C. pipe	metre	754.65
19.6.5	450 mm dia. R.C.C. pipe	metre	1,249.75
19.6.6	500 mm dia. R.C.C. pipe	metre	1,476.05
19.6.7	600 mm dia. R.C.C. pipe	metre	1,778.05
19.6.8	700 mm dia. R.C.C. pipe	metre	2,233.40
19.6.9	800 mm dia. R.C.C. pipe	metre	2,675.95
19.6.10	900 mm dia. R.C.C. pipe	metre	3,632.20
19.6.11	1000 mm dia. R.C.C. pipe	metre	4,260.00
19.6.12	1100 mm dia. R.C.C. pipe	metre	4,766.65
19.6.13	1200 mm dia. R.C.C. pipe	metre	5,345.50
19.7	Constructing brick masonry manhole in cement mortar 1:4 (1 cement : 4 coarse sand) with R.C.C. top slab with 1:1.5:3 mix (1 cement : 1.5 coarse sand (zone-III) : 3 graded stone aggregate 20 mm nominal size), foundation concrete 1:4:8 mix (1 cement : 4 coarse sand (zone-III) : 8 graded stone aggregate 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement and making channels in cement concrete 1:2:4(1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) finished with a floating coat of neat cement complete as per standard design 7		
19.7.1	Inside size 90x80 cm and 45 cm deep including C.I. cover with frame (light duty) 455x610 mm internal dimensions, total weight of cover and frame to be not less than 38 kg (weight of cover 23 kg and weight of frame 15 kg) :		
19.7.1.1	With common burnt clay F.P.S. (non modular) bricks of Class designation 7.5	each	9,690.40

Item Code	Description	Unit	Justified Rate
19.7.1.2	With Sewer bricks conforming to IS : 4885	each	9,612.30
19.7.2	Inside size 120x90 cm and 90 cm deep including C.I. cover with frame (medium duty) 500 mm internal diameter, total weight of cover and frame to be not less than 116 kg (weight of cover 58 kg and weight of frame 58 kg) :		
19.7.2.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	each	20,276.35
19.7.2.2	With Sewer bricks conforming to IS : 4885	each	20,062.70
19.7.3	Inside size 120x90 cm and 90 cm deep including C.I. cover with frame (heavy duty) 560 mm internal diameter, total weight of cover and frame to be not less than 208 kg (weight of cover 108 kg and weight of frame 100 kg):		
19.7.3.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	each	25,343.90
19.7.3.2	With Sewer bricks conforming to IS : 4885	each	25,160.10
19.8	Extra for depth for manholes :		
19.8.1	Size 90x80 cm		
19.8.1.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	metre	6,512.30
19.8.1.2	With Sewer bricks conforming to IS : 4885	metre	6,284.85
19.8.2	Size 120x90 cm		
19.8.2.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	metre	7,806.15
19.8.2.2	With Sewer bricks conforming to IS : 4885	metre	7,535.00
19.9	Constructing brick masonry circular type manhole 0.91 m internal dia at bottom and 0.56m dia at top in cement mortar 1:4 (1 cement :4 coarse sand), inside cement plaster 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement, foundation concrete 1:3:6 mix (1; cement : 3 coarse sand 7 6 graded stone aggregate 40 mm nominal size), and making necessary channel in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) finished with a floating coat of neat cement, all complete as per standard design :		
19.9.1	0.91 m deep with S.F.R.C. cover and frame (heavy duty, HD-20 grade designation) 560 mm internal diameter conforming to I.S. 12592, total weight of cover and frame to be not less than 182 kg., fixed in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) including centering, shuttering all complete. (Excavation, foot rests and 12mm thick cement plaster at the external surface shall be paid for separate)y) :		
19.9.1.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	each	9,693.20
19.9.1.2	With Sewer bricks conforming to IS : 4885	each	9,552.00
19.10	Extra depth for circular type manhole 0.91m internal dia (at bottom) beyond 0.91 m to 1.67 m		
19.10.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	metre	5,603.55
19.10.2	With Sewer bricks conforming IS : 4885	metre	5,413.10
19.11	Constructing brick masonry circular manhole 1.22 m internal dia at bottom and 0 56 rod's at top in cement mortar 1:4(1 cement :4 coarse sand) inside cement piaster 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement foundation concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) and making necessary channel in cement concrete 1:2:4 (1 cement :2 coarse sand : 4 graded stone aggregate 20 mm nominal size) finished with a floating coat of neat cement, all complete as per standard design :		

Item Code	Description	Unit	Justified Rate
19.11.1	1.68 m deep with SFRC Cover and frame (heavy duty HD-20 grade designation) 560 mm internal diameter conforming to I.S. 12592, total weight of cover and frame to be not less than 182 kg. fixed in cement concrete 1:2:4 (1 cement : 2 coarse sand 4 graded stone aggregate 20 mm nominal size) including centering, shuttering all complete. (Excavation, foot rests and 12 mm thick cement piaster at the external surface shall be paid for separately) :		
19.11.1.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	each	18,738.05
19.11.1.2	With Sewer bricks conforming IS : 4885	each	18,422.20
19.12	Extra depth for circular type manhole 1.22 m internal dia (at bottom) beyond 1.68 m to 2.29 m :		
19.12.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	metre	7,260.65
19.12.2	With Sewer bricks conforming IS : 4885	metre	7,012.05
19.13	Constructing brick masonry circular manhole 1.52 m internal dia at bottom and 0.56 m dia at top in cement mortar 1:4(1 cement : 4 coarse sand) inside cement plaster 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement, foundation concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) and making necessary channel in cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) finished with a floating coat of neat cement, all complete as per standard design :		
19.13.1	2.30 m deep with SERC Cover and frame (heavy duty HD- 20 grade designation) 560 mm internal diameter conforming to I.S. 12592, total weight of cover and frame to be not less than 182 kg. fixed in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) including centering, shuttering all complete. (Excavation, foot rests and 12 mm thick cement plaster at the external surface shall be paid for separately). :		
19.13.1.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	each	40,105.35
19.13.1.2	With Sewer bricks conforming IS : 4885	each	39,220.95
19.14	Extra depth for circular type manhole 1.52 m internal dia (at bottom) beyond 2.30 m :		
19.14.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	metre	16,965.55
19.14.2	With Sewer bricks conforming IS : 4885	metre	16,322.70
19.15	Providing M.S. foot rests including fixing in manholes with 20x20x10 cm cement concrete blocks 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) as per standard design :		
19.15.1	With 20x20 mm square bar	each	356.35
19.15.2	With 20 mm diameter round bar .1 1.7_--_	each	320.50
19.16	Providing orange colour safety foot rest of minimum 6 mm thick plastic encapsulated as per IS : 10910, on 12 mm dia steel bar conforming to IS: 1786, having minimum cross section as 23 mmx25 mm and over all minimum length 263 mm and width as 165 mm with minimum 112 mm space between protruded legs having 2 mm tread on top surface by ribbing or chequering besides necessary and adequate anchoring projections on tail length on 138 mm as per standard drawing and suitable to with stand the bend test and chemical resistance test as per specifications and having manufacture's permanent identification mark to be visible even after fixing, including fixing in manholes with 30x20x15 cm cement concrete block 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) complete as per design.	each	374.55
19.17	Replacement of M.S. foot rests in manholes including dismantling concrete blocks and fixing with 20x20x10 cm cement concrete blocks 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size):		

Item Code	Description	Unit	Justified Rate
19.17.1	With 20x20 mm square bar	each	433.50
19.17.2	With 20 mm diameter round bar	each	397.60
19.18	Supplying and fixing C.I. cover without frame for manholes:		
19.18.1	455x610 mm rectangular C.I. cover (light duty) the weight of the cover to be not less than 23 kg	each	1,147.35
19.18.2	500 mm diameter C.I. cover (medium duty) the weight of the cover to be not less than 58 kg	each	2,777.40
19.18.3	560 mm diameter C.I. cover (heavy duty) the weight of the cover to be not less than 108 kg	each	6,036.10
19.19	Providing and fixing in position pre-cast R.C.C. manhole cover and frame of required shape and approved quality		
19.19.1	L D - 2.5		
19.19.1.1	Rectangular shape 600x450 mm internal dimensions	each	1,093.60
19.19.1.2	Square shape 450 mm internal dimensions	each	912.55
19.19.1.3	Circular shape 450 mm internal diameter	each	912.55
19.19.2	M D - 10		
19.19.2.1	Square shape 450 mm internal dimension	each	1,095.45
19.19.2.2	Circular shape 500 mm internal diameter	each	920.20
19.19.3	H D - 20		
19.19.3.1	Circular shape 560 mm internal diameter	each	1,300.10
19.19.4	EHD - 35		
19.19.4.1	Circular shape 560 mm internal dia	each	1,636.90
19.20	Supplying and fixing C.I. cover 300x300 mm without frame for gully trap (standard pattern) the weight of cover to be not less than 4.5 kg	each	598.60
19.21	Making connection of drain or sewer line with existing manhole including breaking into and making good the walls, floors with cement concrete 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) cement plastered on both sides with cement mortar 1:3 (1 cement : 3 coarse sand), finished with a floating coat of neat cement and making necessary channels for the drain etc. complete :		
19.21.1	For pipes 100 to 250 mm diameter	each	528.00
19.21.2	For pipes 250 to 300 mm diameter	each	615.05
19.21.3	For pipes 350 to 450 mm diameter	each	889.75
19.22	Providing sand cast iron drop connection externally for 60 cm drop from branch sewer line to main sewer manhole including inspection and cleaning eye with chain and lid, sand cast iron drop pipe and bend encased all-round with cement concrete 1:5:10(1. cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) with all centering and shuttering required, cutting holes in walls and making good with brick work in cement mortar 1:4 (1 cement : 4 coarse sand) plastered with cement mortar 1:3 (1 cement : 3 coarse sand) on inside of the manhole wall, lead caulked joints between sand cast iron pipes and fittings, stiff cement mortar 1:1 (1 cement : 1 fine sand) joints between sand cast iron tee and S.W. pipe, making required channels complete as per standard design and specifications :		
19.22.1	100 mm dia sand cast iron drop connection	each	8,058.65
19.22.2	150 mm dia sand cast iron drop connection	each	10,999.45
19.23	Extra for depths beyond 60 cm of sand cast iron drop connection complete:		
19.23.1	For 100 mm dia sand cast iron drop connection	metre	2,350.00
19.23.2	For 150 mm dia sand cast iron drop connection	metre	3,046.80
19.24	Dismantling of manhole including R.C.C. top slab, C.I. cover with frame, including stacking of useful materials near the site and disposal of unserviceable materials within 50 m lead as per direction of Engineer-in-charge:		
19.24.1	Rectangular manhole 90x80 cm and 45 cm deep	each	1,477.90

Item Code	Description	Unit	Justified Rate
19.24.2	Rectangular manhole 120x90 cm and 90 cm deep	each	2,599.80
19.24.3	Rectangular arch type manhole 140x90 cm and 2.45 m deep	each	4,918.20
19.24.4	Circular manhole 122 cm diameter and 1.68 m deep	each	3,763.15
19.25	Extra for depth of manholes dismantled :		
19.25.1	Rectangular manhole 90x80 cm and beyond 45 cm depth	metre	1,187.00
19.25.2	Rectangular manhole 120x90 cm and beyond 90 cm depth	metre	1,413.95
19.25.3	Rectangular arch type manhole 140x90 cm and beyond 2.45 m depth (up to 4.25 m depth)	metre	1,145.65
19.25.4	Circular manhole 122 cm diameter and beyond 1.68 m depth (up to 2.29 m depth)	metre	1,292.50
19.26	Raising manhole cover and frame slab to required level including dismantling existing slab and making good the damage as required (Raising depth of manhole to be paid separately) :		
19.26.1	Rectangular manhole 90x80 cm with rectangular cover 600 x 450 mm of grade 1.0 -2.5	each	1,917.55
19.26.2	Rectangular manhole 120x90 cm with circular cover 500 mm dia of grade MD-10	each	3,026.00
19.26.3	Rectangular manhole 120x90 cm with circular cover 560 mm dia of grade HD -20	each	2,817.05
19.26.4	Circular manhole 140 cm dia with circular cover 600 mm dia of grade EHD - 35	each	240.80
19.27	Constructing brick masonry road gully chamber 50x45x60 cm with bricks in cement mortar 1:4 (1 cement : 4 coarse sand) including 500x450 mm pre-cast R.C.C. horizontal grating with frame complete as per standard design :		
19.27.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	each	4,494.95
19.28	Constructing brick masonry road gully chamber 45x45x77.5 cm with bricks in cement mortar 1:4(1 cement : 4 coarse sand (with precast R.C.C. vertical grating complete as per standard design:		
19.28.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	each	5,123.30
19.29	Constructing brick masonry road gully chamber 110x50x77.5 cm with bricks in cement mortar 1:4 (1 cement : 4 coarse sand) including 500)(450 mm precast R.C.C. horizontal grating with frame and vertical grating of size 450x100 mm complete as per standard design:		
19.29.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	each	8,608.80
19.30	Constructing brick masonry chamber for underground C.I. inspection chamber and bends with bricks in cement mortar 1:4 (1 cement 7 4 coarse sand) C.I. cover with frame (light duty) 455x610 mm internal dimensions, total weight of cover with frame to be not less than 38 kg (weight of cover 23 kg and weight of frame 15 kg), R.C.C. top slab with 1:1.5:3 mix (1. cement : 1.5 fine sand : 3 graded stone aggregate 20 mm nominal size), foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size), inside plastering 12 mm thick with cement mortar 173 (1 cement : 3 coarse sand), finished smooth with a floating coat of neat cement on walls and bed concrete etc, complete as per standard design:		
19.30.1	Inside dimensions 455x610 mm and 45 cm deep for single pipe line :		
19.30.1.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	each	5,215.45
19.30.2	Inside dimensions 500x700 mm and 45 cm deep for pipe line with one or two inlets:		
19.30.2.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	each	6,093.75
19.30.3	Inside dimensions 600x 850 awn and 45 cm deep for pipe line with three or more inlets :		
19.30.3.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	each	7,166.75
19.31	Extra for depth beyond 45 cm of brick masonry chamber :		

Item Code	Description	Unit	Justified Rate
19.31.1	For 455x610 mm size		
19.31.1.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	metre	4,522.95
19.31.2	For 500x700 mm size		
19.31.2.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	metre	4,936.70
19.31.3	For 600x850 mm size		
19.31.3.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	metre	5,752.30
19.32	Making soak pit 2.5 m diameter 3.0 metre deep with 45 x 45 cm dry brick honey comb shaft with bricks and S.W. drain pipe 100 mm diameter, 1.8 m long complete as per standard design.		
19.32.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	each	21,806.30
19.33	Constructing soak pit 1.20x1.20x1.70 m filled with brickbats including S.W. drain pipe 100 mm diameter and 1.20 m long complete as per standard design.	each	2,366.00
19.34	Providing and fixing S.W. intercepting trap in manholes with stiff mixture of cement mortar 1:1 (1 cement : 1 fine sand) including testing of joints etc. complete :		
19.34.1	100 mm dia	each	315.35
19.34.2	150 mm dia	each	427.10
19.35	Providing and laying Non Pressure NP-3 class (Medium duty) R.C.C. pipes including collars/spigot jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement : 2 fine sand) including testing of joints etc. complete		
19.35.1	450 mm dia RCC pipes.	metre	2,027.00
19.35.2	600 mm dia RCC pipes.	metre	2,612.40
19.35.3	900 mm dia RCC pipes.	metre	4,128.25
19.35.4	1000 mm dia RCC pipes. (Laying by manual/ machanical means)	metre	5,114.25
19.35.5	1200 mm dia RCC pipes. (Laying by manual/ machanical means)	metre	6,905.20
19.35.6	1800 mm dia RCC pipes. (Laying by manual/ machanical means)	metre	12,194.60
19.36	Providing and laying Non Pressure NP-4 class (Heavy duty) R.C.C. pipes including collars/spigot jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement : 2 fine sand) including testing of joints etc. complete		
19.36.1	450 mm dia RCC pipes.	metre	2,317.40
19.36.2	600 mm dia RCC pipes.	metre	3,018.90
19.36.3	900 mm dia RCC pipes.	metre	5,667.20
19.36.4	1000 mm dia RCC pipes. (Laying by manual/ machanical means)	metre	8,639.40
19.36.5	1200 mm dia RCC pipes. (Laying by manual/ machanical means)	metre	8,426.75
19.36.6	1800 mm dia RCC pipes. (Laying by manual/ machanical means)	metre	17,072.90
20	PILE WORK		
20.1	Providing, driving with hydraulic piling rigs with power units and installing driven cast-in-situ reinforced cement concrete piles of grade M-25 of specified diameter and length below the pile cap, to carry safe working load not less than specified, excluding the cost of steel reinforcement but including the cost of shoe and the length of pile to be embedded in the pile cap etc. all complete. (Length of pile for payment shall be measured from top of shoe to the bottom of pile cap) :		
20.1.1	400 mm dia pipes	metre	2,088.90
20.1.2	450 mm dia piles	metre	2,592.30
20.1.3	500 mm dia piles	metre	3,124.05
20.1.4	550 mm dia piles	metre	3,442.75
20.1.5	750 mm dia piles	metre	5,889.40
20.1.6	1000 mm dia piles	metre	9,737.05
20.1.7	1200 mm dia piles	metre	12,802.40

Item Code	Description	Unit	Justified Rate
20.1.8	1500 mm dia piles	metre	18,232.80
20.2	Boring, providing and installation bored cast-in-situ reinforced cement concrete piles of grade M-25 of specified diameter and length below the pile cap, to carry a safe working load not less than specified, excluding the cost of steel reinforcement but including the cost of boring with bentonite solution and temporary casing of appropriate length for setting out and removal of same and the length of the pile to be embedded in the pile cap etc. by percussion drilling using Direct mud circulation (DMC) or Bailer and chisel technique by tripod and mechanical Winch Machine all complete, including removal of excavated earth with all its lifts and leads (length of pile for payment shall be measured up to bottom of pile cap). Note: Truck Mounted rotary/TMR/Tubewell boring machine shall not be used .		
20.2.1	450 mm dia piles	metre	1,743.90
20.2.2	500 mm dia piles	metre	2,077.60
20.2.3	600 mm dia piles	metre	2,809.65
20.2.4	750 mm dia piles	metre	4,315.20
20.2A	Boring, providing and installation bored cast-in-situ reinforced cement concrete piles of grade M-25 of specified diameter and length below pile cap, to carry a safe working load not less than specified, excluding the cost of steel reinforcement but including the cost of boring with bentonite solution and temporary casing of appropriate length for setting out and removal of same and the length of the pile to be embedded in the pile cap etc. by Crawler mounted, telescopic boom hydraulic piling Rig all complete, including removal of excavated earth with all its lifts and leads (length of pile for payment shall be measured up to bottom of pile cap). Note: Truck Mounted rotary/TMR/Tube well boring machine shall not be used.		
20.2A.1	600 mm dia piles	metre	4,072.15
20.2A.2	750 mm dia piles	metre	5,887.10
20.2A.3	1000 mm dia piles	metre	9,887.80
20.2A.4	1200 mm dia piles	metre	13,031.70
20.2A.5	1500 mm dia piles	metre	18,806.85
20.3	Boring with hydraulic piling rigs with power units, providing and installing cast in situ single under reamed piles of specified diameter and length below pile cap in M-25 cement concrete, to carry a safe working load not less than specified, excluding the cost of steel reinforcement but including the cost of boring with bentonite solution and the length of the pile to be embedded in pile cap etc. all complete. (Length of pile for payment shall be measured upto to the bottom of pile cap) :		
20.3.1	300 mm dia piles	metre	2,242.30
20.3.2	400 mm dia piles	metre	2,821.35
20.3.3	450 mm dia piles	metre	3,166.60
20.3.4	550 mm dia piles	metre	3,554.50
20.4	Extra over single under ream for providing additional bulbs in under reamed piles, under specified diameter(only the nos. of extra bulbs are to be paid)		
20.4.1	300 mm dia piles	metre	1,771.20
20.4.2	400 mm dia piles	metre	2,007.80
20.4.3	450 mm dia piles	metre	2,150.40
20.4.4	550 mm dia piles	metre	2,350.55

Item Code	Description	Unit	Justified Rate
20.5	Providing, driving (with vibrating pile driving hammer complete with power units & accessories) and installing driven Pre-cast reinforced cement concrete piles of specified diameter and length below the pile cap in M-25 cement concrete to carry safe working load not less than specified with a central through preformed hole with M.S. black pipe of dia, 40 mm for grouting with cement sand grouting of mix 1:2 (cement : 2 coarse sand) under sufficient positive pressure to ensure complete filling including centring, shuttering, driving and removing the steel casing pipe and lifting casing etc. complete but excluding the cost of steel reinforcement. (Length of pile for payment shall be measured from top of the shoe to the bottom of pile cap).		
20.5.1	400 mm dia piles	metre	2,731.00
20.5.2	450 mm dia piles	metre	3,428.30
20.5.3	500 mm dia piles	metre	3,619.15
20.5.4	550 mm dia piles	metre	4,137.00
20.5.5	750 mm dia piles	metre	7,984.75
20.5.6	1000 mm dia piles	metre	11,010.20
20.6	Vertical load testing of piles in accordance with IS 2911 (Part IV) including installation of loading platform by Kentledge/Anchor piles method and preparation of pile head or construction of test cap and dismantling of test cap after test etc. complete as per specification & the direction of Engineer in-charge.		
20.6.1	Single pile upto 50 tonne Safe capacity		
20.6.1.1	Initial test (Test Load 2.5 times the Safe capacity)	per test	44,717.75
20.6.1.2	Routine test (Test Load 1.5 times the Safe capacity)	per test	16,028.70
20.6.2	Single pile above 50 tonne and upto 100 tonne Safe capacity		
20.6.2.1	Initial test (Test Load 2.5 times the Safe capacity)	per test	49,944.50
20.6.2.2	Routine test (Test Load 1.5 times the Safe capacity)	per test	26,482.20
20.6.3	Group of two or more piles upto 50 tonne Safe capacity		
20.6.3.1	Initial test (Test Load 2.5 times the Safe capacity)	per test	57,494.25
20.6.3.2	Routine test (Test Load 1.5 times the Safe capacity)	per test	33,102.75
20.7	Cyclic vertical load testing of pile in accordance with IS Code of practice 15:2911 (part IV) by Kentledge method including preparation of pile head etc for.		
20.7.1	Single pile		
20.7.1.1	Upto 50 tonne Safe capacity pile	per test	16,028.70
20.7.1.2	Above 50 tonne and upto 100 tonne Safe capacity pile	per test	26,482.20
20.7.2	Group of two or more piles		
20.7.2.1	Upto 400 tonne Safe capacity of group	per test	33,102.75
20.8	Lateral load testing of single pile in accordance with IS Code of practice IS : 2911 (Part IV) for determining safe allowable lateral load on pile :		
20.8.1	Upto 50 tonne capacity pile	per test	16,028.70
20.8.2	Above 50 tonne and upto 100 tonne capacity pile	per test	26,830.65
20.9	Integrity testing of Pile using Low Strain/ Sonic Integrity Test/ Sonic Echo Test method in accordance with IS 14893 including surface preparation of pile top by removing soil, mud, dust & chipping lean concrete lumps etc. and use of computerised equipment and high skill trained personal for conducting the test & submission of results, all complete as per direction of Engineer-in-charge. Note :- The inclusion of the above item in the schedule of work shall be judiciously decided by the technical sanctioning authority, keeping in view the quality control, type of soil strata & importance of the project.	per test	839.75
21	ALUMINIUM WORK		

Item Code	Description	Unit	Justified Rate
21.1	Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular sections/ appropriate Z sections and other sections of approved make conforming to IS: 733 and IS: 1285, fixing with dash fasteners of required dia and size, including necessary filling up the gaps at junctions, i.e. at top, bottom and sides with required EPDM rubber/ neoprene gasket etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, Aluminium snap beading for glazing I paneling, C.P. brass / stainless steel screws, all complete as per architectural drawings and the directions of Engineer-in-charge. (Glazing, paneling and dash fasteners to be paid for separately) :		
21.1.1	For fixed portion		
21.1.1.1	Anodised aluminium (anodised transparent or dyed to required shade according to IS: 1868, Minimum anodic coating of grade AC 15)	kg	367.10
21.1.1.2	Powder coated aluminium (minimum thickness of powder coating 50 micron)	kg	395.15
21.1.1.3	Polyester powder coated aluminium (minimum thickness of polyester powder coating 50 micron)	kg	402.45
21.1.2	For shutters of doors, windows & ventilators including providing and fixing hinges/ pivots and making provision for fixing of fittings wherever required including the cost of EPDM rubber / neoprene gasket required (Fittings shall be paid for separately)		
21.1.2.1	Anodised aluminium (anodised transparent or dyed to required shade according to IS: 1868, Minimum anodic coating of grade AC 15)	kg	434.00
21.1.2.2	Powder coated aluminium (minimum thickness of powder coating 50 micron)	kg	462.05
21.1.2.3	Polyester powder coated aluminium (minimum thickness of polyester powder coating 50 micron)	kg	469.35
21.2	Providing and fixing 12 mm thick pre-laminated particle board flat pressed three layer or graded wood particle board conforming to IS: 12823 Grade I Type II, in panelling fixed in aluminum doors, windows shutters and partition frames with C.P. brass / stainless steel screws etc. complete as per architectural drawings and directions of engineer-in-charge.		
21.2.1	Pre-laminated particle board with decorative lamination on one side and balancing lamination on other side	sqm	801.90
21.2.2	Pre-laminated particle board with decorative lamination on both sides	sqm	789.70
21.3	Providing and fixing glazing in aluminium door, window, ventilator shutters and partitions etc. with EPDM rubber / neoprene gasket etc. complete as per the architectural drawings and the directions of engineer-in-charge . (Cost of aluminium snap beading shall be paid in basic item):		
21.3.1	With float glass panes of 4.0 mm thickness (weight not less than 10kg/sqm)	sqm	824.65
21.3.2	With float glass panes of 5 mm thickness (weight not less than 12.50 kg/sqm)	sqm	1,090.10
21.3.3	With float glass panes of 8 mm thickness (weight not less than 20 kg/sqm)	sqm	1,238.20
21.4	Providing and fixing double action hydraulic floor spring of approved brand and manufacture conforming to IS : 6315, having brand logo embossed on the body / plate with double spring mechanism and door weight upto 125 kg, for doors, including cost of cutting floors, embedding in floors as required and making good the same matching to the existing floor finishing and cover plates with brass pivot and single piece M.S. sheet outer box with slide plate etc. complete as per the direction of Engineer-in-charge.		
21.4.1	With stainless steel cover plate minimum 1.25 mm thickness	each	2,086.30
21.4.2	With brass cover plate minimum 1.25 mm thickness	each	2,225.70

Item Code	Description	Unit	Justified Rate
21.5	Providing and fixing powder coated aluminium work (minimum thickness of powder coating 50 micron) consisting of tee/ angle sections, of approved make conforming to IS : 733 in frames of false ceiling including aluminium angle cleats with necessary C.P. brass/ stainless steel sunk screws, aluminium perimeter angles fixed to wall with stainless steel rawl plugs @ 450 mm centre to centre and fixing the frame work to G.I. level adjusting hangers 6 mm dia. with necessary cadmium plated machine screws all complete as per approved architectural drawings and direction of the Engineer-in- charge (level adjusting hangers, ceiling cleats and expansion hold fasteners to be paid for separately).	kg	599.00
21.6	Providing and fixing 6 mm dia. G.I. level adjusting hangers (upto 1200mm length), fixed to roof slabs by means of ceiling cleats made out of G.I. flat 40x3mm size 60 mm long and stainless steel expandable dash fastener of 12.5 mm dia and 50 mm long, complete as per direction of Engineer-in-charge.	each	59.05
21.7	Providing and fixing machine moulded aluminium covering of approved pattern & design, made out of machine cut aluminium sheet and machine holed for receiving dash fastener, over expansion joints on vertical surfaces/ceiling floors, the fixing on plate in one row on one side of joint only shall be done with stainless steel dash fasteners of 8 mm dia and 75 mm long bolt including providing aluminium washers 2 mm thick & 15 mm dia , at a staggered pitch of 200mm centre to centre including drilling holes in the receiving surface and providing expandable plastic sleeves in holes etc. complete as per direction of Engineer-in-charge.		
21.7.1	Anodised aluminium sheet 2.5mm thick (anodised trans- parent or dyed to required shade according to IS: 1868, Minimum anodic coating of grade AC 15)	kg	508.95
21.7.2	Powder coated aluminium sheet 2.5mm thick (minimum thickness of powder coating 50 micron)	kg	537.00
21.8	Filling the gap in between aluminium frame & adjacent RCC/ Brick/ Stone work by providing weather silicon sealant over backer rod of approved quality as per architectural drawings and direction of Engineer-in-charge complete.		
21.8.1	Upto 5mm depth and 5 mm width	metre	74.00
21.9	Extra for applying additional anodic coating AC 25 instead of AC 15 to aluminium extruded sections.		
21.9.1	For fixed portion	kg	11.60
21.9.2	For shutters of doors, windows & ventilators	kg	11.60
21.10	Providing and fixing double glazed hermetically sealed glazing in aluminium windows, ventilators and partition etc. with 6 mm thick clear float glass both side, having 12 mm air gap, including providing EPDM gasket, perforated aluminium spacers, desiccants, sealant (Both primary and secondary sealant) etc. as per specifications, drawings and direction of Engineer-in-charge complete.	sqm	3,390.60
21.11	Providing and fixing stainless steel (SS 304 grade) adjustable friction windows stays of approved quality with necessary stainless steel screws etc. to the side hung windows as per direction of Engineer- in-charge complete.		
21.11.1	205 X 19 mm	each	250.50
21.11.2	255 X 19 mm	each	282.10
21.11.3	355 X 19 mm	each	247.25
21.11.4	510 X 19 mm	each	642.15
21.11.5	710 X 19 mm	each	1,095.15
21.12	Providing and fixing aluminium tubular handle bar 32 mm outer dia, 3.0 mm thick & 2100 mm long with SS screws etc .complete as per direction of Engineer-in-Charge.		
21.12.1	Anodized (AC 15) aluminium tubular handle bar	each	444.80
21.12.2	Powder coated minimum thickness 50 micron aluminium tubular handle bar	each	488.45

Item Code	Description	Unit	Justified Rate
21.12.3	Polyester powder coated minimum thickness 50 micron aluminium tubular handle bar	each	499.85
21.13	Providing and fixing Brass 100mm mortice latch and lock with 6 levers without pair of handles (best make of approved quality) for aluminium doors including necessary cutting and making good etc. complete.	each	380.40
21.14	Providing and fixing anodised aluminium (anodised transparent or dyed to required shade according to IS: 1868. Minimum anodic coating of grade AC 15) sub frame work for windows and ventilators with extruded built up standard tubular sections of approved make conforming to IS: 733 and IS: 1285, fixed with dash fastener of required dia and size (Dash fastener to be paid for separately).	kg	307.95
21.15	Providing and fixing aluminium casement windows fastener of required length for aluminium windows with necessary screws etc. complete.		
21.15.1	Anodized (AC 15) aluminium	each	63.50
21.15.2	Powder coated minimum thickness 50 micron aluminium	each	68.85
21.15.3	Polyester powder coated minimum thickness 50 micron aluminium	each	67.55
21.16	Providing and fixing aluminium round shape handle of outer dia 100 mm with SS screws etc. complete as per direction of Engineer- in-ch a rge		
21.16.1	Anodized (AC 15) aluminium	each	76.70
21.16.2	Powder coated minimum thickness 50 micron aluminium	each	77.40
21.16.3	Polyester powder coated minimum thickness 50 micron aluminium	each	79.75
21.17	Providing and fixing anodised aluminium grill (anodised transparent or dyed to required shade according to IS: 1868 with minimum anodic coating of grade AC 15) of approved design/pattern, with approved standard section and fixed to the existing window frame with C.P. brass/ stainless steel screws @ 200 mm centre to centre, including cutting the grill to proper opening size for fixing and operation of handles and fixing approved anodised aluminium standard section around the opening, all complete as per requirement and direction of Engineer-in-charge. (Only weight of grill to be measured for payment).	kg	476.80
21.18	Providing and fixing 12mm thick frameless toughened glass door shutter of approved brand and manufacture, including providing and fixing top & bottom pivot & double acting hydraulic floor spring type fixing arrangement and making necessary holes etc. for fixing required door fittings, all complete as per direction of Engineer in charge (Door handle, lock and stopper etc. to be paid separately)	sqm	3,810.05
21.19	Filling the gap in between aluminium/ stone/ wood frame and adjacent RCC/Brick/ Stone/ wood/ Ceramic/ Gypsum work by providing weather/structural non sag elastomeric PU sealant over backer rod of approved quality as per architectural drawings and direction of Engineer-in-charge complete, complying to ASTM C920, DIN 18540- F & ISO 11600		
21.19.1	Upto 5 mm depth and 5 mm width	metre	110.70
21.19.2	Upto 10 mm depth and 10 mm width	metre	150.75
21.19.3	Upto 20 mm depth and 20 mm width	metre	273.65
22	WATER PROOFING		

Item Code	Description	Unit	Justified Rate
22.1	Providing and laying integral cement based treatment for water proofing on horizontal surface at all depth below ground level for under ground structures as directed by Engineer-in-Charge and consisting of : (i) Ist layer of 22 mm to 25 mm thick approved and specified rough stone slab over a 25 mm thick base of cement mortar 1:3 (1 cement : 3 coarse sand) mixed with water proofing compound conforming to IS:2645 in the recommended proportion over the leveling course (leveling course to be paid separately). Joints sealed and grouted with cement slurry mixed with water proofing compound. (ii) 2nd layer of 25 mm thick cement mortar 1:3 (1 cement: 3 coarse sand) mixed with water proofing compound in recommended proportions. (iii) Finishing top with stone aggregate of 10 mm to 12 mm nominal size spreading @ 8 cudm/sqm thoroughly embedded in the 2nd layer.		
22.1.1	Using rough kota stone.	sqm	1,067.30
22.2	Providing and laying integral cement based treatment for water proofing on the vertical surface by fixing specified stone slab 22 mm to 25 mm thick with cement slurry mixed with water proofing compound conforming to IS:2645 in recommended proportions with a gap of 20 mm (minimum) between stone slabs and the receiving surfaces and filling the gaps with neat cement slurry mixed with water proofing compound and finishing the exterior of stone slab with cement mortar 1:3 (1 cement : 3 coarse sand) 20 mm thick with neat cement punning mixed with water proofing compound in recommended proportion complete at all levels and as directed by Engineer-in-charge :		
22.2.1	Using rough Kota stone	sqm	1,400.05
22.3	Providing and laying water proofing treatment to vertical and horizontal surfaces of depressed portions of W.C., kitchen and the like consisting of: (i) Ist course of applying cement slurry @ 4.4 kg/sqm mixed with water proofing compound conforming to IS 2645 in recommended proportions including rounding off junction of vertical and horizontal surface. (ii) IInd course of 20 mm cement plaster 1:3 (1 cement : 3 coarse sand) mixed with water proofing compound in recommended proportion including rounding off junction of vertical and horizontal surface. (iii) IIIrd course of applying blown or residual bitumen applied hot at 1.7 kg. per sqm of area. (iv) IVth course of 400 micron thick PVC sheet. (Overlaps at joints of PVC sheet should be 100 mm wide and pasted to each other with bitumen @ 1.7 kg/sqm).	sqm	535.25
22.4	Providing and Placing in position suitable PVC water stops conforming to IS:12200 for construction/ expansion joints between two RCC members and fixed to the reinforcement with binding wire before pouring concrete etc. complete :		
22.4.1	Serrated with central bulb (225 mm wide, 8-11 mm thick)	metre	245.05
22.4.2	Dumb bell with central bulb (180 mm wide, 8 mm thick)	metre	198.60
22.4.3	Kickers (320 mm wide, 5 mm thick)	metre	198.60
22.5	Providing and laying water proofing treatment in sunken portion of WCs, bathroom etc., by applying cement slurry mixed with water proofing cement compound consisting of applying : (a) First layer of slurry of cement @ 0.488 kg/sqm mixed with water proofing cement compound @ 0.253 kg/ sqm. This layer will be allowed to air cure for 4 hours. (b) Second layer of slurry of cement @ 0.242 kg/sqm mixed with water proofing cement compound @ 0.126 kg/sqm. This layer will be allowed to air cure for 4 hours followed with water curing for 48 hours. The rate includes preparation of surface, treatment and sealing of all joints, corners, junctions of pipes and masonry with polymer mixed slurry.	sqm	400.40

Item Code	Description	Unit	Justified Rate
22.6	Providing and laying water proofing treatment on roofs of slabs by applying cement slurry mixed with water proofing cement compound consisting of applying: (a) after surface preparation, first layer of slurry of cement @ 0.488 kg/sqm mixed with water proofing cement compound @ 0.253 kg/sqm. (b) laying second layer of Fibre glass cloth when the first layer is still green. Overlaps of joints of fibre cloth should not be less than 10 cm. (c) third layer of 1.5 mm thickness consisting of slurry of cement @ 1.289 kg/sqm mixed with water proofing cement compound @ 0.670 kg/sqm and coarse sand @ 1.289 kg/sqm. This will be allowed to air cure for 4 hours followed by water curing for 48 hours. The entire treatment will be taken upto 30 cm on parapet wall and tucked into groove in parapet all around. (d) fourth and final layer of brick tiling with cement mortar (which will be paid for separately. For the purpose of measurement the entire treated surface will be measured.	sqm	475.45
22.7	Providing and laying integral cement based water proofing treatment including preparation of surface as required for treatment of roofs, balconies, terraces etc consisting of following operations: (a) Applying a slurry coat of neat cement using 2.75 kg/sqm of cement admixed with water proofing compound conforming to IS. 2645 and approved by Engineer-in-charge over the RCC slab including adjoining walls upto 300 mm height including cleaning the surface before treatment. (b) Laying brick bats with mortar using broken bricks/brick bats 25 mm to 115 mm size with 50% of cement mortar 1:5 (1 cement : 5 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer- in-charge over 20 mm thick layer of cement mortar of mix 1:5 (1 cement :5 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer- in-charge to required slope and treating similarly the adjoining walls upto 300 mm height including rounding of junctions of walls and slabs. (c) After two days of proper curing applying a second coat of cement slurry using 2.75 kg/ sqm of cement admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge. (d) Finishing the surface with 20 mm thick jointless cement mortar of mix 1:4 (1 cement :4 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge including laying glass fibre cloth of approved quality in top layer of plaster and finally finishing the surface with trowel with neat cement slurry and making pattern of 300x300 mm square 3 mm deep. (e) The whole terrace so finished shall be flooded with water for a minimum period of two weeks for curing and for final test."All above operations to be done in order and as directed and specified by the Engineer-in-Charge :		
22.7.1	With average thickness of 120 mm and minimum thickness at khurra as 65 mm.	sqm	1,152.05
22.8	Providing and laying four courses water proofing treatment with bitumen felt over roofs consisting of first and third courses of blown bitumen 85/25 or 90/15 conforming to IS : 702 applied hot @ 1.45 Kg per square metre of area for each course, second course of roofing felt type 3 grade-I (hessian based self finished bitumen felt) and fourth and final course of stone grit 6 mm and down size or pea sized gravel spread at 6 cubic decimeter per square metre, including preparation of surface but excluding grading complete with :		
22.8.1	Bitumen felt (hessian base) type 3 grade I conforming to IS : 1322	sqm	350.75
22.9	Providing and laying six courses water proofing treatment with bitumen felt over roofs consisting of first, third and fifth course of blown bitumen 85/25 or 90/15 conforming to IS : 702 applied hot @ 1.45, 1.20 and 1.45 Kg per square metre of area respectively, second and fourth courses of roofing felt type 3 grade I conforming to IS : 1322 (Hessian based self finished bitumen felt) , sixth and final course of stone grit 6 mm and down size or pea sized gravel spread at 6 cubic decimeter per sqm including preparation of surface but excluding grading, complete.	sqm	549.55

Item Code	Description	Unit	Justified Rate
22.10	Providing and laying six courses water proofing treatment with bitumen felt over roofs consisting of first, third and fifth courses of blown or / and residual bitumen applied hot at 1.45, 1.20 and 1.70 kg per square metre of area respectively, second and fourth courses of roofing felt type 2 grade I (fibre base self finished bitumen felt) six and final courses of stone grit 6 mm and down size or pea sized gravel spread at 6 cubic decimeter per sqm including preparation of surface, excluding grading, complete.	sqm	623.25
22.11	Providing and laying six courses water proofing treatment with bitumen felt over roofs consisting of first, third and fifth courses of blown or / and residual bitumen applied hot at 1.45, 1.20 and 1.70 kg per square metre of area respectively, second and fourth courses of roofing felt type 2 grade II (glass fibre base self finished bitumen felt) and sixth and final course of stone grit 6 mm and down size or pea sized gravel spread at 6 cubic decimeter per sqm including preparation of surface but excluding grading, complete.	sqm	623.65
22.12	Supplying and applying bituminous solution primer on roof and / or wall surface at 0.24 litre per sqm.	sqm	39.15
22.13	Deduct for omitting in water proofing treatment final course of spreading stone grit 6 mm down size or pea sized gravel :		
22.13.1	at 6 cudm per sqm	sqm	13.70
22.13.2	at 8 cudm per sqm	sqm	17.25
22.14	Grading roof for water proofing treatment with		
22.14.1	Cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size)	cum	6,616.35
22.14.2	Cement mortar 1:3 (1 cement : 3 coarse sand)	cum	10,850.10
22.14.3	Cement mortar 1:4 (1cement : 4 coarse sand)	cum	9,919.90
22.22	Providing and mixing integral crystalline admixture for water proofing treatment to RCC structures like basement raft, retaining walls, reservoir, sewage & water treatment plant, tunnels / subway and bridge deck etc. at the time of transporting of concrete into the drum of the ready-mix truck , using integral crystalline admixture @0.80% (minimum) to the weight of cement content per cubic meter of concrete) or higher as recommended by the manufacturer's specification in reinforced cement concrete at site of work. The material shall meet the requirements as specified in ACI-212-3R- 2010 i.e. by reducing permeability of concrete by more than 90%, compared with control concrete as per DIN 1048 and resistant to 16 bar hydrostatic pressure. The crystalline admixture shall be capable of self-healing of cracks up to a width of 0.50mm. The work shall be carried out all complete as per specification and the direction of the Engineer-in-charge. The product performance shall carry guarantee for 10 years against any leakage.	kg	288.55
22.22A	Providing and applying fibre reinforced elastomeric liquid water proofing membrane with resilient acrylic polymers having Sun Reflectivity Index (SRI) of 105 on top of concrete roof in three coats @10.76 litre/ 10 sqm. One coat of self-priming of elastomeric waterproofing liquid (dilution with water in the ratio of 3:1) and two coats of undiluted elastomeric waterproofing liquid (dry film thickness of complete application/system not less than 500 microns). The operation shall be carried out after scrapping and properly cleaning the surface to remove loose particles with wire brushes, complete in all respect as per the direction of Engineer-in-Charge.	sqm	393.95

Item Code	Description	Unit	Justified Rate
22.23	Providing and applying integral crystalline slurry of hydrophilic in nature for waterproofing treatment to the RCC structures like retaining walls of the basement, water tanks, roof slabs, podiums, reservoir, sewage & water treatment plant, tunnels / subway and bridge deck etc., prepared by mixing in the ratio of 5 : 2 (5 parts integral crystalline slurry : 2 parts water) for vertical surfaces and 3 : 1 (3 parts integral crystalline slurry : 1 part water) for horizontal surfaces and applying the same from negative (internal) side with the help of synthetic fiber brush. The material shall meet the requirements as specified in ACI- 212-3R-2010 i.e by reducing permeability of concrete by more than 90% compared with control concrete as per DIN 1048 and resistant to 16 bar hydrostatic pressure on negative side. The crystalline slurry shall be capable of self-healing of cracks up to a width of 0.50mm. The work shall be carried out all complete as per specification and the direction of the engineer-in-charge. The product performance shall carry guarantee for 10 years against any leakage.		
22.23.1	For vertical surface two coats @ 0.70 kg per sqm	sqm	352.70
22.23.2	For horizontal surface one coat @1.10 kg per sqm.	sqm	270.45
22.23A	Providing & Applying polymer modified, flexible cementitious negative side waterproofing coating with elastic waterproofing polymers on interior wall plaster surface in three coats @14.35 kg /10 sqm. one coat of self priming of cementitious waterproofing polymer(dilution with water in the ratio of 1:1) and two coats of cementitious waterproofing polymer (dilution with water in the ratio of 3:1) after scrapping and properly cleaning the surface to remove pre-existing paint film & loose particles till plaster is visible, complete in all respect as per the direction of Engineer-in-Charge.	sqm	444.50
22.24	Providing and applying integral crystalline (dry shake) of hydrophilic in nature for waterproofing treatment to the RCC structures like basement raft, foundation slab, sewage & water treatment plant slab, warehouses floor, parking structures and water tank base slab etc. sprinkled @0.60kg per sqm or higher as recommended by the manufacturer's specification over the lean concrete of above cited structures. The material shall meet the requirements as specified in ACI-212-3R-2010 i.e. by reducing permeability of concrete by more than 85%, compared control concrete as per DIN 1048 and resistant to 16 bar hydrostatic pressure on negative side. The crystalline dry- shake shall be capable of self-healing of cracks up to a width of 0.50mm. The work shall be carried out all complete as per specification and the direction of the Engineer-in-charge. The product performance shall carry guarantee for 10 years against any leakage.	sqm	230.70
22.24A	Providing & Applying high quality acrylic modified resin based texture of Dholpur/Red sand stone Pattern with anti algae and UV resistance properties to be applied as intermediate finish in desired pattern @ 43.04 kgs/10 sqm to form film of 1- 1.5 mm thickness after scrapping and properly cleaning the surface to remove loose particles from the plaster surface, followed by top coating with Premium Acrylic Smooth exterior paint with Silicone additives of required shade by two or more coats @ 1.43 litres/10 sqm, complete as the direction of Engineer -in-Charge.	sqm	396.60
22.25	Providing and applying crystalline mortar by mixing in the ratio of 4.5 : 1 (4.5 parts crystalline mortar : 1 part water) for the treatment of faulty construction joints, cracks, tie rod holes and spalled & honeycombed surface of RCC underground structures like basement, water tanks, bridge deck etc. to ensure water tightness. The crystalline mortar shall conform to the EN 1504-3 having compressive strength Class R4 \geq 45 MPa and adhesive bond strength Class R3 \geq 1.5 MPa. The work shall be carried out all complete as per specification and the direction of the engineer-in-charge. The product performance shall carry guarantee for 10 years against any leakage.		

Item Code	Description	Unit	Justified Rate
22.25.1	For sealing cracks and faulty construction joints, routed out/making U-shape groove size 25x25mm and then primed the area with integral crystalline slurry @0.05kg/ running metre and while the surface is tacky filled the groove upto surface with crystalline mortar @1.50kg/ running metre. Once crystalline mortar is touch dry then finally applied two coats of integral crystalline slurry @0.05kg/running metre per coat.	metre	407.70
22.25.2	For patching of tie rod holes, prepared tie rod hole surface and then primed the area with integral crystalline slurry @0.070kg/sqm and while the surface is tacky repair and then filled the tie rod holes with crystalline mortar@0.040kg per hole. The crystalline mortar should be tightly rodded into tie rod holes or packed tightly (For 25x25x25 mm tie rod hole, use 0.040kg to fill the hole)	each hole	17.35
22.26	Providing and applying of swellable type water stop tape, 19mm x 25mm thick in linear meter (expansive nature) for construction joints treatment of RCC structure such as raft slab, retaining walls, water storage tank and at the junctions of raft slab with the retaining walls etc.. After cleaning the surface, one coat of required primer for swellable water stop tape shall be applied throughout the length of the joint @3.78 litre per 240 running meter. Over the primed surface swellable type water stop tape shall be placed. The work shall be carried out all complete as per specification and the direction of the Engineer-In-Charge. The product performance shall carry guarantee for 10 years against any leakage,	metre	430.10
23	RAIN WATER HARVESTING & TUBEWELLS		
23.1	Boring/drilling bore well of required dia for casing/ strainer pipe, by suitable method prescribed in IS: 2800 (part I), including collecting samples from different strata, preparing and submitting strata chart/ bore log, including hire & running charges of all equipments, tools, plants & machineries required for the job, all complete as per direction of Engineer-in-charge, upto 90 metre depth below ground level.		
23.1.1	All types of soil		
23.1.1.1	300 mm dia	metre	483.80
23.1.1.2	350 mm dia	metre	529.15
23.1.1.3	400 mm dia	metre	677.30
23.1.2	Rocky strata including Boulders		
23.1.2.1	300 mm dia	metre	1,142.20
23.1.2.2	350 mm dia	metre	1,201.35
23.1.2.3	400 mm dia	metre	1,407.45
23.2	Boring/drilling bore well of required dia for casing/ strainer pipe, by suitable method prescribed in IS: 2800 (part I), including collecting samples from different strata, preparing and submitting strata chart/ bore log, including hire & running charges of all equipments, tools, plants & machineries required for the job, all complete as per direction of Engineer -in-charge, beyond 90 metre & upto 150 metre depth below ground level.		
23.2.1	All types of soil		
23.2.1.1	300 mm dia	metre	564.40
23.2.1.2	350 mm dia	metre	627.15
23.2.1.3	400 mm dia	metre	846.65
23.2.2	Rocky strata including Boulders		
23.2.2.1	300 mm dia	metre	1,248.75
23.2.2.2	350 mm dia	metre	1,300.60
23.2.2.3	400 mm dia	metre	1,650.20
23.3	Supplying, assembling, lowering and fixing in vertical position in bore well, unplasticized PVC medium well casing (CM) pipe of required dia, conforming to IS: 12818, including required hire and labour charges, fittings & accessories etc. all complete, for all depths, as per direction of Engineer -in-charge.		

Item Code	Description	Unit	Justified Rate
23.3.1	100 mm nominal size dia	metre	478.80
23.3.2	150 mm nominal size dia	metre	578.90
23.3.3	200 mm nominal size dia	metre	825.00
23.4	Supplying, assembling, lowering and fixing in vertical position in bore well unplasticized PVC medium well screen (RMS) pipes with ribs, conforming to IS: 12818, including hire & labour charges, fittings & accessories etc. all complete, for all depths, as per direction of Engineer-in-charge.		
23.4.1	100 mm nominal size dia	metre	502.05
23.4.2	150 mm nominal size dia	metre	590.55
23.4.3	200 mm nominal size dia	metre	952.85
23.5	Supplying, filling, spreading & leveling stone boulders of size range 5 cm to 20 cm, in recharge pit, in the required thickness, for all leads & lifts, all complete as per direction of Engineer-in-charge.	cum	1,094.85
23.6	Supplying, filling, spreading & leveling gravels of size range 5 mm to 10 mm, in the recharge pit, over the existing layer of boulders, in required thickness, for all leads & lifts, all complete as per direction of Engineer-in-charge.	cum	1,100.65
23.7	Supplying, filling, spreading & leveling coarse sand of size range 1.5 mm to 2 mm in recharge pit, in required thickness over gravel layer, for all leads & lifts, all complete as per direction of Engineer -in-charge.	cum	1,100.65
23.8	Gravel packing in tubewell construction in accordance with IS: 4097, including providing gravel fine/ medium/ coarse, in required grading & sizes as per actual requirement, all complete as per direction of Engineer-in-charge.	cum	1,241.30
23.9	Providing and fixing factory made precast RCC perforated drain covers, having concrete of strength not less than M-25, of size 1000 x 450x50 mm, reinforced with 8 mm dia four nos longitudinal & 9 nos cross sectional T.M.T. hoop bars, including providing 50 mm dia perforations @ 100 to 125 mm c/c, including providing edge binding with M.S. flats of size 50 mm x 1.6 mm complete, all as per direction of Engineer-in-charge.	each	1,053.25
23.10	Supplying, assembling, lowering and fixing in vertical position in bore well, ERW (Electric Resistance Welded) FE 410 mild steel screwed and socketed/plain ended casing pipes of required dia, conforming to IS: 4270, of reputed & approved make, including painted with outside surface with two coats of anticorrosive paint of approved brand and manufacture, including required hire & labour charges, fittings & accessories, all complete, for all depths, as per direction of Engineer-in-charge.		
23.10.1	100 mm nominal size dia having minimum wall thickness 5.00 mm	metre	1,005.40
23.10.2	150 mm nominal size dia having minimum wall thickness 5.00 mm	metre	1,440.00
23.10.3	200 mm nominal size dia having minimum wall thickness 5.40 mm	metre	1,790.05
23.11	Supplying, assembling, lowering and fixing in vertical position in bore well, ERW (Electric Resistance Welded) FE 410 plain slotted (having slot of size 1.6/3.2 mm) mild steel threaded and socketed/ plain bevel ended pipe (type A) of required dia, conforming to IS: 8110, of reputed and approved make, having wall thickness not less than 5.40 mm, including painted with outside surface with two coats of anticorrosive bitumestic paint of approved brand and manufacture, including hire & labour charges, fittings & accessories, all complete, for all depths, as per direction of Engineer -in-charge.		
23.11.1	100 mm nominal size dia	metre	1,079.80
23.11.2	150 mm nominal size dia	metre	1,539.20
23.11.3	200 mm nominal size dia	metre	1,888.20

Item Code	Description	Unit	Justified Rate
23.12	Development of tube well in accordance with IS : 2800 (part I) and IS: 11189, to establish maximum rate of usable water yield without sand content (beyond permissible limit), with required capacity air compressor, running the compressor for required time till well is fully developed, measuring yield of well by "V" notch method or any other approved method, measuring static level & draw down etc. by step draw down method, collecting water samples & getting tested in approved laboratory, i/c disinfection of tubewell, all complete, including hire & labour charges of air compressor, tools & accessories etc., all as per requirement and direction of Engineer-in-charge.	hour	795.90
23.13	Providing and fixing suitable size threaded mild steel cap or spot welded plate to the top of bore well housing/ casing pipe, removable as per requirement, all complete for borewell of:		
23.13.1	100 mm dia	each	164.65
23.13.2	150 mm dia	each	182.95
23.13.3	200 mm dia	each	243.90
23.14	Providing and fixing M.S. clamp of required dia to the top of casing/ housing pipe of tubewell as per IS: 2800 (part I), including necessary bolts & nuts of required size complete.		
23.14.1	100 mm clamp	each	1,277.60
23.14.2	150 mm clamp	each	1,350.70
23.14.3	200 mm clamp	each	1,533.10
23.15	Providing and fixing Bail plug/ Bottom plug of required dia to the bottom of pipe assembly of tubewell as per IS:2800 (part I).		
23.15.1	100 mm dia	each	198.15
23.15.2	150 mm dia	each	244.60
23.15.3	200 mm dia	each	267.85
24	CONSERVATION OF HERITAGE BUILDINGS		
24.1	Raking out joints of stone masonry surface to the required width and depth, with due care and precaution, by mechanical / manual means, including preparing and cleaning the surface for re-pointing/ refilling of joints, including disposal of rubbish to the dumping ground within 50 metre lead.	sqm	42.30
24.2	Providing and fixing double scaffolding system (cup lock type) on the exterior side of building/structure, upto 25 metre height, above ground level, including additional rows of scaffolding in stepped manner as per requirement of site, made with 40mm dia M.S. tube, placed 1.5 metre centre to centre, horizontal & vertical tubes joint with cup & lock system with M.S. Tubes, M.S. tube chalis, M.S. clamps and staircase system in the scaffolding for working platform etc. and maintaining it in a serviceable condition for execution of work of cleaning and/ or pointing and/ or applying chemical and removing it thereafter. The scaffolding system shall be stiffened with bracings, runners, connecting with the building etc, wherever required, if feasible, for inspection of work at required locations with essential safety features for the workmen etc., complete as per directions and approval of Engineer-in-charge. Note:- (1) The elevational area of the scaffolding shall be measured for payment purpose. (2) The payment will be made once only for execution of all items for such works.	sqm	221.10

Item Code	Description	Unit	Justified Rate
24.3	Cleaning the sand stone surface and removing dirt, dust, bird dropping, grease, oil, algae, fungus, monkey beats, vegetable growth etc., including providing, applying and washing the surface with liquid Ammonia Chemical of 5% solution and other chemical cleaning agent as approved by Archaeological Survey of India/ Engineer-in-charge, of approved brand and manufacturer, with the help of required scrubbers and also cleaning with machine operated water jet mixed with desired quantity of fine silica where ever required, without causing any scratching/ damage to the stone surface and finally washing the surface with clean water with the help of pressure jet machine, complete in all respect, including taking all precautions to safeguard ventilators, windows, doors etc. by suitable covering so as to avoid any damage to the building/structure, all as per direction of Engineer- in-charge (The rate is inclusive of all materials & labours involved except scaffolding).	sqm	127.80
24.4	Providing and applying antifungal wash treatment using 3% solution of sodium pentachlorophenate, of reputed brand and manufacturer, on cleaned sand stone surface at desired locations as per direction of Engineer-in-charge (The rate is inclusive of all materials & labours involved except scaffolding).	sqm	47.55
24.5	Ruled / Flush pointing on Red sand stone masonry surface with lime, surkhi and marble dust mortar in the ratio of 1:1.5:1/2 {One lime: 1.5 surkhi (50% red and 50% light yellow surkhi) : 1/2 marble dust}. (The rate is inclusive of all materials & labours involved except scaffolding).	sqm	229.70
24.6	Ruled/ Flush pointing on White sand stone masonry surface with lime, surkhi and marble dust mortar in the ratio of 1:1.5:1/2 {One lime : 1.5 surkhi (15% dark red and 85% light yellow surkhi) : 1/2 marble dust}. (The rate is inclusive of all materials & labours involved except scaffolding).	sqm	229.70
24.7	Applying two or more coat of Ethyl Silicate chemical as approved by Archaeological Survey of India/ Engineer-in-charge, of approved brand and manufacturer, with brush or spray on the existing stone masonry surface till there is no further absorption of chemical by stone surface, including protecting the applied surface from direct sunlight by suitable means during application, all complete as per direction of the Engineer-in-Charge (The rate is inclusive of all materials & labours involved except scaffolding).	sqm	236.35
24.8	Applying breathable, non-reactive, antifungal, and water repellent Silane/Siloxane chemical as approved by Archaeological Survey of India/ Engineer-in-charge, of approved brand and manufacture, diluted with solvent mineral Turpentine oil in the ratio of 1:12 (One part of approved chemical :12 Part of Turpentine oil), on the existing sand stone masonry surface with two or more coats to give uniform application of chemical on the surface, all complete as per direction of Engineer-In-charge (The rate is inclusive of all materials & labours involved except scaffolding).	sqm	73.45
25	STRUCTURAL GLAZING ALUMINIUM COMPOSITE PANEL		
25.1	Providing and supplying aluminium extruded tubular and other aluminium sections as per the architectural drawings and approved shop drawings , the aluminium quality as per grade 6063 T5 or T6 as per BS 1474, including super durable powder coating of 60-80 microns conforming to AAMA 2604 of required colour and shade as approved by the Engineer-in-Charge. (The item includes cost of material such as cleats, sleeves, screws etc. necessary for fabrication of extruded aluminium frame work. Nothing extra shall be paid on this account). The weight of aluminium extruded section shall be taken for purpose of payment.	kg	321.60

Item Code	Description	Unit	Justified Rate
25.2	<p>Designing, fabricating, testing, protection, installing and fixing in position semi (grid) unitized system of structural glazing (with open joints) for linear as well as curvilinear portions of the building for all heights and all levels, including:</p> <p>(a) Structural analysis & design and preparation of shop drawings for the specified design loads conforming to IS 875 part III (the system must pass the proof test at 1.5 times design wind pressure without any failure), including functional design of the aluminum sections for fixing glazing panels of various thicknesses, aluminium cleats, sleeves and splice plates etc. gaskets, screws, toggles, nuts, bolts, clamps etc., structural and weather silicone sealants, flashings, fire stop (barrier)-cum-smoke seals, microwave cured EPDM gaskets for watertightness, pressure equalisation & drainage and protection against fire hazard including:</p> <p>(b) Fabricating and supplying serrated M.S. hot dip galvanised / Aluminium alloy of 6005 T5 brackets of required sizes, sections and profiles etc. to accommodate 3 Dimensional movement for achieving perfect verticality and fixing structural glazing system rigidly to the RCC/ masonry/ structural steel framework of building structure using stainless steel anchor fasteners/bolts, nylon separator to prevent bimetallic contacts with nuts and washers etc. of stainless steel grade 316, of the required capacity and in required numbers.</p> <p>(c) Providing and filling, two part pump filled, structural silicone sealant and one part weather silicone sealant compatible with the structural silicone sealant of required bite size in a clean and controlled factory / work shop environment, including double sided spacer tape, setting blocks and backer rod, all of approved grade, brand and manufacture, as per the approved sealant design, within and all around the perimeter for holding glass.</p> <p>(d) Providing and fixing in position flashings of solid aluminium sheet 1 mm thick and of sizes, shapes and profiles, as required as per the site conditions, to seal the gap between the building structure and all its interfaces with curtain glazing to make it watertight.</p> <p>(e) Making provision for drainage of moisture/ water that enters the curtain glazing system to make it watertight, by incorporating principles of pressure equalization, providing suitable gutter profiles at bottom (if required), making necessary holes of required sizes and of required numbers etc. complete. This item includes cost of all inputs of designing, labour for fabricating and installation of aluminium grid, installation of glazed units, T&P, scaffolding and other incidental charges including wastages etc., enabling temporary structures and services, cranes or cradles etc. as described above and as specified. The item includes the cost of getting all the structural and functional design including shop drawings checked by a structural designer.</p>	sqm	2,701.05
25.3	<p>Providing, assembling and supplying vision glass panels (IGUs) comprising of hermetically-sealed 6-12- 6 mm insulated glass (double glazed) vision panel units of size and shape as required and specified, comprising of an outer heat strengthened float glass 6mm thick, of approved colour and shade with reflective soft coating on surface # 2 of approved colour and shade, an inner Heat strengthened clear float glass 6mm thick, spacer tube 12mm wide, dessicants, including primary seal and secondary seal (structural silicone sealant) etc. all complete for the required performances, as per the Architectural drawings, as per the approved shop drawings, as specified and as directed by the Engineer-in-Charge. The IGUs shall be assembled in the factory/ workshop of the glass processor. (Payment for fixing of IGU Panels in the curtain glazing is included in cost of item No.25.2) For payment, only the actual area of glass on face # 1 of the glass panels (excluding the areas of the grooves and weather silicone sealant) provided and fixed in position, shall be measured in sqm. (i) Coloured tinted float glass 6mm thick substrate with reflective soft coating on face # 2, + 12mm Airgap + 6mm Heat Strengthened clear Glass of approved make having properties as visible Light transmittance (VLT) of 25 to 35 %, Light reflection internal 10 to 15%, light reflection external 10 to 20%, shading coefficient (0.25- 0.28) and U value of 3.0 to 3.3 W/m² degree K etc. The properties of performance glass shall be decided by technical sanctioning authority as per the site requirement.</p>	sqm	2,932.10

Item Code	Description	Unit	Justified Rate
25.4	Extra for openable side / top hung vision glass panels (IGUs) including providing and supplying at site all accessories and hardwares for the openable panels as specified and of the approved make such as heavy duty stainless steel friction hinges, min 4 -point cremonelocking sets with stainless steel plates, handles, buffers etc. including necessary stainless steel screws/ fasteners, nuts, bolts, washers etc. all complete as per the Architectural drawings, as per the approved shop drawings, as specified and as directed by the Engineer- in-Charge.	sqm	2,872.70
25.5	Providing, fabricating and supplying shadow box of required size and shape, for fixing in the spandrel portion of the structural glazing, in linear as well as curvilinear portions of the building by providing semi-rigid, inorganic, non-combustible fibre glass wool insulation 50 mm thick, conforming to IS: 8183 and BS: 3958 Part 5. The insulation layer shall have facing (factory bonded on surface # 1 of the fibreglass insulation layer), of black non-woven fibre glass tissue of nominal thickness 0.5 mm and nominal mass not less than 60 gm /sqm, made of randomly oriented glass fibres distributed in a binder by a wet-lay process including fixing 1.5 mm thick solid aluminum sheet backing using, 6 mm thick cement board including SS rivets, nuts, bolts, washers etc complete.	sqm	1,696.60
25.6	Providing and supplying Spandrel Glass Panels comprising of 6 mm thick heat strengthened monolithic float glass of approved colour and shade with reflective soft coating on surface # 2 of approved colour and shade so as to match the colour and shade of the IGUs in the vision panels etc. ,all complete for the required performances as specified, as per the Architectural drawings, as per the approved shop drawings, as specified, and as directed by the Engineer- in-Charge. For payment, only the actual area of glass on face # 1 of the glass panels (but excluding the area of grooves and weather silicone sealant) provided and fixed in position, shall be measured in sqm. (Payment for fixing of Spandrel Glass Panels in the curtain glazing is included in cost of relevant Item*)."(i) Coloured tinted float glass 6mm thick substrate with reflective soft coating on face # 2, having properties as visible Light transmittance (VLT) of 25 to 35 %, Light reflection internal 10 to 15%, light reflection external 10 to 20 %, shading coefficient (0.25- 0.28) and U value of 3.0 to 3.3 W/m ² K etc. .The properties of performance glass shall be decided by technical sanctioning authority as per the site requirement.	sqm	1,921.60
25.8	Design supply & installation of suspended Spider Glazing system designed to withstand the wind pressure as per IS 875 (Part-III). The Suspended System held with Spider Fittings of SS-316 Grade Steel of approved manufacturer with glass panel having 12 mm thick clear toughened glass held together with SS-316 Grade Stainless steel Spider & bolt assembly with laminated glass fins 21 mm thick. The Glass fins and glass panel assembly shall be connected to Slab/beams by means of SS- 316 Grade stainless steel brackets & Anchor bolts and at the bottom using SS channel of 50x25x2mm using fastener & anchor bolts, non staining weather sealants of approved make, Teflon/ nylon bushes and separators to prevent bi-metallic contacts, all complete to perform as per specification and approved drawings. The complete system to be designed to accommodate thermal expansion & seismic movements etc. The joints between glass panels (6 to 8 mm) and gaps at the perimeter & in U channel of the assembly to be filled with non staining weather sealant, so as to make the entire system fully water proof & dust proof. The rate shall include all design, Engineering and shop drawing including approval from structural designer, labour, T&P, scaffolding, other incidental charges including wastage, enabling temporary services all fitting fixers nut bolts, washer, Buffer plates, fastener, anchors, SS channel laminated glass etc. all complete. For the purpose of payment, actual elevation area of Glazing including thickness of joints and the portion of Glass panel inside the SS channel shall be measured.	sqm	7,144.75
26	NEW TECHNOLOGIES AND MATERIALS		

Item Code	Description	Unit	Justified Rate
26.1	Providing & fixing in position Phenol bonded Bamboowood flooring with planks of sizes 14mm thick, minimum 1800mm length and minimum 100 mm wide, in approved colour, texture and finish, having Performance Appraisal Certificate (PAC) issued by Building Materials & Technology Promotion Council (BMTPC). The flooring shall be fixed with tongue and groove interlocking system, with underlayment of 4mm thick expanded polyethylene foam sheets having density 40kg/cum, over prepared surface with necessary quarter round planks of size 1900mm x 18mm and door reducer of size 1900mm x 44mm, wherever required. The bamboowood planks shall have minimum density of 1000 Kg/cum & minimum Hardness 1000 Kgf. with Eco friendly UV coating, all complete as per direction of the Engineer-in-charge.	sqm	4,585.55
26.2	Providing & fixing in position Phenol bonded Bamboo wood in wall skirting with planks of sizes 14mm thick, 1900mm length (minimum) and 85mm wide(minimum), in approved colour, texture and finish, having Performance Appraisal Certificate (PAC) issued by Building Materials & Technology Promotion Council (BMTPC). The skirting shall be fixed with SS screws & rawl plugs, over underlayment of 4mm thick, expanded polyethylene foam sheets having 40kg/cum density over prepared surface. The bamboowood planks shall have minimum density of 1000Kg/cum & minimum Hardness 1000 Kgf. with Eco friendly UV coating, all complete as per direction of the Engineer in-charge.	sqm	4,486.45
26.3	Providing & fixing in position Phenol bonded Bamboowood wall cladding at all height with planks of sizes 10mm thick, minimum 1800mm length and minimum 100 mm wide, in approved colour, texture and finish, having Performance Appraisal Certificate (PAC) issued by Building Materials & Technology Promotion Council (BMTPC), with necesasary profiled edges fixed with 40mm SS screws 5 nos in each tile to frame work made of second class teak wood of size 20x15 mm in centre of each tile and bottom and top of work height, 40x15mm placed at ends of each tile. The cladding shall be laid over backlayment of 1.00 mm thick expanded polyethylene foam of density 40kg/cum in two layers, first layer on wall surface before fixing wooden frame and second layer on frame under cladding. The bamboowood planks shall have minimum density of 1000 Kg/cum & minimum Hardness 1000 Kgf. with Eco friendly UV coating, all complete as per direction of the Engineer in-charge.	sqm	4,852.55
26.4	Providing & fixing in position Phenol bonded Bamboowood panelled or panelled and glazed shutters for doors windows, clerestorey windows with pre-molded minimum 30mm thick planks, in approved colours, texture & finish. It shall have 10mm wide, 25mm deep grove to fit in panels.The bamboo wood shall have minimum density of 1000 Kg/cum, minimum Hardness 1000 Kgf. All styles and rails shall have profiled interlocking system locked in place by bamboo pins, all complete as per direction of Engineer in charge. (The panelling will be paid for separately).	sqm	4,743.30
26.5	Providing & fixing in position Phenol bonded Bamboo wood panelling of 10mm thick, in 25 to 40 mm thick panelled or panelled & glazed shutters for doors, windows, clerestorey windows, in approved colour, texture & finish. The bamboowood planks shall have minimum density of 1000 Kg/cum & minimum Hardness 1000 Kgf. The panels shall have profiled interlocking system locked in place with bamboo pins all complete as per direction of the Engineer in-charge. (area of opening for panel inserts excluding portion inside grooves or rebates to be measured)	sqm	3,055.80
26.6	Providing & fixing in position 65 mm thick factory made door frame of Phenol bonded Bamboo wood (superior class, interior use), in approved colour, texture and finish.The bamboo wood shall have minimum density of 1000 Kg/cum, minimum hardness 1000 Kgf. The door frame shall have tenon & mortise interlocking system, to be fixed to the wall with 100 mm size G.I screws all a complete as per direction of Engineer-in charge.	cudm	220.35

Item Code	Description	Unit	Justified Rate
26.6A	Providing, erecting, laying and fixing in position in 3.5 to 4 mm thick bamboo mat corrugated sheet (BMCS) as per IS: 15476-2004 in roofing with self drilling screws along with EPDM washers complete or with galvanized iron J or L hooks 8mm dia G.I. plain and bitumen washers etc, all complete as per direction of Engineer-in-Charge.	sqm	4,494.35
26.6B	Providing and fixing in position ridges of 3.5 to 4 mm thick bamboo mat ridge cap (BMRC) as per IS: 15476-2004 in roofing with self drilling screws along with EPDM washers complete or with galvanized iron J or L hooks 8mm dia G.I. plain and bitumen washers etc, all complete as per direction of Engineer-in-Charge.	metre	3,598.30
26.6C	Providing and fixing at all height false ceiling of 4mm thick phenol bonded Bamboo Mat board (595x595mm) conforming to IS:13958- 1994 including providing and fixing of frame work made of GI angle 25x25x0.4 mm thick all around suitably fixed to wall with the help of dash fastener and hanger frame (600x600 c/c) made GI slotted Tee having powder coating on bottom side (30x25x0.3 mm thick for main member & 25x25x0.3 mm for cross member) connected to ceiling with 2.64mm GI wire and anchor fastener at every junction and also including cost of making openings for light fittings, grills, diffusers, cut outs made with frame of perimeter channels suitably fixed all complete as per direction of Engineer-in-charge.	sqm	2,863.70
26.6D	Providing and fixing at Bamboo Mat board conforming to IS:13958- 1994 for partition to frame by bucking or studding with screws etc. complete (Frames, backing or studding to be paid separately)		
26.6D.1	3mm thickness	sqm	2,085.05
26.6D.2	4mm thickness	sqm	2,394.90
26.6D.3	6mm thickness	sqm	2,863.30
26.6D.4	9mm thickness	sqm	3,641.60
26.6D.5	12mm thickness	sqm	4,191.75
26.6E	Providing and fixing at all height wall panelling with phenol bonded Bamboo Mat board conforming to IS:13958-1994 including providing and fixing to frame work made of 50mm x 50mm hardwood plugs including cutting brick work and fixing in cement mortar and making good the wall etc. and also providing and fixing wooden moulded corner beading of triangular shape to the junction of panelling etc. with iron screws all complete as per direction of Engineer-in-Charge.		
26.6E.1	9mm thickness	sqm	3,845.20
26.6E.2	12mm thickness	sqm	4,396.80
26.7	Providing and fixing 50 mm thick extruded polystyrene rigid insulation board of required size between cavity wall, complying with ISO 4898:2008 & ASTM C 578-08b - type VI, having thermal conductivity of 0.0289 W/m K as per ASTM C 578 (measured as per IS 3346), compressive strength of > 350 kPa listed as per ASTM D 1621, density of 34-36 kg/m ³ as per ASTM D 1622, water absorptions ? 1% by volume as per ASTM D 2842, oxygen index of 24.1 to 28.1 listed as per ASTM D 2863, cell size 0.4 mm of dia (max) as per ASTM D 3576. Fire retardent property as per DIN 4102, Part 1 of class B2 and as per ASTM E84 class A, fixed with suitable water based adhesive and fastener, complete in all respect as per the direction of Engineer-in-Charge.	sqm	730.40
26.8	Providing and fixing 50 mm thick extruded polystyrene rigid insulation board of required size underdeck on ceiling surface, complying with ISO 4898:2008 & ASTM C 578-08b - type VI, having thermal conductivity of 0.0289 W/m K as per ASTM C 578 (measured as per IS 3346), compressive strength of > 350 kPa listed as per ASTM D 1621, density of 34-36 kg/cum as per ASTM D 1622, water absorptions ? 1% by volume as per ASTM D 2842, oxygen index of 24.1 to 28.1 listed as per ASTM D 2863, cell size 0.4 mm of dia (max) as per ASTM D 3576. Fire retardent property as per DIN 4102, Part 1 of class B2 and as per ASTM E84 class A, fixed with suitable water based adhesive and fastener, complete in all respect as per the direction of Engineer-in-Charge.	sqm	784.60

Item Code	Description	Unit	Justified Rate
26.9	Providing and fixing factory made solid Foam uPVC profile for kitchen cabinet frame (45 x 20 mm) of approved shade, quality and make. The profile shall be laminated on both sides, made from rigid foam sheets (Single extruded) having density 600 Kg/cum and the exposed edges sealed with PVC edge beading of same shade and colour. The frame shall be fire retardent with necessary screw holding capacity. Frame shall be fixed to wall using Expendable Fastner with necessary stainless steel screws, all complete as per direction of Engineer-in-charge.	metre	337.75
26.10	Providing and fixing factory made Kitchen Cabinet Shutter/Partition 20 mm nominal thickness of approved shade, quality and make, made from rigid foam sheets (Single extruded) having density 600 Kg./cum and laminated on both side by laminate Sheet/PVC foil lamination. The exposed edges shall be sealed with PVC edge beading of same shade and colour. The shutter shall be fire retardent having necessary screw holding capacity. Shutter shall be fixed to frame using approved hinges with necessary stainless steel screws, all complete as per direction of Engineer-in-charge.	sqm	3,996.00
26.11	Providing and fixing concealed hinge of approved quality for 19-20mm thick door with stainless steel screws complete :	each	97.35
26.12	Supplying & laying of bi-axial extruded high modulus polypropylene geogrid coforming to MORTH SPECIFICATION for base/sub-base reinforcement having minimum tensile strength 15kN/m in the longitudinal and transverse direction, with 5kN/m and 7kN/m tensile strength at 2% and 5% strain respectively in the longitudinal and transverse direction, junction efficiency not less than 95% and with 38mm X 38mm mesh opening.	sqm	173.40
26.13	Supplying & laying of bi-axial extruded high modulus polypropylene geogrid coforming to MORTH SPECIFICATION for base/sub-base reinforcement having minimum tensile strength 20kN/m in the longitudinal and transverse direction, with 7kN/m and 14kN/m tensile strength at 2% and 5% strain respectively in the longitudinal and transverse direction, junction efficiency not less than 95% and with 38mm X 38mm mesh opening.	sqm	192.55
26.14	Supplying & laying of bi-axial extruded high modulus polypropylene geogrid coforming to MORTH SPECIFICATION for base/sub-base reinforcement having minimum tensile strength 30kN/m in the longitudinal and transverse direction, with 10.5kN/m and 21kN/m tensile strength at 2% and 5% strain respectively in the longitudinal and transverse direction, junction efficiency not less than 95% and with 38mm X 38mm mesh opening.	sqm	282.00
26.15	Supplying & laying of bi-axial extruded high modulus polypropylene geogrid coforming to MORTH SPECIFICATION for base/sub-base reinforcement having minimum tensile strength 40kN/m in the longitudinal and transverse direction, with 14kN/m and 28kN/m tensile strength at 2% and 5% strain respectively in the longitudinal and transverse direction, junction efficiency not less than 95% and with 38mm X 38mm mesh opening.	sqm	390.60
26.16	Supplying & laying of drainage composite for use behind walls, between two different fills, alongside drains of road, below concrete lining of canals etc. Geocomposite for planar drainage, realized by thermobonding a draining core in extruded monofilaments with two filtering nonwoven geotextiles that may also be working as separation or protecting layers. The draining three dimensional core will have a "W" configuration as longitudinal parallel channels. Minimum thickness to be 7.2mm, with two filtering UV stabilized polypropylene nonwoven geotextile of minimum thickness of 0.75mm charecteristic opening size (O90) of 110 micron and tensile strength of 8.0 kN/m that will be working as separation or protecting layer, geocomposite having in plane flow capacity of 2.1 L / (m.s) at hydraulic gradient of 1.0 & 20 kPa pressure and tensile strength of 18 kN/m , with mass per unit area of 740 gsm, supplied in the form of roll for easy transportation to site of work as per detailed specification all complete as per directions of Engineer in charge.	sqm	697.20

Item Code	Description	Unit	Justified Rate
26.17	Supplying & laying of drainage composite for use behind walls, between two different fills, alongside drains of road, below concrete lining of canals etc. having thermobonding a draining core - HDPE geonet comprises of two sets of parallel overlaid ribs integrally connected to have a rhomboidal shape with a polyethylene film and a nonwoven geotextile having mass per unit area 130 gsm and tensile strength of 8.0 kN/m that will be working as separation or protecting layer, geocomposite having in plane flow capacity of 0.7 L / (m.s) at hydraulic gradient of 1.0 & 20 kPa pressure and tensile strength of 13.5 kN/m , with mass per unit area of 830 gsm, at easily accessible location including top and bottom, with all leads and lifts, manpower and machinery, materials, labour etc. complete and as directed by Engineer - In - Charge.	sqm	825.00
26.18	Supplying and laying high strength flexible geogrids (HSFG) as soil reinforcement / basal reinforcement as per MORTH 3100 and IRC 113, made of high tenacity polyester core with polyethylene coating with Minimum Long Term Design Strength (LTDS) of more than 50% of ultimate tensile strength at 30 degree Celcius corresponding to 12% strain .		
26.18.1	Ultimate tensile strength- 100 kN/m	sqm	275.60
26.18.2	Ultimate tensile strength- 150 kN/m	sqm	288.35
26.18.3	Ultimate tensile strength- 200 kN/m	sqm	454.45
26.18.4	Ultimate tensile strength- 250 kN/m	sqm	467.25
26.18.5	Ultimate tensile strength- 300 kN/m	sqm	480.00
26.18.6	Ultimate tensile strength- 350 kN/m	sqm	492.80
26.18.7	Ultimate tensile strength- 400 kN/m	sqm	595.00
26.18.8	Ultimate tensile strength- 500 kN/m	sqm	658.90
26.18.9	Ultimate tensile strength- 600 kN/m	sqm	722.75
26.18.10	Ultimate tensile strength- 700 kN/m	sqm	850.55
26.18.11	Ultimate tensile strength- 800 kN/m	sqm	946.35
26.18.12	Ultimate tensile strength- 900 kN/m	sqm	1,106.05
26.18.13	Ultimate tensile strength- 1000 kN/m	sqm	1,233.85
26.18.14	Ultimate tensile strength- 1100 kN/m	sqm	1,297.70
26.18.15	Ultimate tensile strength- 1200 kN/m	sqm	1,361.60
26.19	Providing at all heights, levels and locations Aluminium profile industrial troughed sheet of Alloy 31500/31000/40800, conforming to IS 1254, IS 737, IS 2676. The sheet shall be fixed using self drilling/ self tapping SS screws of size 5.5x65 mm with EPDM seal complete upto required pitch in horizontal, vertical or curved surfaces i/c cutting to size and shape where required as per specifications, detail drawings and direction of Engineer-in-Charge. The rate shall be inclusive of all screws, seal, ridge, labour, scaffolding, machinery for fixing and approved sealent where required etc. but excluding the cost of purlins, rafters and trusses.		
26.19.1	0.71 mm thick, the profile detail width 1044/920 mm, cover width 1000/875 mm.	sqm	842.10
26.19.2	0.91 mm thick, the profile detail width 1044/920 mm, cover width 1000/875 mm.	sqm	1,070.90

Item Code	Description	Unit	Justified Rate
26.22	Providing and fixing false ceiling at all heights with integral densified calcium silicate reinforced with fibre and natural filler false ceiling tiles of Size 595x595mm of approved texture, design and patterns as per CPWD Specification 2019, to be laid in true horizontal level suspended on interlocking metal T-Grid of hot dipped galvanised iron section of 0.33mmthick (galvanized @ 120 grams per sqm including both sides)comprising of main-T runners of size 24x38 mm of length 3000 mm,cross - T of size 24x32 mm of length 1200 mm and secondary intermediate cross-T of size 24x32 mm of length 600mm to formgrid module of size 600 x 600 mm, suspended from ceiling usinggalvanised mild steel items (galvanizing @ 80 grams per sqm) i.e. 12x50 mm long dash fasteners, 6 mm dia fully threaded hanger rod upto 1000 mm length and L-shape level adjuster of size 76x25x25x1.6 mm fixed with grid and Z cleat of size 25x37x25x1.6mm thick with precut hole on both 25mm flange to pierce into 12x50mm or even bigger size dash fastener if require, fixed with Glavanised iron perimeter wall angle or size 24x24x0.40 mm of length 3000 mm to be fixed on periphery wall / partition with the help of plastic rawl plugs at 450mm center to center and 40 mm long dry wall S.S screws. The workshall be carried out as per specifications, drawing and as per directions of the Engineer-in-Charge.		
26.22.1	With 15 mm thick Tegular edged light weight calcium silicate false ceiling tiles	sqm	1,494.00
26.22.2	With 15 mm thick tegular/butt edged without perforation plain/designer light weight calcium silicate Anti-Microbial Bio-Safe coated false ceiling tiles <u>Confirming to JIS-Z2801 and ASTM G-21</u>	sqm	1,670.85
26.23	Providing and fixing false ceiling at all heights with integral densified calcium silicate reinforced with fibre and natural filler false ceiling tiles of Size 595x595 mm of approved texture, design and patterns having NRC (Noise Reduction coefficient) of 0.50 (minimum) as per IS 8225:1987, Light reflectance of 85% (minimum). Non combustible as per BS:476 (part-4), fire performance as per BS:476 (part 6 &7), humidity resistance of 100%, thermal conductivity < 0.043 W/m K as per ASTM 518:1991, in true horizontal level suspended on interlocking metal powder coated T-Grid of hot dipped galvanised iron section of 0.40 mm thick on Silhouette profile, rotary stiched double webbed white with 6mm reveal profile (white/black),comprising of main-T runners of size 15x42mm of length 3000 mm, cross - T of size 15x42 mm of length 1200 mm and secondary intermediate cross- T of size 15x42 mm of length 600mm to form grid module of size 600 x 600 mm, suspended from ceiling using galvanised mild steel items (galvanizing @ 80 grams per sqm) i.e. 50 mm long, 8 mm outer diameter M-6 dash fasteners, 6 mm dia fully threaded hanger rod upto 1000 mm length and L-shape level adjuster of size 85x25x2 mm. Galvanised iron perimeter wall angle of size 22x19x0.40 mm of length 3000 mm to be fixed on periphery wall / partition with the help of plastic rawl plugs at 450 mm center to center and 40mm long dry wall S.S screws. The work shall be carried out as per specifications, drawing and as per directions of the Engineer-in-Charge.		
26.23.1	With 15 mm thick integral densified micro edge light weight calcium silicate false ceiling tiles	sqm	1,735.45

Item Code	Description	Unit	Justified Rate
26.24	Providing and fixing in position wall panelling at all heights with integral densified calcium silicate panels/tiles of size 595 x 595mm, having NRC (Noise Reduction coefficient) of 0.50 (minimum) as per IS 8225:1987, Light reflectance of 85% (minimum). Non combustible as per BS:476 (part-4), fire performance as per BS:476 (part 6 &7), humidity resistance of 100%, thermal conductivity <0.043 W/m K as per ASTM 518:1991, comprising of a frame made from especially fabricated galvanised mild steel sheet 0.50 mm thick pressed section (galvanizing @120 grams per sqm including both sides) i.e.vertical studs of size 48 x 34 x 36 mm are placed at 600mm center to center in a floor and ceiling channel section of size 50 x 32mm fixed to the floor and soffit at 600mm centers using 12mm dia,50mm long wedge type expanded zinc alloy dash fastner with 10mm bolt. This same channel is then to be fixed in horizontal direction at 600mm center to center so as to form a grid of 600mm x 600mm. Glasswool of 50mm thickness is then to be inserted in the slots and finally calcium silicate non combustible panels/tiles are to be screw fixed with self tapping pan head nickel coated mild steel screws of size 13 x 3.2mm on to this grid leaving an even groove of 1 mm between the panels. The joints between the panels are to be duly jointed and finished using recommended jointing calcium silicate based compound and fiber joint tape roll 50mm wide (90 metre)roll and two coats of primer suitable for panelling as per manufacturer's specification as per direction of Engineer-in-Charge all complete.		
26.24.1	With 15 mm thick fully perforated square/butt edge light weight calcium silicate panels/ tiles	sqm	2,297.20
26.25	Providing and fixing 15 mm thick false ceiling tiles at all heights with integral densified calcium silicate reinforced with fibre and natural filler false ceiling tiles of Size 595x595 mm of approved texture, design and patterns having NRC (Noise Reduction coefficient) of 0.50 (minimum) as per IS 8225:1987, Light reflectance of 85% (minimum). Non combustible as per BS:476 (part-4), fire performance as per BS:476 (part 6 &7), humidity resistance of 100%, thermal conductivity < 0.043 W/m K as per ASTM 518:1991,in true horizontal level on the existing frame work consisting of T-sections and Lsections suitably fixed according to tile size as per direction of Engineer-in-charge.	sqm	1,188.80
26.26	Providing & fixing false ceiling at all heights with GRG (Glass Fibre Reinforced Gypsum) false ceiling tiles of Size 595x595 mm of approved texture, design and patterns having moisture content less than 2%, humidity resistance of 99%, NRC 0.50 to 0.75 as per IS 8225:1987, Non combustible as per BS 476 (part 4)-1970 and light reflectance of 85% (minimum) to be laid in true horizontal level suspended on inter- locking metal T-Grid of hot dipped galvanised iron section of 0.33mm thick (galvanized @ 120 grams per sqm including both sides) comprising of main-T runners of size 15x32 mm of length 3000 mm, cross - T of size 15x32 mm of length 1200 mm and secondary intermediate cross-T of size 15x32 mm of length 600mm to form grid module of size 600 x 600 mm, suspended from ceiling using galvanised mild steel items (galvanizing @ 80 grams per sqm) i.e. 50 mm long, 8 mm outer diameter M-6 dash fasteners, 6 mm dia fully threaded hanger rod upto 1000 mm length and L-shape level adjuster of size 85x25x2 mm. Galvanised iron perimeter wall angle of size 24x24x0.40 mm of length 3000 mm to be fixed on periphery wall / partition with the help of plastic rawl plugs at 450 mm center to center and 40 mm long dry wall wood screws. The work shall be carried out as per specifications, drawing and as per directions of the Engineer-in-Charge.		
26.26.1	With semi perforated 12 mm thick micro tegular edged GRG false ceiling tiles.	sqm	1,418.40
26.26.2	With fully perforated 12 mm thick micro tegular edged or 10 mm thick square edged GRG false ceiling tiles.	sqm	1,479.40

Item Code	Description	Unit	Justified Rate
26.27	Providing and fixing mineral fibre false ceiling tiles at all heights of size 595X595mm of approved texture, design and pattern. The tiles should have Humidity Resistance (RH) of 99%, Light Reflectance a 85%, Thermal Conductivity k = 0.052 - 0.057 w/m K, Fire Performance as per (BS 476 pt - 6 &7)in true horizontal level suspended on interlocking T-Grid of hot dipped all round galvanized iron section of 0.33 mm thick (galvanized @120 gsm) comprising of main I runners of 15x32 mm of length 3000 mm, cross T of size 15x32mm of length 1200 mm and secondary intermediate cross T of size 15x32 mm of length 600 mm to form grid module of size 600x600 mm suspended from ceiling using galvanized mild steel item (galvanised@80gsm) 50 mm long 8mm outer diameter M-6 dash fasteners, 6 mm diameter fully threaded hanger rod up to 1000 mm length and L-shape level adjuster of size 85x25x2 mm, spaced at 1200 mm centre to centre along main 'T'. The system should rest on periphery walls /partitions with the help of GI perimeter wall angle of size24x24X3000 mm made of 0.40 mm thick sheet, to be fixed to the wall with help of plastic rawl plug at 450 mm centre to centre & 40 mm long dry wall S.S. screws. The exposed bottom portion of all T-sections used in false ceiling support system shall be pre- painted with polyester baked paint, for all heights. The work shall be carried out as per specifications, drawings and as per directions of the engineer-in-charge.		
26.27.1	With 16 mm thick beveled tegular mineral fibre false ceiling tile (NRC 0.55 to 0.6	sqm	1,747.80
26.27.2	With 20 mm thick beveled tegular mineral fibre false ceiling tile (NRC 0.7)	sqm	1,998.05
26.27.3	With 16 mm thick beveled tegular mineral fibre Anti- microbial false ceiling tile confirming to ISO 5 (class 100) specifications	sqm	1,851.70
26.28	Chipping of unsound/weak concrete material from slabs, beams, columns etc. with manual Chisel and/ or by standard power driven percussion type or of approved make including tapering of all edges, making square shoulders of cavities including cleaning the exposed concrete surface and reinforcement with wire brushes etc. and disposal of debris for all lead and lifts all complete as per direction of Engineer-In-Charge		
26.28.1	75mm average thickness	sqm	244.95
26.28.2	50mm average thickness	sqm	165.90
26.28.3	25 mm average thickness	sqm	82.45
26.29	Cleaning of reinforcement from rust from the reinforcing bars to give it a total rust free steel surface by using alkaline chemical rust remover of approved make with paint brush and removing loose particles after 24 hours of its application with wire brush and thoroughly washing with water and allowing it to dry, all complete as per direction of Engineer-In-Charge.		
26.29.1	Bars upto 12 mm diameter	metre	5.35
26.29.2	Bars above 12 mm diameter	metre	10.70
26.30	Drilling suitable holes in reinforced or plain cement concrete with power driven drill machine to a minimum depth of 100mm upto 200mm in RCC beams, lintels, columns and slabs to introduce steel bars for sunshades/balconies including fixing the steel bars in position using epoxy resin anchor grout of approved make but excluding the cost of reinforcement, all complete as per direction of Engineer-In-Charge.		
26.30.1	Upto and including 12mm dia.	each	95.80
26.31	Providing, mixing and applying bonding coat of approved adhesive on chipped portion of RCC as per specifications and direction of Engineer-In-charge complete in all respect.		
26.31.1	SBR Polymer (@10% of cement weight) modified cementitious bond coat @ 2.2 kg cement per sqm of surface area mixed with specified proportion of approved polymer	sqm	98.50
26.31.2	Epoxy bonding adhesive having coverage 2.20 sqm/kg of approved make	sqm	338.95

Item Code	Description	Unit	Justified Rate
26.32	Providing, mixing and applying SBR polymer (of approved make) modified Cement mortar in proportion of 1:4 (1 cement: 4 graded coarse sand with polymer minimum 2% by wt, of cement used) as per specifications and directions of Engineer-in-charge. Note: Measurement and payment: The pre-measurement of thickness shall be done just after the surface preparation is completed and Payment under this item shall be made only after proper wet curing has been done and surface has been satisfactorily evaluated by sounding / tapping with a blunt metal instrument and/or the 75mm size cube crushing strength at the end of 28 days to be not less than 30 N/Sqmm2).		
26.32.1	12 mm average thickness.	sqm	253.40
26.32.2	25 mm average thickness in 2 layers.	sqm	391.65
26.32.3	50 mm average thickness in 3 layers.	sqm	783.30
26.33	Providing, mixing and applying SBR polymer (of approved make @ minimum 2% by wt. of cement used) modified plain/reinforced cement concrete for structural members having minimum characteristic compressive strength (with ordinary portland cement, coarse sand and graded stone aggregate of 10mm maximum size in proportion as per design criteria] with specified average thickness. Note: Rates shall be for finished surface area of concrete and shall include the cost of labour, concrete and appropriate approved Super-Plasticiser for rendering concrete as flowable and SBR polymer but shall exclude cost of reinforcement, bond coat, Shear Keys, centering and shuttering, strutting, propping etc (Payment under this item shall be made only after proper wet curing has been done and surface has been satisfactorily evaluated by sounding/tapping with a blunt metal instrument)		
26.33.1	50mm thick in Grade M 25 with cement content not less than 330 kg per cum	sqm	445.20
26.33.2	75mm thick in Grade M 25 with cement content not less than 330 kg per cum	sqm	754.70
26.34	Providing and laying SBR Polymer modified (of approved make @ minimum 2% by wt. of cement used) plain/reinforced concrete jacket for the structural members e.g. columns, pillars, piers, beams etc with concrete having the specified minimum characteristic compressive strength [with ordinary portland cement, coarse sand and graded stone aggregate of 10mm maximum size in proportion as per design criteria] with specified average thickness all-round existing core of RCC member. Note: Rates shall be for finished surface area of concrete and shall include the cost of making holes in existing RCC slab, if required, for pouring concrete in shuttering mould of jacket and appropriate approved Super-Plasticiser for rendering concrete as flowable self compacting and SBR polymer but shall exclude cost of reinforcement, bond coat, Shear Keys, centering and shuttering, strutting, propping etc (Payment under this item shall be made only after proper wet curing has been done and surface has been satisfactorily evaluated by sounding/tapping with a blunt metal instrument)		
26.34.1	50mm thick in Grade M 25 with cement content not less than 330 kg per cum	sqm	445.20
26.34.2	75mm thick in Grade M 25 with cement content not less than 330 kg per cum	sqm	667.80
26.34.3	100mm thick in Grade M 25 with cement content not less than 330 kg per cum	sqm	890.40
26.35	Providing and injecting approved grout in proportion recommended by the manufacturer into cracks/honey-comb area of concrete/ masonry by suitable gun/pump at required pressure including cutting of nipples after curing etc. complete as per directions of Engineer-in-Charge. (The payment shall be made on the basis of actual weight of approved grout injected.)		
26.35.1	Stirrer mixed Acrylic Polymer of approved make @ 2% of weight of cement used) modified Cement slurry made with non shrink compound in concrete/RCC work	kg	88.70

Item Code	Description	Unit	Justified Rate
26.35.2	Stirrer mixed SBR Polymer (of approved make) modified Cement slurry made with Shrinkage Compensating Cement in concrete/RCC work.	kg	92.05
26.35.3	Epoxy injection grout in concrete/RCC work of approved make	kg	687.60
26.36	Providing, erecting, maintaining and removing temporary protective screens made out of specified fabric with all necessary fixing arrangement to ensure that it remains in position for the work duration as required by the Engineer-in-charge.		
26.36.1	Wooven PVC cloth	sqm	39.70
26.37	Cleaning of exposed concrete surface of sticking material including loose and foreign material by sand blasting with coarse sand followed by and including cleaning with oil free air blast as per direction of Engineer in charge.	sqm	230.05
26.38	Shotcreting R.C.C. columns, beams and slabs etc. in layers with approved design mix concrete having the specified minimum characteristic compressive strength [with ordinary portland cement, coarse sand and graded stone aggregate of 10 mm maximum size in proportion as per design criteria(including the cost of centering and shuttering at edges and corners etc. as directed by Engineer- in-Charge Note: Rates shall include the providing necessary ground wires etc. The levelling gauges, if used, shall be paid for separately. Payment under this item shall be made only after proper wet curing has been done and surface has been satisfactorily evaluated by sounding/tapping with a blunt metal instrument.		
26.38.1	25mm thick in Grade M 25 with cement content not less than 330 kg per cum	sqm	533.50
26.38.2	50mm thick in Grade M 25 with cement content not less than 330 kg per cum	sqm	847.15
26.38.3	75mm thick in Grade M 25 with cement content not less than 330 kg per cum	sqm	1,214.20
26.39	Providing and inserting 12mm dia galvanised steel injection nipple in honey comb area and along crack line including drilling of holes of required diametre (20mm to 30mm) up to depth from 30mm to 80mm at required spacing and making the hole & crack dust free by blowing compressed air, sealing the distance between injection nipple with adhesive chemical of approved make and allow it to cure complete as per direction of Engineer-In-Charge.	each	167.15
26.40	Providing and fixing hard drawn steel wire fabric of size 75 x25 mm mesh or other suitable size wire mesh to be fixed & firmly anchored to the concrete surface by means of "L" shaped mild steel shear key welded with existing reinforcement including the cost of materials, labour, tool & plants as approved by Engineer-in-charge.	sqm	686.20

Item Code	Description	Unit	Justified Rate
26.41	<p>Designing, providing, installing and fixing factory finished custom designed cold form Light Gauge Steel Framed super structure comprising of steel wall panel, trusses, purlins etc manufactured out of minimum 0.75 mm thick steel sheet as per design requirements. The steel sheet shall be galvanized (AZ-150gms Aluminium Zinc Alloy coated steel having minimum yield strength 300-550 Mpa) conforming to AISI specifications and IBC 2009 for cold formed steel framing and construction and also as per IS: 875-1987, ISO 800-1984 and IS:801- 1975. The wind load shall be as per provisions of IS 875 (part -III). LGSFS frame shall be designed as per IS: 801 using commercially available software such as Frame CAD Pro-11.7/ STAAD PRO-V8i/ ArchitekV2.5.16/ Revit architecture-2011 or equivalent. Proper usage of Connection Accessories like Heavy Duty Tension Ties, Light Duty Hold-ons, Twist Straps (to connect truss with wall frames), Strong Tie, Tie Rod, H-Brackets, Boxing Sections, L-Shaped Angles for better structural stability be inserted in the slots and finally calcium silicate non combustible panels/tiles are to be screw fixed with self tapping pan head nickel coated mild steel screws of size 13 x 3.2mm on to this grid leaving an even groove of 1 mm between the panels. The joints between the panels are to be duly jointed and finished using recommended jointing calcium silicate based compound and fiber joint tape roll 50mm wide (90 metre)roll and two coats of primer suitable for panelling as per manufacturer's specification as per direction of Engineer-in-Charge all complete.ingprovided shall remain to be the property of the contractor on completion in-Charge.of the work). with polyester baked paint, for all heights, as per specifications, drawings and as directed by Engineer-in-Charge. Note :- Only calcium silicate false ceiling area will be measured from wall to wall. No deduction shall be made for exposed frames/opening (cut outs) having area less than 0.30 sqm.The calcium silicate ceiling tile shall have NRC value of 0.50 (Minimum), light reflection > 85%, non- combustible as per B.S. 476 part IV, 100% humidity resistance and also having thermal conductivity <0.043 w/mK.cludes the submission of stability reports duly examined and issued by any NIT/IIT. The rate includes the concept design, detailed design, fabrication of sections, transportation, installation and all required fixing arrangement at site as described above.</p>	kg	199.10
26.42	<p>Providing and fixing of external wall system on Light gauge steel frame work with outer face cement boards as per standard sizes fixed with self- drilling /taping screws / fasteners @ 60cm c/c of approved make. A groove of 2 mm to 3mm shall be maintained and grooves shall be sealed with silicon based sealant. The board shall be fixed in a staggered pattern. Screws shall be of counter sunk rib head of 1.60mm to 4 mm thick or 8 to 10 gauge of length varying from 25 to 45 mm and. Internal face 12.5 mm thick gypsum plaster board fixed on cement board as per standard sizes fixed with self- drilling /taping screws / fasteners @ 60cm c/c of approved make, proper taping and jointing to be done using fiber mesh tape and epoxy and acrylic based jointing compound for seamless finish.(cost of frame work to be paid for separately)</p>		
26.42.1	<p>Outer face- Outer face having 6mm thick fiber cement board Type A, Category IV as per IS:14862:2000 fixed on 9mm thick fiber cement board, Type A, Category-IV as per IS:14862:2000 (high pressure steam cured) Inner Face-12.5 mm thick gypsum plaster board conforming to IS 2095:2011 fixed on 8 mm thick fibre cement board of Type B, Category-III conforming to IS:14862:2000 (High pressure steam cured)</p>	sqm	2,803.15
26.42.2	<p>Outer face- Outer face having 6mm thick fiber cement board Type A, Category III as per IS:14862:2000 fixed on 9mm thick fiber cement board Type A, Category-III, as per IS:14862:2000 (high pressure steam cured) Inner Face-12.5 mm thick gypsum plaster board conforming to IS 2095:2011 fxed on 8 mm thick fibre cement board of Type B, Category-III, conforming to IS:14862:2000 (High pressure steam cured)</p>	sqm	1,404.15

Item Code	Description	Unit	Justified Rate
26.43	Providing and fixing internal wall panels on Light gauge steel frame work with 12.5mm thick gypsum plaster board conforming IS 2095:2011 fixed on cement board as per standard sizes fixed with self-drilling / taping screws / fasteners @ 60cm c/c of approved make, Screws shall be of counter sunk rib head of 1.60mm to 4 mm thick or 8 to 10 gauge of length varying from 25 to 45 mm. Proper taping and jointing to be done using fiber mesh tape and epoxy and acrylic based jointing compound for seamless finish.(cost of frame work to be paid for separately		
26.43.1	Cement Fiber Board 8 mm thick of Type B, Category III as per IS 14862:2000 (High pressure Steam Cured)	sqm	1,611.90
26.43.2	Cement Bonded particle board 8 mm (Termite, Fire & Moisture Resistance), as per IS:14276 : 1995	sqm	1,599.15
26.44	Providing and fixing in all exterior face panels breathable vapour barrier underneath the cement fiber board as per National Building Code 7009 complete as per direction of Engineer-in- charge.	sqm	236.40
26.45	Supplying and installation of moisture resistant/fire resistant cement board as per standard sizes fixed with self-drilling / taping screws. Screws shall be of counter sunk rib head of 1.60mm to 4 mm thick or 8 to 10 gauge of length varying from 25 to 45 mm.		
26.45.1	Cement Fiber Board 6 mm thick as per IS 14862:2000 of type B (High pressure Steam Cured)	sqm	1,000.05
26.45.2	Cement Bonded particle board 8 mm thick (Termite, Fire & Moisture Resistance), as per IS:14276 : 1995	sqm	674.25
26.46	Providing and fixing in position, 200 mm thick factory made Expanded Polystyrene Core (EPS Core) wall panels consisting of EPS core sandwiched between two Engineered sheets of welded wire fabric mesh duly finished with shotcrete materials on outer faces. The fabric mesh shall be made of 3 mm dia G.I. wire mesh with 50 mm pitch in both the directions and on both faces of the wall, kept at 120-135 mm gap and connected by the zig zag G.I. wire of 3 mm dia at alternate row by welding (at an angle ranging from 50-70 degree) . The EPS core shall consist of 100 mm thick EPS of density not less than 20 kg/ per cum. Both the outer faces of the panel shall be finished by applying the layer of 50 mm thick cement mortar 1:3 {1 cement: 3 coarse sand (not having more than 40% stone chips of size upto 6 mm)} with the help of shotcreting/guniting equipment etc at a pressure not less than 1 bar (100Kn/m2) and both surfaces finished with trowel. Fixing operations of wall panels shall be completed in all respect as per drawings and specifications and under the overall direction of the Engineer-in-charge.	sqm	3,396.25
26.47	Providing and fixing in position, 230mm thick factory made Expanded Polystyrene Core (EPS Core) roof/floor panels made of 3 mm dia G.I. wire mesh with 50 mm pitch in both the directions and on both faces of panel, kept at 120-135 mm gap and connected by the zig zag G.I. wire of 3 mm dia at alternate row by welding (at an angle ranging from 50-70 degree). The EPS core shall consist of 100 mm thick EPS of density not less than 20kg/ per cum. The bottom side of the panel shall be finished by applying a layer of 60-65 mm thick cement mortar 1: 3 (1 cement: 3 coarse sand (not having more than 40% stone chips of size upto 6 mm)) with the help of shotcreting equipment etc at a pressure of not less than 1 bar (100Kn/m2) and surface finished with trowel. The top face of the panel shall be provided and finished by applying 70-75 mm thick layer of cement concrete 1:1.5: 3 (1 cement :1.5 coarse sand : 3 graded stone aggregate 20 mm nominal size). Fixing operations of roof/floor panels shall be completed in all respect as per drawings and specifications and under the overall direction of the Engineer-in-charge.	sqm	3,662.40

Item Code	Description	Unit	Justified Rate
26.48	<p>Providing and fixing of custom(zed Aluminium form work for monolithic construction on RCC members with repetitive usage made up of aluminium sheets/plates of minimum 4mm thickness and grade 6061 (Type-6), The formwork comprises of (a) wall panel, rocker, kicker and internal soffit corner, external soffit corner, external corner, internal corner etc., (b) beam components i.e, beam side panel, prop head for soffit beam, beams soffit panel, beam soffit bulk head and (c) deck components i.e. deck panel, deck prop, prop length, deck mid, soffit length, deck beam bar. The panels are held in position by a simple pin and wedge system that passes through holes in the outside rib of each panel. The tolerance of finished panel shall not be less than (-1 mm) and shall conform to IS 14987-1999, Pins and wedges to be made of high grade hot dipped galvanized mild steel. This form work also comprises of M.S. angle iron, "Z" shaped brackets braced diagonally at 0.90 to 1.00 metre centre to centre on external wall face just the level below on which to lay M.S. square tube panels (Challis) and guard railing supports to form working platform and 40 mm dia G.I./M.S. telescopic adjustable props to support deck formwork and beam soffit panels including de-shuttering the formwork from odd/even level to be shifted/lifted to next alternate odd/even level before which the points and shuttering surface to be thoroughly cleaned, pins greasing and shuttering surface oiling properly before fixing all complete including sealing of gap between kicker plates of wall panel and floors (if any) as per design of formwork as provided by shuttering supplier and as per direction of the Engineer-in-charge, including filling and finishing the holes of varied sizes and shapes (left by keys/pins of aluminium form work shuttering while de-shuttering) with GP-2 cementitious polymer compound mixed with water in ratio prescribed by manufacturer to form consistent workable enough for pushing it in the holes upto full depth of wall using appropriate tools and finishing smooth all complete as per directions of the Engineer-in-charge.</p>	sqm	326.75
26.49	<p>Providing and fixing in position factory made EPS cement sandwich wall/roof/floor light weight solid core panels made of core material of EPS granule balls/beads (conforming to IS 4671:1984 and shall have density not less than 15kg per cum) adhesive, cement, sand, flyash and other bonding material in mortar state processed to form in a preset mould. The outer face on both sides of the panels will be non asbestos fiber cement board conforming to IS 14862:2000 or Calcium silicate board conforming to EN 14306:2009 of 5mm thick each. Panel shall be laid on 6mm thick cement mortar (1 cement: 2 fine sand) mixed with chemical adhesive of 0.5kg per 50kg of cement or shall be preferably fixed into 'C' channel made of 1.2mm thick MS plate screwed/fastened to the slab/column/beam etc. The panel shall be fixed vertically with tongue and groove joint and horizontally locked with steel bar between each other and floors and filled with cement mortar and adhesive. Panels should be used as floor & roofing with additional structural support, steel or RCC depending upon the design. All the operation shall be completed in all respect as per drawings, Manufacturers specifications and under the overall direction of Engineer-in-Charge (Cost of all the material is included except "C channel" which will be paid separately).</p>		
26.49.1	Non load bearing panels 50mm thick of required size	sqm	1,009.05
26.49.2	Non load bearing panels 60mm thick of required size	sqm	1,142.90
26.49.3	Non load bearing panels 75mm thick of required size	sqm	1,422.75
26.49.4	Non load bearing panels 90mm thick of required size	sqm	1,658.80
26.49.5	Non load bearing panels 100mm thick of required size	sqm	1,956.80

Item Code	Description	Unit	Justified Rate
26.50	Providing and fixing in position factory made non asbestos fibre reinforced aerated cement sandwich wall/roof/floor light weight solid core panels made of light weight cement concrete core composed of OPC cement, pulverized flyash, quick lime, cotton pulp & Gypsum in mortar state mixed with aeration agent in a preset mould. The outer face on both sides of the panels will be non asbestos fibre cement board confirming to IS 14862:2000. These solid wall panels are installed using Galvanized iron steel tracks/C channel of 1mm thick of required sizes as recommended by manufacturer's and fixed to floor and RCC soffit in plumb to each other with steel screw/ fasteners. The panel shall be fixed vertically with tongue & groove joint with cement based polymer modified jointing compound. The exposed surface finished with fibre mesh/glass fibre tape with polymer based jointing compound having superior flexibility. Panels should be used as floor & roofing with additional structural support, steel or RCC depending upon the design. All the operation shall be completed in all respect as per drawings, Manufacturers specifications and under the overall direction of Engineer-in-Charge (Cost of all the material is included except "tracks/C channel" which will be paid separately).		
26.50.1	Non load bearing panels 50 mm thick of required size (minimum 4mm thick fibre cement board Type B, Category III as per IS: 14862:2000 on both faces)	sqm	1,138.25
26.50.1A	Non load bearing panels 50 mm thick of required size (minimum 4mm thick fibre cement board Type A, Category III as per IS: 14862:2000 on both faces)	sqm	365.05
26.50.1B	Non load bearing panels 50 mm thick of required size (minimum 4mm thick fibre cement board Type A, Category IV as per IS: 14862:2000 on both faces)	sqm	365.05
26.50.2	Non load bearing panels 75 mm thick of required size (minimum 5mm thick fibre cement board Type B, Category III as per IS: 14862:2000 on both faces)	sqm	1,327.30
26.50.2A	Non load bearing panels 75 mm thick of required size (minimum 5mm thick fibre cement board Type A, Category III as per IS: 14862:2000 on both faces)	sqm	243.80
26.50.2B	Non load bearing panels 75 mm thick of required size (minimum 5mm thick fibre cement board Type A, Category IV as per IS: 14862:2000 on both faces)	sqm	365.05
26.51	Supplying of standard quality GFRG panel of 124 mm thickness with modular cavities purchased from GFRG panel manufacturing plant in the country, cut to required wall sizes and floor/ roof slab sizes in correct length and height, including cutting of door, window and ventilator opening as per the cutting drawing prepared by architects /design engineers for the construction of GFRG building and loaded in stillages for transportation to the construction site. Cost of panel includes security deposits, hire charges of stillages & jaws, cost of transportation in trucks/ lorries without any damages upto 300kms including all leads and lifts from GFRG manufacturing plant to construction site and unloading at site using suitable fork lift/ crane. (Payment shall be made on the basis of area of one side of panel without reduction of opening of door/ window / ventilator). For transportation above 300kms, additional charges to be paid.	sqm	1,136.40

Item Code	Description	Unit	Justified Rate
26.52	Erection of GFRG Panels in walls in all floors using suitable crane as per instructions of Engineer-in-Charge, as per cutting drawings and structural drawings, in perfect line and plumb, above RCC plinth beam/GFRG panel below and provide necessary lateral/ slanting support to keep the wall panel in safe position, providing & tying of Reinforcement as per structural drawings and applying a coat of water repellent coating Zycosil/equivalent or equivalent product (1 Zycosil/equivalent compound :10 water) to saturation level over RCC plinth beam to provide water proofing treatment to joint between wall panel & plinth beam as per the guide lines / instruction by the engineer in charge. (Cost of reinforcement, water proofing of walls and plinth beam/GFRG panel below joints and installation of door/ window frames before filling of concrete shall be paid separately). The rate quoted shall include making provision for laying of lintels, beams, sunshades, staircase beams, lofts, plumbing work, electrical conduits and any structural insertion etc., as per the drawing and direction of the engineer in charge. The payment shall be made based on the actual exposed area (one side only) of the panel.The work shall be carried out as per the Special Conditions For Glass Fibre Reinforced Gypsum (GFRG) Structures mentioned in NIT.Note: i) When cutting panel, "A" side is to be for outside or external surface of respective external wall and B side is to be for internal surface of wall ii)Erection of panel is to be with reference to both building plan & cutting drawing by following notational mark indicated in the cutting drawing as well as notional mark written on each panel cut as per cutting drawing	sqm	194.95
26.53	Filling of empty cavities (as shown in the structural design drawing) with quarry dust mixed with 5% cement (by volume). After initial infill of 50 mm thick with M25 concrete at base/bottom of cavities to seal off, infill wall panel cavities in 3 stages as detailed below, (i) 1st pour / infill to be limited to 0.3 to 0.50 m height from bottom of the panel.(ii) 2nd Pour/ infill: infilling shall be done only after 90 minutes interval between successive pours. The maximum height of infill shall be restricted to 1.5m height or up to the top level of door / window.(iii) 3rd pour/infill: After an interval of 90 minutes of second pour, infill or pour the balance height up to the bottom of embedded RCC tie beam. Pour enough water just required to dampen the dry mix enough to form cake form after each stage.(cost of laying M25 concrete shall be paid separately)(If any rain falls in between any stages of concrete pour, make sure to cover the panel top to prevent ingress of water or water falling into the cavities. In case of water collection over the concrete inside the panel, drill 10mm hole in GFRG panel immediately above concrete filled level to drain out water before pour/infill of balance concreting)	cum	2,107.80
26.54	Laying of GFRG panel as roof / floor slab panel and staircase panel using suitable crane as per instructions of Engineer-in-Charge, including providing support system with 25mm x 300mm-400 mm wide plywood, as runner with proper prop below proposed micro beams including(a) Cutting of top flange of panel to 180 mm wide (leaving 25mm projection on either side) to provide RCC embedded micro beam as per cutting drawings and structural drawings. (b) Reinforcement for micro beams and tie beams to be provided in position with proper anchorage as per structural drawings. (c) Provision for Electrical cabling, fan hooks and laying of pipes for plumbing work. (d) Concreting of Tie beam, micro beam and top of GFRG panels (50 mm thick) with M-25 cement concrete mix using coarse aggregate of size less than 20 mm including laying of 10 gauge 100x100 size weld mesh with 25 mm effective cover from the panel top.	sqm	198.95
26.55	Supplying and fixing 10 Gauge weld mesh of size 100mm x 100 mm for floor/roof slab concrete screed over the micro beams as reinforcement. The weld mesh shall be fixed as per drawing.	sqm	201.20

Item Code	Description	Unit	Justified Rate
26.56	Application of ZMB 60/equivalent solution (100 Kg ZMB 60/equivalent, 1 litre ZMB Nano Thinner, 20 litre water & 1 Litre Zycoprime/equivalent = 122 litre/kg) over already applied coat of Zycosil/equivalent & Zycoprime/equivalent solution on the top of all the RCC plinth beams by brush/spray coat before erection of GFRG over RCC plinth beams in GF. In the case of upper floors 150 mm wide on floor slab for all the external walls, bath/toilet/wet areas (3 hrs drying time) before erection of wall panel on upper floors including erection of parapet wall.	sqm	252.65
26.57	After erection of GFRG wall panels, seal all GFRG wall joints with paper tape temporarily. Water proofing treatment of vertical joints with Zycosil/equivalent water proofing Solution (1 litre of Zycosil/ equivalent & 20 litres of water stirred first & 2 litres of Zycoprime/ equivalent added and stirred (total 23 litres)) with 50 ml syringe till the gap and in filled concrete is completely saturated. After removing the paper seal, seal off the vertical joints with water proofing material "Grout RW/equivalent " (Sealing cost excluded.)	metre	71.50
26.58	Filling of joints between RCC plinth beam / floor slab and wall panel of external walls, toilet / bath room / wet areas walls on all floor and parapet wall over roof slab, stair case head room at the time of erection of GFRG panels with Grout RW/equivalent sealant compound after the erection of panel before the infill of concrete in panel cavities and fine finish. This applies for all horizontal and vertical joints between GFRG wall and slab panels.	metre	34.35
26.59	Water proofing treatment of Vertical joints (of external side and internal side) between door frame, window & ventilator frames (on all four sides) of outer wall over the Zycosil/equivalent & Zycoprime/equivalent solution already applied (before the installation of door / window / ventilator frames in position) and fine finish with Grout RW/equivalent.	metre	35.00
26.60	Water proofing treatment of RCC sunshade with Zycosil/equivalent water proofing Solution (1 litre of Zycosil/equivalent & 20 litres of water stirred first & 2 litres of Zycoprime/equivalent added and stirred (total 23 litres)) till it meets the saturation level and testing as per RILEM or by water drops test in which water drops do not absorb but drops remain or rolls.	sqm	110.35
26.61	In-filling / sealing of joint between RCC lintel cum sunshade and wall (on external side) in all floors by pushing in Grout RW/equivalent in paste form and coving 20 mm x 20 mm after applying a coat of Zycosil/equivalent & zycoprime/equivalent solution before cement plastering of top, bottom and sides of RCC sunshade.	metre	35.00
26.62	Designing, Providing, installing and fixing factory finished customed design pregalvanized high tensile steel joists manufactured from G350 Z275 confirming to IS:277-1992, minimum coating of galvanizing 275 gm/sqm, minimum yield stress 35 MPa & minimum tensile strength of 380 MPa placed 1.23 metre apart to support the load of slab etc as per the design & directions of Engineer-in-Charge.	kg	120.15
26.63	Providing and fixing special adjustable lockbars of mild steel E-250 to support the temporary plywood for work between joists during construction as per <u>design & directions of the Engineer-in-charge.</u>	kg	16.80
26.64	Centering and shuttering with 12mm thick shuttering plywood confirming to IS 4990:2011 and removal of form at all heights. Plywood will be supported on <u>lock bars.</u>		
26.64.1	Suspended floors, roofs, landings, balconies and access platform.	sqm	76.20
26.65	Providing and fixing roofing consist of 0.8 mm thick galvanized steel deck sheet confirming to IS 277:1992 used as permanent shuttering over which MS wire mesh 3mm laid at 100x100 mm grid including edge trim covered with concrete. This metal deck will be supported on structural steel beam with shear studs. (Structural steel like Beam, column, joists etc. & concrete of different grade as per design will be paid separately).	sqm	1,400.95

Item Code	Description	Unit	Justified Rate
26.66	Providing and fixing in position, 130 mm thick factory made Expanded Polystyrene Core (EPS Core) wall panels consisting of EPS core sandwiched between two Engineered sheets of welded wire fabric mesh duly finished with shotcrete materials on outer faces. The fabric mesh shall be made of 3 mm dia zinc coated G.I. wire mesh with 50 mm pitch in both the directions and on both faces of the wall and connected by GI wire of 3mm dia at alternate row by welding. The EPS core shall consist of 60 mm thick EPS of density not less than 16 kg/ per cum. Both the outer faces of the panel shall be finished by applying the layer of 35 mm thick cement mortar 1:3 {1 cement: 3 coarse sand (not having more than 40% stone chips of size upto 6 mm)} with the help of shotcreting/guniting equipment etc at a pressure not less than 1 bar (100KN/m ²) and both surfaces finished with trowel. Fixing operations of wall panels shall be completed in all respect as per drawings and specifications and under the overall direction of the Engineer-in-charge.	sqm	2,068.15
26.67	Providing and fixing of external thermal insulation and composite system with First layer of self-extinguishing type Expanded Polystyrene (EPS) insulation boards of 120 mm thick (max 1mX0.5m section), confirming to IS 4671:1984, having thermal conductivity of 0.034 W/mK, (measured as per IS 3346-1980), density of 20-24 kg/ m ³ measured as per IS 5688-1982, Fire retardant property self- extinguishing type as per EN 13501-1, bonded with special polymer modified cementitious adhesive confirming to EOTA ETAG 004 (European Technical Approval) formulated to bond polystyrene insulation boards to typical mineral substrate (according to ETAG 004) and Polypropylene mechanical fasteners with plastic pin confirming to EOTA ETAG 014 (European Technical Approval) having dia 10mm & L=200mm on finished level wall and the junction between two adjacent EPS boards to be sealed with low expansion moisture cure Polyurethane Foam. Second layer consists of Fiberglass mesh covered with alkali-resistant coating, mass per unit area ?145 gm/ m ² , mesh size: 3.9x4.0 mm ±10% embedded in special polymer modified cementitious Base Coat with hydrophobes and the corners will be protected with Corner-beads with alkali-resistant mesh wings at least 10 cm wide, mesh mass per unit area min 145 gm/m ² . The surface will be levelled, finished, made smooth complete in all respect as per manufactures specification and as per directions of Engineer-in-Charge.	sqm	2,926.95
26.68	Providing and laying factory made Precast concrete solid blocks of 200 mm thickness of grade M10 made of C&D waste from approved manufacturer in foundation and plinth in:		
26.68.1	Cement mortar 1:6 (1 cement : 6 coarse sand)	cum	4,956.85
26.69	Providing and laying factory made Precast concrete solid blocks of 200 mm thickness of grade M10 made of C&D waste from approved manufacturer in superstructure above plinth level up to floor V level		
26.69.1	Cement mortar 1:6 (1 cement : 6 coarse sand)	cum	6,414.80
26.70	Providing and laying half block masonry with factory made Precast concrete solid blocks of 100 mm thickness of grade M10 made of C&D waste from approved manufacturer in foundation and plinth in:		
26.70.1	Cement mortar 1:4(1 cement : 4 coarse sand)	sqm	594.15
26.71	Providing and laying half block masonry with factory made Precast concrete solid blocks of 100 mm thickness of grade M10 made of C&D waste from approved manufacturer in superstructure above plinth level up to floor V level:		
26.71.1	Cement mortar 1:4 (1 cement : 4 coarse sand)	sqm	713.35

Item Code	Description	Unit	Justified Rate
26.72	Providing and laying 60mm thick factory made cement concrete paver block of approved shape and colour of M -30 grade made of C&D waste by block making machine with vibratory compaction laid in required pattern and including over 50mm thick compacted bed of coarse sand, filling the joints with fine sand etc. all complete as per the direction of Engineer-in-charge.	sqm	584.40
26.73	Fabrication & Manufacturing of Prestressed Hollow Core slab (Hollow area 25 to 30%) of different thickness & modular width 1200 mm in Controlled Factory Environment with approved methodology confirming to IS 10297:1982 by using long line casting method having arrangement of proper steel bed. Concreting should be done by batch mixing plant capable of producing zero slump concrete, transported through automatic shuttels of standard make & laved on bed with the help of extruder/Slipformer, finishing, curing and also provision of steam curing, Cutting, making necessary cutout/holes of required sizes for services in slab element after achieving required strength, yard handling & stacking all complete as per approved shop drawings & design mix as per the direction of the Engineer-in- charge, (Cost of strands should be paid separately), Note: Excess/less cement over the specified cement content used as per design mix is payable/recoverable separately)		
26.73.1	Concrete Grade-M-40 (cement content 400 kg)		
26.73.1.1	100 mm thick hollow core slab	metre	997.50
26.73.1.2	120 nom thick hollow core slab	metre	1,168.35
26.73.1.3	150 mm thick hollow core slab	metre	1,424.60
26.73.1.4	200 mm thick hollow core slab	metre	1,739.00
26.73.1.5	250 mm thick hollow core slab	metre	2,137.95
26.73.1.6	300 mm thick hollow core slab	metre	2,536.90
26.73.1.7	350 mm thick hollow core slab	metre	2,935.85
26.73.1.8	400 mm thick hollow core slab	metre	3,334.80
26.73.2	Extra for using M-50 (Cement content 425 kg) instead of M-40		
26.73.2.1	100mm thick hollow core slab	metre	17.60
26.73.2.2	120mm thick hollow core slab	metre	21.10
26.73.2.3	150mm thick hollow core slab	metre	26.35
26.73.2.4	200mm thick hollow core slab	metre	32.80
26.73.2.5	250mm thick hollow core slab	metre	41.00
26.73.2.6	300mm thick hollow core slab	metre	49.20
26.73.2.7	350mm thick hollow core slab	metre	57.40
26.73.2.8	400mm thick hollow core slab	metre	65.60
26.73.3	Extra for using M-60 (Cement content 440 kg) instead of M-40		
26.73.3.1	100mm thick hollow core slab	metre	28.10
26.73.3.2	120mm thick hollow core slab	metre	33.70
26.73.3.3	150mm thick hollow core slab	metre	42.20
26.73.3.4	200mm thick hollow core slab	metre	52.45
26.73.3.5	250mm thick hollow core slab	metre	65.60
26.73.3.6	300mm thick hollow core slab	metre	78.75
26.73.3.7	350mm thick hollow core slab metre 90.10	meter	91.85
26.73.3.8	400mm thick hollow core slab	metre	105.00

Item Code	Description	Unit	Justified Rate
26.74	Fabrication and manufacturing of solid precast concrete element with provisions of shear keys, connecting loops, dowel tubes and proper lifting accessories for walls, beams, slabs, stairs, column etc, of various thickness, shape and size of different concrete grades manufactured in controlled factory environment with approved methodology including moulds (Pallet system, Tilts form, table moulds, battery moulds, vertical moulds, beam moulds, column moulds, staircase moulds, Facade mould, etc.), mixing, transporting and placing of concrete, vibrating, curing, finishing, making necessary cutout/holes of required sizes for services, yard handling & stacking all complete as per IS 11447:1985 and as per approved shop drawings and design mix as per the direction of Engineer-in-Charge (Cost of reinforcement, Mechanical, Electrical and Plumbing inserts will be paid separately). Note: Excess/less cement over the specified cement content used as per design mix is payable/recoverable separately)		
26.74.1	Concrete grade M-35 (Cement content 370 kgs)	cum	15,778.40
26.74.2	Extra for using M-40 (Cement content 400 kg) instead of M-35	CUM	234.35
26.74.3	Extra for using M-50 (Cement content 425 kg) instead of M-35	cum	429.65
26.74.4	Extra for using M-60 (Cement content 440 kg) instead of M-35	cum	546.85
26.75	Providing & laying in position Prestressing steel strands (low relaxation) on hollow core bed by using mechanical pulling arrangement like Rabbit/ Bed master including all accessories for Stressing & destressing operations as per approved make conforming to IS1343 & grade FY-1860 etc, complete as per drawings and direction of Engineer -in-charge.	kg	126.75
26.76	Transportation of Precast Elements by flat bed Tractor (Double / Triple axle 40ft Length with proper accessories like A frame etc) from factory, including the cost of loading , unloading & stacking at site with the help of required capacity cranes.		
26.76.1	Lead within 15km	MT	397.60
26.76.2	Add/Deduct over item 26.76.1 for every additional lead of 5 km	MT	89.45
26.77	Erection & Installation of Precast/Prestressed Concrete elements in correct & final position with proper line level and plumb at site making all arrangements (i.e cranes, push-pull jacks & all another T & P for lifting Placing & Alignment of elements, within erection tolerance as per IS 15916 as per approved shop drawings and all complete as per the direction of Engineer-in-Charge but excluding the cost of sim pads, non shrink grout and steel works i.e hangers. All work up to fifth floor.		
26.77.1	Prestressed hollow core Slab up to 200 mm thickness	sqm	141.80
26.77.2	Prestressed hollow core slab above 200 mm up to 400 mm thickness	sqm	243.25
26.77.3	Solid concrete wall elements	cum	1,877.50
26.78	Providing & Applying weather proof sealant on outer joints of approved make confirming to IS & directed by Engineer-in-charge.		
26.78.1	Sealant 25mmx10mm at joints	metre	132.35
26.79	Providing & Laying of levelling sim pads required sizes (5x5cm to 10x10cm) of PVC / Rubber to adjust level of bearing surface of supporting members as per the direction of Engineer in charge.		
26.79.1	2mm thick	each	20.50
26.79.2	5 mm thick	each	26.30
26.79.3	10 mm thick	each	37.95
26.80	Providing & Grouting of dowel tubes / Shear keys / Joints of precast members with M-60 grade cementitious grout (Non Shrink) of approved make by suitable means (Free flowing /pump),curing etc. Complete as per directions of Engineer-in-charge. (The payment shall be made on the basis of actual weight of approved grout injected.)		
26.80.1	Stirrer mixed cementitious grout (non shrink) of approved make in dowel tubes / Shear keys / Joints of precast members.	kg	65.45

Item Code	Description	Unit	Justified Rate
26.81	Providing and fixing Scaffolding net of required width made of high density Polyethylene UV stabilized knitted on warp knitting machines having density 100grams/sqm and shading coefficient minimum 75% around the construction site/ for vertical extension as per requirement including fastening/tying with building/scaffolding pipes or with any other fixtures etc. complete as per direction of Engineer-in-Charge. (One time payment shall be made for providing Scaffolding net from start of work till completion of work including shifting if any. The Scaffolding net shall be the property of the contractor on completion of the work)	sqm	21.30
26.82	Providing and laying rigid EPS (cellular plastic material) blocks conforming to ASTM standards/specifications of minimum density 21.60 Kg/cum on floors, steps, stage etc. of required size and shape as per direction of the Engineer-in-Charge. This shall include the following operation. "The EPS blocks shall be cut to required shape and sizes including cuttings for passing of services, joined together with synthetic resin adhesives as per relevant specifications and packed/placed in position for stepped floor or platform formation. The top and sides surfaces to be provided with GI woven wire mesh of aperture 5.45 mm (with wire dia 0.90 mm) secured to EPS blocks with wire pins/clips. Horizontal top surface to be provided with 20 mm thick cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate upto 6mm chippings) and vertical surface to be provided with 12mm cement plaster 1:4 (1 cement : 4 coarse sand). The concrete/plastered surfaces so prepared shall be scratched with wire brushes to form burrs, so as to act as base for flooring or veneering/panelling to be done later as per approved design (which shall be paid for separately complete as per direction of the Engineer-in-Charge.	sqm	1,757.15
26.83	Applying stamping finish to the top surface of freshly laid plain/ reinforced cement concrete of specified grade in porticos, sidewalks, driveways, pool decks and open yards as per direction of the Engineer-in-Charge. The process shall include the following:- * The concrete shall be placed and screeded to the finished grade, and floated to a uniform surface by using standard finishing techniques. The approved color hardener @ 2.7 kg/sqm shall be applied evenly to the surface of the fresh concrete by the dry shake method by sprinkling in two or more shakes, floated after each shake and trowelled only after the final floating. The approved release agent @ 0.113 kg/sqm shall be applied evenly to the trowelled surface before stamping or the said release agent can be applied to the flexible polyurethane stamp moulds of approved design and in required sizes to achieve final stamped pattern. These stampings shall be placed on the surface of concrete in three to four pieces at a time and tapped gently with rammers of sufficient size & weight to leave proper stamp marks and the process repeated for the remaining concrete surface till the whole surface to be stamped is completed within the time while concrete is in plastic stage of setting. * After stamping, the curing shall be done as per manufactures specifications. After initial curing the imprinted joints shall be grouted using cement slurry mixed with color hardener as per the requirement. The surface shall be sealed by applying acrylic based sealer not less than 0.167 litre/sqm.on finished surface. * The construction joints shall be provided by groove cutting of size 4mm x 20mm in panel size 3m x 3 m or lesser as per the site conditions and filling the same with 10 mm baker rod and providing and laying (PU) Polyurethane based joint sealer of approved make as per manufacturer's specifications and finished by applying Polyurethane resin based top protective clear coat of minimum 80 micron applied with rollers on properly cured and dry clean surface. (Cost of concrete for flooring is not included in this item which shall be paid separately.)	sqm	532.50

Item Code	Description	Unit	Justified Rate
26.84	Supplying and laying of Uni-Axial Woven Polyester Geogrid conforming to MORTH 3100 and IRC113, as soil reinforcement/ basal reinforcement including accessories like tie-strips, nuts & bolts and loops/lugs for joining reinforcing elements with the fascia panels, overlaps and other protective elements for synthetic geo-grids and all other activities required for reinforced soil walls, slopes etc complete as per design requirements, manufacturer specifications and as per direction of engineer-in-charge.		
26.84.1	Uni Axial Woven polyester geogrid of minimum tensile strength 40KN/m in the Longitudinal direction and 20 KN/m in the Transverse direction.	sqm	189.60
26.84.2	Uni Axial Woven polyester geogrid of minimum tensile strength 60KN/m in the Longitudinal direction and 20 KN/m in the Transverse direction.	sqm	216.40
26.84.3	Uni Axial Woven polyester geogrid of minimum tensile strength 80 KN/m in the Longitudinal direction and 30 KN/m in the Transverse direction.	sqm	270.05
26.84.4	Uni Axial Woven polyester geogrid of minimum tensile strength 100KN/m in the Longitudinal direction and 30 KN/m in the Transverse direction.	sqm	309.10
26.84.5	Uni Axial Woven polyester geogrid of minimum tensile strength 120KN/m in the Longitudinal direction and 30 KN/m in the Transverse direction.	sqm	329.85
26.84.6	Uni Axial Woven polyester geogrid of minimum tensile strength 150KN/m in the Longitudinal direction and 30 KN/m in the Transverse direction.	sqm	409.10
26.84.7	Uni Axial Woven polyester geogrid of minimum tensile strength 200KN/m in the Longitudinal direction and 30 KN/m in the Transverse direction.	sqm	477.40
26.84.8	Uni Axial Woven polyester geogrid of minimum tensile strength 250KN/m in the Longitudinal direction and 30 KN/m in the Transverse direction.	sqm	578.65
26.84.9	Uni Axial Woven polyester geogrid of minimum tensile strength 300KN/m in the Longitudinal direction and 30 KN/m in the Transverse direction.	sqm	665.20
26.85	Supplying and laying of Bi-Axial Woven Polyester Geogrid conforming to MORTH 3100 and IRC113, as soil reinforcement/ basal reinforcement of granular road base and sub base, area stabilization, track bed stabilization, load transfer platforms including accessories like tie-strips, nuts & bolts and loops/ lugs for joining reinforcing elements with the fascia panels, overlaps and other protective elements for synthetic geo-grids and all other activities required etc. complete as per design requirements, manufacturer specifications and as per direction of engineer-in-charge.		
26.85.1	Bi Axial Woven polyester geogrid of minimum tensile strength 20KN/m in both Longitudinal and Transverse direction.	sqm	159.10
26.85.2	Bi Axial Woven polyester geogrid of minimum tensile strength 40KN/m in both Longitudinal and Transverse direction.	sqm	231.05
26.85.3	Bi Axial Woven polyester geogrid of minimum tensile strength 60KN/m in both Longitudinal and Transverse direction.	sqm	292.05

Item Code	Description	Unit	Justified Rate
26.86	Providing and fixing factory made single extruded WPC (Wood Polymer Composite) solid door/window/Clerestory Ywindows & other Frames/Chowkhat comprising of virgin PVC polymer of K value 58-60 (Suspension Grade), calcium carbonate and natural fibers (wood powder/ rice husk/wheat husk) and non toxic additives (maximum toxicity index of 12 for 100 gms) fabricated with miter joints after applying PVC solvent cement and screwed with full body threaded star headed SS screws having minimum frame density of 750 kg/cum, screw withdrawal strength of 2200 N (Face) & 1100 N (Edge), minimum compressive strength of 58 N/mm ² , modulus of elasticity 900 N/mm ² and resistance to spread of flame of Class A category with property of being termite/borer proof, water/moisture proof and fire retardant and fixed in position with M.S hold fast/lugs/SS dash fasteners of required dia and length complete as per direction of Engineer-In- Charge. (M.S hold fast/lugs or SS dash fasteners shall be paid for separately). Note: For WPC solid door/window frames, minus 5mm tolerance in dimensions i.e depth and width of profile shall be acceptable. Variation in profile dimensions on plus side shall be acceptable but no extra payment on this account shall be made.		
26.86.1	Frame size 45x 70mm	metre	532.15
26.86.2	Frame size 45 x 85 mm	metre	706.35
26.86.3	Frame size 50 x 100 mm	metre	723.75
26.86.4	Frame size 50 x 125 mm	metre	828.30
26.86.5	Frame size 65 x 100 mm	metre	851.55
26.86.6	Frame size 65 x 125 mm	metre	1,066.40
26.86.7	Frame size 65 x 150 mm	metre	1,269.70
26.87	Providing and fixing factory made single extruded WPC (Wood Polymer Composite) solid plain flush door shutter of required size comprising of virgin polymer of K value 58-60 (Suspension Grade), calcium carbonate and natural fibers (wood powder/ rice husk/wheat husk) and non toxic additives (maximum toxicity index of 12 for 100 gms) having minimum density of 650 kg/cum and screw withdrawal strength of 1800 N (Face) & 900 N (Edge), minimum compressive strength 50 N/mm ² , modulus of elasticity 850 N/mm ² and resistance to spread of flame of Class A category with property of being termite/borer proof, water/moisture proof and fire retardant and fixing with stainless steel butt hinges of required size with necessary full body threaded star headed counter sunk S.S screws, all as per direction of Engineer-In-Charge. (Note: stainless steel butt hinges and necessary S.S screws shall be paid separately)		
26.87.1	30 mm thick	sqm	3,411.45
26.87.2	35 mm thick	sqm	3,934.15
26.88	Providing and fixing factory made single extruded WPC (Wood Polymer Composite) solid decorative type flush door shutter of required size comprising of virgin polymer of K value 58-60 (Suspension Grade), calcium carbonate and natural fibers (wood powder/ rice husk/wheat husk) and non toxic additives (maximum toxicity index of 12 for 100 gms) having minimum density of 650 kg/cum and screw withdrawal strength of 1800 N (Face) & 900 N (Edge), minimum compressive strength 50 N/ mm ² , modulus of elasticity 850 N/mm ² and resistance to spread of flame of Class A category with property of being termite/ borer proof, water/moisture proof and fire retardant. WPC to be laminated with PVC foil of minimum 14 microns thick of approved design pasted with hot melt adhesive on both faces of shutter and fixing with stainless steel butt hinges of required size with necessary full body threaded star headed counter sunk S.S screws, all as per direction of Engineer-In- Charge. (Note: stainless steel butt hinges and necessary S.S screws shall be paid separately)		
26.88.1	30 mm thick	sqm	3,729.40
26.88.2	35 mm thick	sqm	4,252.05

Item Code	Description	Unit	Justified Rate
26.89	Providing and fixing factory made single extruded WPC (Wood Polymer Composite) solid board one side white color and other side of board laminted with PVC foil of minimum 14 micron thickness of approved design pasted with hot melt adhesive for cup boards, work stations and bathroom/kitchen cabinet etc. of required sizes comprising of virgin polymer of K value 58-60 (Suspension Grade), calcium carbonate and natural fibers (wood powder/ rice husk/wheat husk) and non toxic additives (maximum toxicity index of 12 for 100 gms) having minimum density of 650 kg/cum and screw withdrawal strength of 1800 N (Face) & 900 N (Edge), minimum compressive strength 50 N/ mm2, modulus of elasticity 850 N/mm2 and resistance to spread of flame of Class A category with property of being termite/ borer proof, water/moisture proof and fire retardant and fixing with stainless steel piano hinges/soft close clip on concealed hinges of required size with necessary full body threaded star headed counter sunk S.S screws, all as per direction of Engineer-In- Charge. (Note: stainless steel piano hinges/soft close clip on concealed hinges and necessary S.S screws shall be paid separately)		
26.89.1	18 mm thick	sqm	2,334.70
26.89.2	25 mm thick	sqm	3,043.25
26.90	Providing and fixing factory made single extruded WPC (Wood Polymer Composite) solid plain white color board for backing of cup boards and bathroom/kitchen cabinets etc. of required size comprising of virgin polymer of K value 58-60 (Suspension Grade), calcium carbonate and natural fibers (wood powder/ rice husk/wheat husk) and non toxic additives (maximum toxicity index of 12 for 100 gms) having minimum density of 650 kg/cum and screw withdrawal strength of 1800 N (Face) & 900 N (Edge), minimum compressive strength 50 N/mm2, modulus of elasticity 850 N/mm2 and resistance to spread of flame of Class A category with property of being termite/borer proof, water/moisture proof and fire retardant and fixing with stainless steel screws etc. all as per direction of Engineer-In- Charge. (Note: stainless steel screws shall be paid separately)		
26.90.1	6 mm thick	sqm	831.00
26.90.2	12 mm thick	sqm	1,318.85
26.91	Providing and fixing factory made 18 mm thick single extruded WPC (Wood Polymer Composite) solid plain white colour board Jali, CNC (Computer numeric control) routed of approved design by Engineer-in -charge which are machine cut for duct/ shaft covering, partitions and facades comprising of virgin polymer of K value 58-60 (Suspension Grade), calcium carbonate and natural fibers (wood powder/ rice husk/wheat husk) and non toxic additives(maximum toxicity index of 12 for 100 gms) having minimum density of 650 kg/cum and screw withdrawal strength of 1800 N (Face) minimum compressive strength 50 N/mm2, modulus of elasticity 850 N/mm2 and resistance to spread of flame of Class A category with properties of being termite/borer proof, water/moisture proof and fire retardant and fixing on M.S (mild steel) frame made of 25 x 25 x 1.5 mm square hollow box section including applying a priming coat of approved steel primer, placed at grid made at 1.0 x 1.0 m or as per requirement at site with necessary stainless steel fasteners and SS screws etc., all complete as per direction of Engineer-In- Charge. (Note: M.S (mild steel) framework with priming coat and necessary SS fasteners and SS screws shall be paid separately.	sqm	2,708.95

Item Code	Description	Unit	Justified Rate
26.92	<p>Providing and fixing of façade at all heights with extruded hollow Clay / Terracotta ventilated rainscreen tiles of height 250/ 300/ 400mm and length of 595 mm of approved texture,design and pattern having Flexural Strength/ Modulus of Rupture of > 14 N/m² and maximum water absorption of 10% tested as per ISO 10545-4:2004(E) and ISO 10545-3:1995 respectively in true level fixed to a supporting aluminium framework(Alloy 6063 T5/T6) consisting of vertical 'T' (for intermediates)/ 'L'(for ends/ termination)/ Tubular sections (at corners)of size 80x60x2mm/ 40x60x2mm/ 40x40x2mm respectively, spaced at maximum spacing of 600mm c/c matching to the tile vertical grid, and horizontal aluminium 'C'-clamps of size 56x25x2mm thickness of length 150mm at junction of tiles and of length 75mm at wall ends/ corners fixed on top of the vertical sections at spacing of 250/ 300/ 400mm c/ c matching to the tile horizontal grid with two numbers of self- drilling / self-tapping SS screws of size 5.5x25 mm with EPDM washers.The vertical 'T'/'L/ Tubular' sections shall be fixed to the wall using HDG (hot-dip-galvanized) steel L-brackets (galvanizing thickness of minimum 80 microns)of size 110x80x6 mm at intermediate vertical aluminium profiles and of size 220x110x12 mm at outer corners and stainless steel grade 304,M10 full threaded anchor fasteners with nylon sleeve 100mm long (for brick work) and M8 expansion anchor fasteners 75mm long for concrete surface, spacing of brackets to be based on a structural/ static calculation. The brackets shall be of length 175mm at junction of two vertical aluminium profiles and of length 100mm at intermediate points of vertical profiles and shall be fixed to the vertical aluminium T / L / Tubular profiles using two numbers self-drilling/ self-tapping SS screws of size 5.5x25mm with EPDM washers. EPDM gaskets to be fixed in between brackets and vertical profiles. The tiles shall be mounted on the 'C' clamps such that the tiles are supported at top and bottom at both ends. The tiles shall be additionally secured to the horizontal 'C' clamps using special SS clips of required size which shall be inserted and pressed into position on the 'C' clamps holding the tiles and the cut- tiles shall be glued at points to the horizontal 'C' clamps by using MS Polymer sealant adhesive. The vertical joint open groove between two adjacent tiles shall be 5mm. The tiles and system shall be designed to resist wind load as per IS 875 (Part 3) according to different zones. The tiles shall be installed using the ventilated rain screen principle with provision for natural ventilation of the space between the façade tiles and the structural wall. The work shall be carried out as per specification, drawing and as per direction of the Engineer-in- Charge. Note : Scaffolding wherever required to be paid separately</p>		
26.92.1	With 16mm thickness (+/- 10%) terracotta tiles of grey colour	sqm	4,610.15
26.92.2	With 16mm thickness (+/- 10%) terracotta tiles of other than grey colors	sqm	4,413.20
26.93	<p>Providing and fixing of façade at all heights with extruded hollow clay/ terracotta ventilated rain screen tiles of height 259/309/409mm and length of 1190mm of approved texture, design and pattern having flexural strength/ modulus of rupture of > 14 N/m² and maximum water absorption of 10% tested as per ISO 10545- 4:20045 and ISO 10545-3:1995 respectively in true level fixed to a supporting aluminium framework (Alloy 6063 T5/T6) consisting of vertical 'T' (for intermediates) / 'L' (for ends/ termination)/ Tubular sections (at corners) of size 80x60x2mm/ 40x60x2mm/ 40x40x2mm respectively, spaced at maximum spacing of 1200mm c/c matching to the tile vertical grid and horizontal aluminium 'C' clamps of size 56x34x2mm thickness of length 150mm at junction of tiles and of length 75mm at wall ends/ corners fixed on top of the vertical sections at spacing of 250/300/400mm c/c matching to the tile horizontal grid with</p>		
26.93.1	With 24mm thickness (+/- 10%) terracotta tiles of grey colour	sqm	4,591.50
26.93.2	With 24mm thickness (+/- 10%) terracotta tiles of other than grey colors	sqm	4,329.30

Item Code	Description	Unit	Justified Rate
26.94	Designing, shop fabricating, supplying , erecting, stripping and shifting of customized Modular Tunnel Formwork system for cast in-situ monolithic RCC structures, using precision steel cubical formworks are molds with minimum 3mm thick hot rolled plain painted/hot dip galvanized M.S. sheets for panel in contact area with necessary framing and allied accessories as per CPWD specifications including transporting, storage, assembly, hoisting and placing in position for supporting and holding the formwork in place till initial setting of the concrete then stripping the formwork, propping to support horizontal surface cleaning and oiling etc. for shifting to the next cycle, inclusive of all labour, machines and T&P requirements taking all safety measures etc. as per design and cycle programme all complete as per directions of the Engineer-in-Charge. Design of Tunnel Formwork system shall be provided by concerned service provider/vendor and the rate is inclusive of all the elements and all operations for all heights.	sqm	186.80
26.95	Providing and installation of factory made Structural Stay in place form work system with double faced panels for walls, single faced panels for roof/ floor slabs, L-shaped single faced panels for corners, with necessary scaffolding, struts, bracing etc_ Complete as per CPWD specification and directions of the Engineer in Charge. Design of walls and other members to be provided by the supplier & shall be duly vetted by any engineering institute of National repute such as IITs, NITs etc. and nothing extra shall be payable on this account (Additional steel reinforcement/dowels, design mix concrete of specified grade, electrical and plumbing conduits insert for services and plastering on either side of walls shall be paid for separately). Note:- This item shall be adopted for building upto 0+3 Storeys only excluding seismic zone V.		
26.95.1	Double panel of required thickness 1110mm & above) with minimum weight of panel as 11.05 kg per sqm for walls with corresponding corners and jamps strips.	sqm	146.50
26.95.2	Single panel for slabs with minimum weight of panel as 4.05 kg/sqrm for walls with corresponding corners and jamps strips.	sqm	367.55
26.96	Providing and placing "Stay in Place PVC Wall formwork" made up of extruded Unplasticised Poly Vinyl Chloride (uPVC) consisting of Main panel, 3 way Connector, Starter Channel, Joint Panel, Connection Panels, Door/Window frame/trim panels etc. all complete as per manufacturer design and for all heights as per direction of Engineer-in-charge. (Note: Suitable for in fill walls with appropriate Structural system).		
26.96.1	125 mm wide Stay in Place PVC Wallform made of minimum 2.50 mm thick sections and minimum weight 21.97 kg /sqm of formwork.	sqm	199.70
26.96.2	165 mm wide Stay in Place PVC Wallform made of minimum 2.50 mm thick sections and minimum weight 29.00 kg /sqm of formwork.	sqm	224.05

Item Code	Description	Unit	Justified Rate
SOR for Horticulture works			
All Areas except Ranchi			
Item Code	Description	Unit	Justified Rate
2	HORTICULTURE AND LANDSCAPING		
2.1	Trenching in ordinary soil up to a depth of 60 cm including removal and stacking of serviceable materials and then disposing of surplus soil, by spreading and neatly levelling within a lead of 50 m and making up the trenched area to proper levels by filling with earth or earth mixed with sludge or / and manure before and after flooding trench with water (excluding cost of imported earth, sludge or manure).	cum	64.95
2.1C	Earth work in surface excavation not exceeding 30 cm in depth but exceeding 1.5 m in width as well as 10 sqm on plan including disposal of excavated earth up to 50 m and lift up to 1.5 m, as per directions of Engineer in Charge:		
2.1C.1	All kinds of soil	sqm	75.20
2.2	Supplying and stacking of good earth at site including royalty and carriage upto 5 km lead complete (earth measured in stacks will be reduced by 20% for payment).	cum	493.05
2.3	Supplying and stacking sludge at site including royalty and carriage upto 5 km lead complete (sludge measured in stacks will be reduced by 8% for payment).	cum	311.50
2.4	Supplying and stacking at site dump manure from approved source, including carriage upto 5 km lead complete (manure measured in stacks will be reduced by 8% for payment) :		
2.4.1	Screened through sieve of I.S. designation 20 mm	cum	262.20
2.4.2	Screened through sieve of I.S. designation 16 mm	cum	292.50
2.4.3	Screened through sieve of I.S. designation 4.75 mm	cum	316.75
2.5	Rough dressing the trenched ground including breaking clods.	sqm	1.25
2.6	Uprooting weeds from the trenched area after 10 to 15 days of its flooding with water including disposal of uprooted vegetation.	sqm	4.05
2.6C	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan), including disposal of excavated earth, lead up to 50 m and lift up to 1.5 m, as per directions of Engineer in Charge.		
2.6C.1	All kinds of soil	cum	155.85
2.7	Fine dressing of the ground.	sqm	3.05
2.7C	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan), including disposal of excavated earth, lead up to 50 m and lift up to 1.5 m, as per directions of Engineer in Charge.		
2.7C.1	Ordinary rock.	cum	301.30
2.8	Spreading of sludge, dump manure and/or good earth in required thickness as per direction of officer-in-charge (cost of sludge, dump manure and/ or good earth to be paid separately).	cum	43.70
2.8C	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, lift up to 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.		
2.8C.1	All kinds of soil	cum	213.05
2.9	Mixing earth and sludge or manure in the required proportion specified or directed by the Officer-in-charge	cum	30.30

Item Code	Description	Unit	Justified Rate
2.10	Grassing with selection No. 1 Doob grass including watering and maintenance of the lawn for 30 days or more till the grass forms a thick lawn, free from weeds and fit for mowing including supplying good earth, if needed (the grass and good earth shall be paid for separately).		
2.10.1	In rows 5 cm apart in both directions	sqm	14.70
2.10.2	With grass Turf	sqm	11.10
2.11	Renovating lawns including weeding, cheeling the grass, forking the ground, top dressing with sludge or manure, mixing the same with forked soil, watering and maintaining the lawn for 30 days or more till the grass forms a thick lawn free from weeds and fit for mowing and disposal of rubbish as directed, including supplying good earth if needed (the cost of sludge, manure and the good earth shall be paid for separately).	sqm	28.55
2.12	Uprooting rank vegetation and weeds by digging the area to a depth of 60 cm, removing all weeds and other growth with roots by forking repeatedly, breaking clods, rough dressing, flooding with water, uprooting fresh growths after 10 to 15 days and then fine dressing for planting new grass, including disposal of all rubbish with all leads and lifts.	sqm	50.65
2.13	Preparation of beds for hedging and shrubbery by excavating 60 cm deep and trenching the excavated base to a further depth of 30 cm, refilling the excavated earth after breaking clods and mixing with sludge or manure in the ratio of 8:1 (8 parts of stacked volume of earth after reduction by 20%: one part of stacked volume of sludge or manure after reduction by 8%), flooding with water, filling with earth if necessary, watering and finally fine dressing, leveling etc. including stacking and disposal of materials declared unserviceable and surplus earth by spreading and leveling as directed, within a lead of 50 m, lift up to 1.5 m complete (cost of sludge, manure or extra earth to be paid for separately)	cum	184.90
2.14	Digging holes in ordinary soil and refilling the same with the excavated earth mixed with manure or sludge in the ratio of 2:1 by volume (2 parts of stacked volume of earth after reduction by 20% : 1 part of stacked volume of manure after reduction by 8%) flooding with water, dressing including removal of rubbish and surplus earth, if any, with all leads and lifts (cost of manure, sludge or extra good earth if needed to be paid for separately)		
2.14.1	Holes 1.2 m dia and 1.2 m deep	Each	302.55
2.14.2	Holes 90 cm dia, and 90 cm deep	Each	129.45
2.14.3	Holes 60 cm dia, and 60 cm deep	Each	39.75
2.14.4	Holes 45 cm dia, and 45 cm deep.	Each	17.10
2.15	Half brick circular tree guard in bricks, internal diameter 1.25 metre and height 1.2 metre above ground and 0.20 m below ground, bottom two courses laid dry and top three courses in cement mortar 1:6 (1 cement : 6 fine sand) and the intermediate courses being in dry honey comb masonry as per design complete:		
2.15.1	With common burnt clay F.P.S. (non modular) bricks of class designation 5.0	Each	1,584.70
2.16	Providing and fixing M.S. flat iron tree guard 60 cm dia and 2 m high, above ground consisting 4 nos 25 x 6 mm, 2.25 m long and 8 nos 25 x 3 mm 2 m long verticals M.S. flats, riveted to 3 nos 25 x 6 mm M.S. flat iron rings in two halves, fixing together at site with required six numbers of 8 mm dia and 30 mm long bolts, including painting two coats with synthetic enamel paint of approved brand and manufacture over a coat of primer. One name plate of 1 mm thick M.S. sheet of size 250x100 mm shall be welded to the tree guard near the middle height and lettered CPWD / PWD/ any other approved name. The tree guard shall be suitably fixed to the ground by embedding four legs of tree guard in pits of suitable dia and to a depth of 25 cm, refilling the pits with soil and ramming, complete in all respect as per satisfaction and direction of Officer-in-charge.	Each	4,115.85

Item Code	Description	Unit	Justified Rate
2.17	Making tree guard 53 cm dia and 1.3 m high as per design from empty coal tar drums, supplied free by the department, including providing and fixing 2 nos M.S. sheet rings 50 x 0.5 mm fixed with rivets complete in all respects including painting inside and outside of tree guard with:		
2.17.1	A coat of coal tar	Each	332.90
2.17.2	Two or more coats of synthetic enamel paint of approved quality shade over a priming coat	Each	542.65
2.18	Making tree guard 53 cm dia and 2 m high as per design from empty coal tar drums, supplied free by the department, including providing and fixing four legs 40 cm long of 30 x 3 mm M.S. flat riveted to tree guard and providing and fixing 2 nos M.S. sheet rings 50 x 0.5 mm fixed with rivets complete in all respects including painting inside and outside of tree guard with :		
2.18.1	A coat of coal tar	Each	597.65
2.18.2	Two or more coats of synthetic enamel paint of approved quality shade over a priming coat	Each	921.00
2.19	Edging with bricks laid dry length wise, including required excavation, refilling, consolidating with hand packing and spreading surplus earth neatly within a lead of 50 m :		
2.19.1	Common burnt clay F.P.S (non modular) bricks of Class designation 7.5	Metre	39.10
2.20	Filling mixture of earth and sludge or manure in the desired proportion in trenches, flooding with water and leveling (cost of supplying earth and sludge or manure and mixing excluded).	Cum	15.15
2.21	Excavation in dumped stones or malba including stacking of serviceable and unserviceable material separately and disposal of unserviceable material, lead up to 50 m and lift up to 1.5 m, disposed material to be neatly dressed.	Cum	424.40
2.22	Excavation in bajri path including stacking of serviceable and unserviceable material separately, lead up to 50 m and lift up to 1.5 m, disposed material to be neatly dressed.	Cum	472.90
2.23	Excavation in water bound macadam road including stacking the serviceable and unserviceable material, separately and disposal of unserviceable material, lead up to 50 m and lift up to 1.5 m, disposed material to be neatly dressed.	Cum	582.05
2.24	Flooding the ground with water including making kiaries and dismantling the same.	sqm	1.90
2.25	Supplying and stacking of well decayed cattle manure at site including royalty and carriage upto 5 k.m.lead complete (Cattle manure measured in stacks will reduced by 8% for Payment).	Cum	497.35
2.25C	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m.	cum	179.90
2.26	Providing and fixing M. S. tree guard 45 cm square in plan, height 1.20 metre above ground level and 0.40 metre below ground level. The vertical members shall consist of four nos. angle iron of size 25x25x3 mm, 1.6 m long, one at each corner and 8 nos flat iron of size 25x3 mm, 1.2 m long. The vertical members shall be welded to 4 nos. 25x6 mm M. S. flats placed horizontally around the vertical member of the cage. One name plate of 1 mm thick M.S. sheet of size 250x100 mm shall be welded to the tree guard near the middle height and lettered CPWD/ PWD/ any other approved name. The tree guard shall be fixed to the ground by making suitable holes and by embedding four corners leg in the ground, including refilling the earth, compaction etc. complete. The tree guard shall be painted with two or more coats of synthetic enamel paint of approved brand and manufacture over a coat of primer, complete in all respect.	Each	2,175.90

Item Code	Description	Unit	Justified Rate
2.27	Providing and fixing M. S. tree guard 50 cm square in plan, height 1.40 metre above ground level and 0.50 metre below ground level. The vertical members shall consist of four nos of angle iron of size 25x25x5 mm 1.9 long, one at each corner and 8 nos flat iron of size 25x5 mm 1.4 long. The vertical members shall be welded to 4 nos 25x6 mm M. S. flats placed horizontally around the vertical member of the cage. One name plate of 1 mm thick M.S. sheet of size 250x100 mm shall be welded to the tree guard near the middle height and lettered CPWD / PWD/ any other approved name. The tree guard shall be fixed to the ground by making suitable holes and by embedding four corners leg in the ground, including refilling the earth, compaction etc. complete. The tree guard shall be painted with two coats of paint of approved brand and manufacture over a coat of primer, complete in all respect.	Each	3,395.10
2.27C	Supplying and spreading of sand in lawn area, including watering, and dressing complete.	cum	1,263.25
2.28	Preparation of mounds of various size and shape by available excavated / supplied earth in layers not exceeding 20 cm in depth, breaking clods, watering of each layer, dressing etc., lead upto 50 meter and lift upto 1.5 m complete as per direction of Officer-in-charge.	Cum	380.35
2.28C	Surface dressing of the ground including removing vegetation and inequalities not exceeding 15 cm deep and disposal of rubbish, lead up to 50 m and lift up to 1.5 m.		
2.28C.1	All kinds of soil	sqm	19.75
2.29	Providing Circular Cement Concrete pots of specified size, cast with cement concrete of nominal mix 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 6 mm nominal size), reinforced with 7 Nos (3 nos horizontal & 4 nos vertical " U " shape) M.S. wires of 3.5 mm dia as per design, including required form work, finishing with cement punning on exposed surface, curing for specified period and stacking in required rows & height, all complete as per direction of Officer-in-charge.		
2.29.1	Top inside dia 35 cm, outer bottom dia 25 cm, total height 35 cm with wall thickness of 25.4 mm	Each	211.25
2.29.2	Top inside dia 30 cm, outer bottom dia 20 cm, total height 30 cm with wall thickness of 25.4 mm	Each	174.00
2.29C	Ploughing the existing ground to a depth of 15 cm to 25 cm and watering the same.		
2.29C.1	All kinds of soil	sqm	20.20
2.30	Providing Circular Cement Concrete pots of specified size, cast with cement concrete of nominal mix 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 6 mm nominal size), reinforced with 7 Nos (3 nos horizontal & 4 nos vertical " U " shape) M.S. wires of 3.5 mm dia as per design, including required form work, finishing with cement punning on exposed surface, curing for specified period and stacking in required rows & height, all complete as per direction of Officer-in-charge.		
2.30.1	Top inside dia 30 cm, outer bottom dia 20 cm, total height 30 cm with wall thickness of 25.4 mm	Each	240.35
2.31	Filling of the following size empty pots with mixture of good earth & manure in the ratio of 2:1 (Two part of Good earth & one part of manure) and placing them on appropriate place i/c carriage of earth, manure and pots up to 50 mtr, as per direction of officer incharge. (The cost of good earth, earthen pots & manure will be paid separately.)		
2.31.1	Size of Empty Pots 15cm Top dia, 8cm Bottom Dia & 15cm Perpendicular height.	Each	6.35
2.31.2	Size of Empty Pots 16cm Top dia, 12cm Bottom Dia & 14cm Perpendicular height.	Each	6.50
2.31.3	Size of Empty Pots 20cm Top dia, 10cm Bottom Dia & 20cm Perpendicular height.	Each	9.50
2.31.4	Size of Empty Pots 20cm Top dia, 12cm Bottom Dia & 20cm Perpendicular height.	Each	9.90
2.31.5	Size of Empty Pots 22cm Top dia, 16cm Bottom Dia & 23cm Perpendicular height.	Each	15.85

Item Code	Description	Unit	Justified Rate
2.31.6	Size of Empty Pots 25cm Top dia, 15cm Bottom Dia & 25cm Perpendicular height.	Each	18.55
2.31.7	Size of Empty Pots 35cm Top dia, 25cm Bottom Dia & 35cm Perpendicular height.	Each	38.20
2.31C	Clearing jungle including uprooting of rank vegetation, grass, brush wood, trees and saplings of girth up to 30 cm measured at a height of 1 m above ground level and removal of rubbish up to a distance of 50 m outside the periphery of the area cleared.	sqm	10.20
2.32	Filling of the Polythene bags by mixture of good earth and manure in the ratio of 2:1 (2 part of good earth and 1 part of the manure) and placing the same of appropriate place (the good earth & manure Polythene bags will be provided by the department) all complete as per direction of the Officer- in-charge.		
2.32.1	Polythene bags size 12.5 cm dia x 17.5 cm height	Each	1.45
2.32.2	Polythene bags size 15 cm dia x 20 cm height	Each	3.40
2.32.3	Polythene bags size 20 cm dia x 25 cm height	Each	7.45
2.32.4	Polythene bags size 20 cm dia x 30 cm height	Each	8.85
2.32.5	Polythene bags size 25 cm dia x 35 cm height	Each	16.15
2.32.6	Polythene bags size 30 cm dia x 30 cm height	Each	19.90
2.32C	Clearing grass and removal of the rubbish up to a distance of 50 m outside the periphery of the area cleared.	sqm	5.20
2.33	Providing and laying Neelgiri/Mexican grass turf with earth 50mm to 60mm thickness of existing ground prepared with proper level and ramming with tools wooden (Dhurmos) and than rolling the surface with light roller make the surface smoothen and light watering with sprinkler and maintenance for 30 days or more till the grass establish properly, as per direction of officer-in-charge.	Per Sqm	14,078.80
2.33C	Felling trees of the girth (measured at a height of 1 m above ground level), including cutting of trunks and branches, removing the roots and stacking of serviceable material and disposal of unserviceable material.		
2.33C.1	Beyond 30 cm girth upto and including 60 cm girth	each	309.90
2.33C.2	Beyond 60 cm girth upto and including 120 cm girth	each	1,377.65
2.33C.3	Beyond 120 cm girth upto and including 240 cm girth	each	6,386.05
2.33C.4	Above 240 cm girth	each	12,798.65
2.34	Providing & laying Selection no. 1 doob grass turf with earth 50mm to 60mm thickness of existing ground prepared with proper level and ramming with required tools wooden and than rolling the surface with light roller make the surface smoothen and light watering the same maintenance for 30 days or more till the grass establish properly,as per direction of officer in charge	Per Sqm	13,951.95
2.35	Supplying & Stacking of Selection No.1 doob grass turf at site fresh & free from weeds having proper roots in green including loading, unloading, carriage and all taxes paid etc.and as per direction of officer in charge.	Per Sqm	50.80
2.36	Cutting of Hedge/Edge including removing of cut material, cleaning, hoeing of hedge/edge bed watering, manureing and applying insecticides and fungicides etc.(excluding the cost of material which shall be supplied by the department) and as per direction of officer in charge.	Per Sqm per month	19.85
2.37	Cutting of designer hedge/edge removing of cut materials, cleaning, hoeing of hedge/edge bed watering manure and applying insecticides and fungicides etc.(excluding the cost of material which shall be supplied by the department) and as per direction of officer in charge	Per Sqm per month	39.65
2.38	Topiary cutting/shapping of plant removing of cut materials, cleaning, hoeing of plants complete design hoeing of trees (Topiary) watering manure etc.(excluding the cost of material which shall be supplied by the department) and as per direction of officer in charge.		
2.38.1	Height of Topiary upto 120 cm.	per plant per month	73.70

Item Code	Description	Unit	Justified Rate
2.38.2	Height of Topiary above 120 cm.	Per plant per month	92.70
2.39	Complete maintenance of the entire garden features having as per yard stick in the garden area i.e. lawn trees, shrubs, edge, flower beds, foliage, creepers etc. including hoeing, weeding, pruning, replacement of plants, gap filling, watering, mowing of lawn, grass cutting by lawn mover and brush cutter, removal of garden waste, applying insecticide, pesticide & fertilizers (whenever required) top dressing of lawn with good earth and manure and maintenance of other garden related works as directed by office-in-charge (Cost of Good Earth, Manure, Fertilizer, Insecticide, Pesticide, lawn mover and brush cutter with fuel & other T & P material/ articles shall be provided by the department.)		
2.39.1	Prestigious works / Rajpath/C Hexagon (1Mali for 1.00 Acre)	Per Sqm/ per Month	3.90
2.39.2	Permanent office accommodation. (1Mali for 1.25 Acre)	Per Sqm/ per Month	3.10
2.39.3	Flats. (1Mali for 1.35 Acre)	Per Sqm/ per Month	2.90
2.39.4	MPs accommodation and Govt. officers bungalows. (1Mali for 1.25 Acre)	Per Sqm/ per Month	3.10
2.39.5	Play grounds / Public parks (1Mali for 2.00Acre).	Per Sqm/ per Month	1.95
2.39.6	Open spaces (1Mali for 3.00 Acre).	Per Sqm/ per Month	1.30
2.39.7	H.M. House & Officers entitled to free accommodation (1Mali for 0.75 Acre).	Per Sqm/ per Month	5.20
2.40	Complete maintenance of the entire garden features having as per yard stick in the garden area i.e. lawn trees, shrubs, herbs, edge, flower beds, foliage, creepers etc. including hoeing, weeding, pruning, replacement of plants, gap filling, watering, mowing of lawn, grass cutting by lawn mover and brush cutter, removal of garden waste, applying insecticide, pesticide & fertilizers (whenever required) top dressing of lawn with good earth and manure and maintenance of other garden related works as directed by office-in-charge (Cost of Good Earth, Manure, Fertilizer, Insecticide, Pesticide will be provided by the Department & lawn mover and brush cutter with fuel and other T & P material/articles shall be provided by the contractor.) and as per direction of officer in charge.		
2.40.1	Prestigious works / Rajpath/C Hexagon (1Mali for 1.00Acre)	Per Sqm/ per Month	4.05
2.40.2	Permanent office accommodation.(1Mali for 1.25Acre)	Per Sqm/ per Month	3.25
2.40.3	Flats.(1Mali for 1.35Acre)	Per Sqm/ per Month	3.00
2.40.4	MPs accommodation and Govt. officers bungalows. (1Mali for 1.25 Acre)	Per Sqm/ per Month	3.25
2.40.5	Play grounds / Public parks (1Mali for 2.00Acre).	Per Sqm per Month	2.05
2.40.6	Open spaces(1Mali for 3.00Acre).	Per Sqm/ per Month	1.35
2.40.7	H.M. house & officers entitled to free accommodation (1 mali for 0.75Acre)	Per Sqm/ per Month	5.40
2.41	Maintenance of Kitchen garden including preparation of beds manuring/ fertigation weeding hoeing watering planting of vegetable seeds including spraying of insecticide and pesticide and Harvesting. (Note:-Only Good Earth, Manure, Fertilizer, Insecticide & Pesticide will be provided by the Department and other T & P material/articles shall be provided by the contractor) and as per direction of officer in charge	Per Sqm/ per Month	9.20
2.42	Complete maintenance of trees (Out side garden features), jobs like making of basin at regular interval i/c watering, weeding, pruning & application of fertilizer etc, (excluding the cost of material which shall be supplied by the department and other T & P material/articles shall be provided by the contractor) and as per direction of officer in charge.		

Item Code	Description	Unit	Justified Rate
2.42.1	Trees for 250 no/(up to 4 & up to 3 year Slow & Fast growing group)	Per Plant/ per Month	63.05
2.42.2	Trees for 300 no/ (4-8 & 5-6 year Slow & Fast growing group)	Per Plant/ per Month	52.55
2.42.3	Trees for 1200 no (beyond 8 year Slow & beyond 6 Fast growing group)	Per Plant/ per Month	13.15
2.43	Complete maintenance of shrubs (Out side garden features), jobs like making of basin at regular interval i/c watering, weeding, pruning & application of fertilizer etc, (excluding the cost of material which shall be supplied by the department) and as per direction of officer in charge.	Per Plant/ per Month	31.55
2.44	Maintenance of Potted Plants at Nursery in Earthen pot including resetting/ displaying at Nursery, including watering, weeding, hoeing, colouring, transplanting the damaged pots and disposal of generated garbage at specified place as per direction of officer-in-charge. (Note:-Good earth, manure, fertilizer, insecticide & pesticide will be provided by the department) (Earthen pot 2000 nos)	Per Pot / Per Month	7.90
2.45	Maintenance of earthen potted plants in displayed at ground floor only in bungalow,office complex including application of good earth, manure, insecticide, pesticide and fertilizer, removing of dry parts by pruning, cleaning dry leaves and displaying in appropriate place and replacement of broken pots coloring of pots and change of location of pots and replacing with fresh plants as and when required (Materials provided by the department) as per direction of officer in charge (For Earthen pot 750 Nos) Per Month	Per Pot /	21.00
2.46	Maintenance of cement potted plants at ground floor in flats and ground floor bungalow,office complex including application of good earth, manure, insecticide, pesticide and fertilizer, removing of dry parts by pruning, cleaning dry leaves and displaying in appropriate place and replacement of broken pots coloring of pots and change of location of pots and replacing with fresh plants as and when required (Materials provided by the department) as per direction of officer in charge (For of Cement pots 300 no)	Per Pot / Per Month	52.55
2.47	Maintenance of earthen potted plants in displayed at multi storied office buildings,flats and ground floor bungalow,office complex including application of good earth, manure, insecticide, pesticide and fertilizer, removing of dry parts by pruning, cleaning dry leaves and displaying in appropriate place and replacement of broken pots coloring of pots and change of location of pots and replacing with fresh plants as and when required (Materials provided by the department) as per direction of officer in charge (For Earthen pots 250 no)	Per Pot / Per Month	63.05
2.48	Weeding out of lawn by removal of all weeds and other wild growth with roots by forking including disposal of garden rubbish with all loads and lifts complete if top dressing required (cost of manure, sludge or extra good earth to be paid for separately) as per direction and satisfaction of officer in charge		
2.48.1	Where weeds upto 50%	Per Sqm	21.30
2.48.2	Where weeds upto 25%	Per Sqm	10.65
2.49	Supplying of floral foam brick premium quality high density (oasis or equivalent) proper packing box (one Box containing 20 bricks of size 22.5 cm x 10.5 cm x 7.5 cm) at site of work including loading, unloading,carriage with all taxes paid etc.and as per direction of officer in charge.	Per Box	645.00
2.50	Providing & fixing of White River (Stone) Pebbles size of 2" to 2.50" dia in natural colour at site of work including loading, unloading, carriage and all taxes paid etc.and as per direction of officer in charge.	Per Qtl.	585.85
2.51	Arranging of cut flower in flower vases and display the same in a presentable manner including cleaning of vases and replacement of water etc. complete (Cost of Cut flowers will be paid separately) as per direction of officer in charge		
2.51.1	For 3 to 6 spike	Per Flower vase	10.10

Item Code	Description	Unit	Justified Rate
2.51.2	For 7 to 12 spike	Per Flower vase	12.65
2.51.3	For 15 to 20 spike	Per Flower vase	18.95
2.51.4	For above 20 spike	Per Flower vase	25.25
2.52	Stage Decoration with arrangement of cut flower height 15 cm to 75 cm with 6 to 8 Row of flower and fillers on the oasis in presentable manner in the tray as per design approved by authority including clearing of site (Cost of Tray, Oasis and Cut flowers will be paid separately) as per direction of officer in charge	Per Metre Length	151.60
2.53	Providing and watering of irrigation water through water tanker of Horticulture features i.e. lawn, tree, shrubs, hedge/edge, ground cover etc. at the site of work. Water tanker having 5000 lit. capacity with one labour for watering i/c cost of water, filling of tanker, watering at site with all leads and lifts as per direction of officer-in-charge.	Per Trip	938.35
2.54	Anti termite treatment by digging holes 30 cm deep and 4 cm dia, 6 to 7 holes around the tree using chemical emulsion at the rate of 1.5 liter per hole in two time or more application to get the trees free from termite infection chemicals used Chlorpyriphos 20% EC in the ratio of 1% concentration and as per direction of officer-in-charge.	Each Tree	48.70
2.55	Providing and applying anti termite treatment of infected trees i/c all branches/leaves by spraying chemical emulsion 0.5% (Chlorpyriphos 20% EC) concentration through power spray machine (@ 100 ml Chlorpyriphos per tree i/c cost of chemical) and as per direction of officer-in-charge.and as per direction of officer-in-charge.	Each Tree	55.15
2.56	Anti termite treatment of lawn area through premise 30.50% I P. one liter premise diluted in 499 liters water and applying solution @ 1.00 litre solution per sqm lawn or bed area.(two application) i/c cost of chemical)and as per direction of officer-in-charge.and as per direction of officer-in-charge.	Per sqm	7.45
2.57	Plantation of Trees, Shrubs, and Hedge at site i/c watering and removal of unserveiceable material's as per direction of officer in charge (excluding cast of plant & water)		
2.57.1	Trees Plant	Each	6.05
2.57.2	Shrubs Plant	Each	3.05
2.57.3	Hedge Plant /Ground cover	Each	2.00
2.58	Providing and fixing of Tuflex Garden fencing Hexagonal net/or equivalent of green colour having contents (Weight grams/sqm. 510 (+/- 8%)) in width of 60 cm. with bamboo of 90 cm. length. The bamboo should be painted with green colour paint of approved brand and manufacture (two or more coats) and fixed 30 cm. below ground level and 60 cm. above ground level at a distance of 1.50 mtrs. The net and bamboo should be binded with 2 mm. G.I. Wire at three places properly as per direction of Engineer-in-charge.	Sqm.	197.00
2.59	Cleaning and Sweeping of Lawn / Garden area and keep it neat and clean by mechanized method / manually, remove litter,debries, picking of leaves, papers, plastic bottles etc. including disposal of collected waste in dustbin/ designated place, as per direction of officer -in- charge (All T & P, materials/ articles shall be provided by the contractor.)		
2.59.1	For Prestigious Area	Sqm.	2.75
2.59.2	For Other Prime Area	Sqm.	2.35
2.60	Removal of garden waste by TATA 407 or equivalent including loading/ unloading and carriage upto 1 km lead,complete disposal upto designated place as per direction of officer-in-charge .	Per Trip	395.30
2.61	Pruning, trimming, shaping of trees /shrubs (ht 15 feet and above) i/c removal of cut materials upto 50mt. Lead, as per direction of officer in charge. T&P shall be arranged by the contractor.	Per tree	82.35
3	FOLIAGE AND SHADE LOVING PLANTS		

Item Code	Description	Unit	Justified Rate
3.1	Providing and displaying of Aglaonema Butterfly having ht.30 cm 10 to 12 fresh, healthy and attractive colorful leaves, well developed in 25 cm size Earthen pot/Plastic pot & as per direction of the officer-in-charge.	Each	184.50
3.2	Providing and displaying of Aglaonema Ice ht.25 cm having 10 to 12 fresh, healthy and attractive colorful leaves, well developed in 25 cm size Earthen pot/Plastic pot & as per direction of the officer-in-charge.	Each	184.50
3.3	Providing and displaying of Aglaonema Parrot Jungle (three in one), having ht. 30 cm and above with 20 to 25 leaves, well developed, fresh & healthy in 25 cm size of Earthen pot/Plastic pot & as per direction of the officer- in-charge.	Each	67.65
3.4	Providing and displaying of Aglaonema Dove variety having ht. 30 cm to 45 cm with 8 to 10 leaves, well developed, fresh and healthy in 25 cm size of Earthen pot/Plastic pot & as per direction of the officer-in-charge.	Each	87.15
3.5	Providing and displaying of Aglaonema Pseudo-bractatum s, having ht. 30 cm and above with 3 to 4 suckers & 20 to 25 leaves, well developed, fresh and healthy in 25 cm size of Earthen pot/Plastic pot & as per direction of the officer-in-charge.	Each	87.15
3.6	Providing and Displaying of Aglaonema Sam plant ht.30 cm well developed three in one, having 18 to 20 fresh, healthy and attractive colorful leaves in 35 cm size Earthen pot/Chali/Tray & as per direction of the officer-in-charge.	Each	307.50
3.7	Providing and displaying of Aglaonema Snow-White hybrid (three in one), having ht. 30 cm & above with 6 to 8 leaves, bright colour, well developed, fresh and healthy in 25 cm size of Earthen pot/Plastic pot. (Specimen) & as per direction of the officer-in-charge.	Each	217.30
3.8	Providing and displaying of Aglaonema Silver Queen having 30 cm to 45 cm. ht. with 12 to 15 leaves, multi suckers, fresh and healthy leaves, well developed in 25 cm dia Earthen pot/Plastic pot & as per direction of the officer-in-charge.	Each	161.95
3.9	Providing and displaying of Aglaonema ernesto (three in one), having ht. 45 cm & above with 12 to 15 leaves, well developed, fresh and healthy in 25 cm size of Earthen pot/Plastic pot.& as per direction of the officer-in-charge.	Each	188.60
3.10	Providing and displaying of Aglaonema marentifolium variety having ht. 23 cm to 30 cm with 8 to 10 leaves, well developed, fresh and healthy with colorful leaves in 20 cm size of Earthen pot/Plastic pot. & as per direction of the officer-in-charge.	Each	67.65
3.11	Providing and displaying of Aglaonema modestum having ht. 23 cm to 30 cm with 3 to 4 suckers & 15 to 20 leaves, well developed, fresh and healthy in 25 cm size of Earthen pot/Plastic pot. & as per direction of the officer-in-charge.	Each	67.65
3.12	Providing and displaying of Aglaonema nitida having ht. 30 cm to 45 cm with 8 to 10 leaves, well developed, fresh and healthy with attractive leaves in 25 cm size of Earthen pot/Plastic pot.& as per direction of the officer-in-charge.	Each	161.95
3.13	Providing and displaying of Araucaria cookie having ht. 60 cm to 75 cm, straight, well developed, fresh and healthy with lush green leaves from bottom to top in 20 cm size of Earthen pot/Plastic pot. & as per direction of the officer-in-charge.	Each	188.60
3.14	Providing and displaying of Araucaria cookie having ht. 75 cm to 90 cm, straight, well developed, fresh and healthy with lush green leaves from bottom to top in 25 cm size of Earthen pot/Plastic pot & as per direction of the officer-in-charge.	Each	215.25
3.15	Providing and Displaying of Araucaria cookie having ht. 90 cm to 120 cm, straight, well developed, fresh and healthy with lush green leaves from bottom to top in 25 cm size of earthen pot/plastic pot	Each	256.25
3.16	Providing and displaying of Araucaria cookie having ht. 1.20 m to 1.35 m, straight, well developed, fresh and healthy with lush green leaves from bottom to top in 25 cm size of Earthen pot/Plastic pot & as per direction of the officer-in-charge.	Each	377.20

Item Code	Description	Unit	Justified Rate
3.17	Providing and displaying of Araucaria cookie having ht. 1.80 m to 1.95 m, straight, well developed, fresh and healthy with lush green leaves from bottom to top in 30 cm size of Earthen pot/Plastic pot & as per direction of the officer-in-charge.	Each	563.75
3.18	Providing and displaying of Areca Palm having ht. 90 cm to 1.20 m with 4 to 5 suckers, well developed, fresh and healthy with lush green foliage in 25 cm size of Earthen pot/Plastic pot & as per direction of the officer-in-charge.	Each	157.85
3.19	Providing and displaying of Areca Palm having ht. 1.20 m to 1.50 m with 5 to 6 suckers, well developed, fresh and healthy with lush green foliage in 25 cm size of Earthen pot/Plastic pot & as per direction of the officer-in-charge.	Each	169.15
3.20	Providing and displaying of Areca palm having ht. 1.50 m to 1.80 m with 6 to 8 suckers, well developed, fresh and healthy with lush green foliage in 25 cm size of Earthen pot/Plastic pot & as per direction of the officer-in-charge.	Each	193.75
3.21	Providing and displaying of Areca Palm having ht. 1.80 m to 2.10 m with 8 to 10 suckers, well developed, fresh and healthy with lush green foliage in 30 cm size of Earthen pot/Plastic pot & as per direction of the officer-in-charge.	Each	349.55
3.22	Providing and displaying of Areca Palm having ht. 2.40 m to 2.70 m with 12 to 14 suckers, well developed, fresh and healthy with lush green foliage in 35 cm size of Bucket type cement pots & as per direction of the officer-in-charge.	Each	592.45
3.23	Providing and displaying of Brassia Variegated having ht. 30 cm, well developed with fresh and healthy foliage in 20 cm size of Earthen pot/ Plastic pot & as per direction of the officer-in-charge.	Each	75.85
3.24	Providing and displaying of Brassia Variegated having ht. 30 cm to 45 cm, well developed with fresh and healthy foliage in 25 cm size of Earthen pot /Plastic pot. & as per direction of the officer-in-charge.	Each	118.90
3.25	Providing and Displaying of Brassia hicolour 3 in 1 well developed with fresh, healthy from bottom to top with 30 cm to 45 cm ht. in 25 cm size Plastic pot/Earthen pot	Each	128.15
3.26	Providing and displaying of Chamaedorea elegans palm having ht. 60 cm to 75 cm, well developed with fresh and healthy leaves in 25 cm size of Earthen pot/Plastic pot. & as per direction of the officer-in-charge.	Each	107.65
3.27	Providing and displaying of Croton Challenger variety having ht. 30cm and above, well developed with full of fresh and healthy leaves in 20 cm size of Earthen pot/Plastic pot & as per direction of the officer-in-charge.	Each	45.10
3.28	Providing and displaying of Croton baby golden variety having ht.30 cm and above, well developed with full of fresh and healthy leaves in 20 cm size of Earthen pot/Plastic pot & as per direction of the officer-in-charge.	Each	41.00
3.29	Providing and displaying of Croton Baby Golden Punctatum Aureum having ht. 23 cm to 30 cm, well developed with fresh and healthy foliage in 15 cm size of Earthen pot/Plastic pot. as per direction of the officer-in-charge.	Each	33.85
3.30	Providing and displaying of Croton Golden having ht. 45 cm to 60 cm with 2 to 3 branches, well developed, fresh and healthy foliage in 25 cm size of Earthen pot/Plastic pot as per direction of the officer-in-charge.	Each	56.40
3.31	Providing and displaying of Croton Baby Golden (three in one), having ht. 30cm, multi branches, well developed with fresh and healthy foliage in 25 cm size of Earthen pot/Plastic pot. as per direction of the officer-in-charge.	Each	85.10
3.32	Providing and displaying of Croton golden (Broad Leaves) having ht. 60 cm to 75 cm with 3 to 4 branches, well developed, fresh and healthy leaves in 25 cm size of Earthen pot/Plastic pot. & as per direction of the officer-in-charge.	Each	56.40
3.33	Providing and displaying of Croton Golden specimen having ht. 90 cm to 1.05 cm with 5 to 6 branches, well developed, fresh and healthy foliage in 30 cm size of Earthen pot/Plastic pot as per direction of the officer-in-charge.	Each	172.20

Item Code	Description	Unit	Justified Rate
3.34	Providing and displaying of Croton Duck foot (Elite) having ht. 45 cm and above with 3 to 4 branches, well developed, fresh and healthy leaves in 25 cm size of Earthen pot/Plastic pot. & as per direction of the officer-in-charge.	Each	112.75
3.35	Providing and displaying of Croton Duck Foot (Elite) having ht. 60 cm to 75 cm with 4 to 5 branches, well developed, fresh and healthy colorful leaves in 25 cm size of Earthen pot/Plastic pot & as per direction of the officer-in-charge.	Each	322.90
3.36	Providing and displaying of Croton Petra Bangalore variety having ht 45 cm & above, well developed with fresh and healthy leaves in 20 cm size of Earthen pot/Plastic pot. & as per direction of the officer-in-charge.	Each	117.90
3.37	Providing and displaying of Croton Petra having ht. 45 cm & above with 2 to 3 branches, well developed, fresh and healthy leaves in 25 cm size of Earthen pot/Plastic pot. & as per direction of the officer-in-charge.	Each	123.00
3.38	Providing and displaying of Croton Petra Bangalore variety having ht. 60 cm to 75 cm with 4 to 6 branches, well developed, fresh and healthy colorful leaves in 25 cm size of Earthen pot/Plastic pot & as per direction of the officer-in-charge.	Each	344.40
3.39	Providing and displaying of Croton Petra Bangalore (Specimen) variety having ht. 60 cm to 75 cm with 4 to 6 branches, well developed, fresh & healthy foliage approximately 60-65 leaves in 30 cm size of Earthen pot/ Plastic pot & as per direction of the officer-in-charge.	Each	538.15
3.40	Providing and displaying of Dieffenbachia Tropic-snow having ht. 60 cm & above with 8 - 10 leaves, well developed, fresh & healthy in 25 cm size of Earthen pot/Plastic pot & as per direction of the officer-in-charge.	Each	78.95
3.41	Providing and displaying of Dieffenbachia Mosaic having ht. 30cm to 45 cm with 10-12 leaves, well developed, fresh and healthy in 25 cm size of Earthen pot/Plastic pot. & as per direction of the officer-in-charge.	Each	78.95
3.42	Providing and displaying of Dieffenbachia Maculata having ht. 45 cm to 60 cm with 5 and above leaves, well developed, fresh and healthy & attractive variegated foliage in 25 cm size of Earthen pot/Plastic pot & as per direction of the officer-in-charge.	Each	150.70
3.43	Providing and Displaying of Dieffenbachia superba, well developed, with 10-12 fresh, healthy and attractive leaves 45 cm to 60 cm ht. in 25 cm size Earthen pot/Plastic pot & as per direction of the officer-in-charge.	Each	164.00
3.44	Providing and displaying of Dracaena Song of India (three in one), having ht. 30 cm and above, multibranching, well developed with fresh and healthy leaves in 25 cm size of Earthen pot/Plastic pot & as per direction of the officer-in-charge.	Each	112.75
3.45	Providing and displaying of Dracaena song of India specimen (three in one), having ht. 60 cm & above, well developed, fresh and healthy with good foliage in 25 cm size of Earthen pot/Plastic pot & as per direction of the officer-in-charge.	Each	141.45
3.46	Providing and displaying of Dracaena Song of India Green (three in one), having ht. 30 cm, well developed, fresh & healthy, lush green foliage from bottom to top in 20 cm size of Earthen pot/Plastic pot & as per direction of the officer-in-charge.	Each	45.10
3.47	Providing and displaying of Dracaena Song of India variegated having ht. 30 cm to 45 cm, well developed, fresh & healthy foliage with bright leaves in 20 cm size of Earthen pot/Plastic pot & as per direction of the officer-in-charge.	Each	45.10
3.48	Providing and displaying of Dracaena Kedarnath having ht. 30 cm & above, well developed with good colorful foliage in 20 cm size of Earthen pot/ Plastic pot. & as per direction of the officer-in-charge.	Each	45.10
3.49	Providing and displaying of Dracaena Marginata having ht. 30 cm to 45 cm with colorful leaves, fresh and healthy in 20 cm size of Earthen pot/Plastic pot & as per direction of the officer-in-charge.	Each	47.15
3.50	Providing and displaying of Dracaena mahatma having ht. 30 cm to 45 cm, well developed, fresh and healthy foliage in 20 cm size of Earthen pot/ Plastic pot & as per direction of the officer-in-charge.	Each	45.10

Item Code	Description	Unit	Justified Rate
3.51	Providing and Displaying of Dracaena pendanus, well developed, having 6 to 8 suckers with healthy foliage in 25 cm size Earthen pot/Plastic pot & as per direction of the officer-in-charge.	Each	184.50
3.52	Providing and displaying of Dracaena rosea having ht. 30 cm & above with 8 to10 leaves, well developed, fresh and healthy in 20 cm size of Earthen pot/Plastic pot & as per direction of the officer-in-charge.	Each	45.10
3.53	Providing and displaying of Dracaena Victoria having ht. 30 cm & above, well developed with full of leaves, fresh and healthy in 25 cm size of Earthen pot/Plastic pot & as per direction of the officer-in-charge.	Each	59.45
3.54	Providing and displaying of Dracaena fragrans"Massangeana" having ht. 30 cm & above with full of leaves, well developed, fresh and healthy in 25 cm size of Earthen pot/Plastic pot & as per direction of the officer-in-charge.	Each	59.45
3.55	Providing and displaying of Dracaena warneckii having ht. 30 cm to 45 cm. with good colour foliage, well developed, fresh and healthy in 20 cm size of Earthen pot/Plastic pot & as per direction of the officer-in-charge.	Each	56.40
3.56	Providing and displaying of Livistona palm having ht. 30 cm to 45 cm, well developed with 5 to 6 leaves, fresh & healthy foliage in 25 cm size of Earthen pot/Plastic pot as per direction of the officer-in-charge.	Each	86.10
3.57	Providing and displaying of Livistona palm having ht. 60 cm to 75 cm, well developed with 8 to 10 leaves, fresh & healthy foliage in 30 cm size of Earthen pot/Plastic pot. as per direction of the officer-in-charge.	Each	215.25
3.58	Providing and displaying of Monestaria mounted on moss stick 90 cm ht., 2 to 3 in one pot well developed with fresh & healthy foliage in 25 cm size of Earthen pot/Plastic pot & as per direction of the officer-in-charge.	Each	215.25
3.59	Providing and displaying of Money Broad Leaves mounted on moss stick 90 cm ht., 3 to 4 s in each pot, well developed with full of fresh & healthy leaves in size of 25 cm Top dia x 18 cm Bottom dia x 25 cm Perpendicular height Earthen pot/Plastic pot. & as per direction of the officer-in-charge.	Each	184.50
3.60	Providing and displaying of Money Broad Leaves mounted on moss stick 1.20 m ht., 5 to 6 s in each pot, well developed with full of fresh & healthy leaves in size of 25 cm Top dia x 18 cm Bottom dia x 25 cm Perpendicular height Earthen pot/Plastic pot & as per direction of the officer-in-charge.	Each	246.00
3.61	Providing and displaying of Money Golden leaves mounted on moss stick 90cm ht., having 3 s at equal distance, well developed with full of fresh, shining and healthy leaves from bottom to top in 25 cm size of Earthen pot/Plastic pot & as per direction of the officer-in-charge.	Each	184.50
3.62	Providing and displaying of Philodendron Burgundy mounted on moss stick 90 cm ht., well developed with full of fresh & healthy leaves from bottom to top in 25 cm size of Earthen pot/Plastic pot & as per direction of the officer-in-charge.	Each	258.30
3.63	Providing and displaying of Philodendron emerald red colour mounted on moss stick 90 cm ht., having 3 s placed at equal distance, well developed with full of fresh & healthy leaves in 25 cm size of Earthen pot/Plastic pot & as per direction of the officer-in-charge.	Each	377.20
3.64	Providing and displaying of Philodendron Envy mounted on moss stick 90 cm ht., well developed with full of fresh & healthy leaves in 30 cm size of Earthen pot/Plastic pot & as per direction of the officer-in-charge.	Each	430.50
3.65	Providing and displaying of Philodendron Oxycodium mounted on moss stick 90 cm ht., having 3 s placed at equal distance, well developed with full of fresh & healthy leaves in 25 cm size of Earthen pot/Plastic pot & as per direction of the officer-in-charge.	Each	161.95

Item Code	Description	Unit	Justified Rate
3.66	Providing and displaying of Philodendron Oxycodium Golden Colour Mounted on moss stick 90 cm ht., having 3 s placed at equal distance, well developed with full of fresh & healthy leaves in 25 cm Top dia x 18 cm Bottom dia x 25 cm Perpendicular height Earthen pot/Plastic pot & as per direction of the officer-in-charge.	Each	172.20
3.67	Providing and displaying of Philodendron Oxycodium Golden Colour Mounted on moss stick 1.20 m ht., having 3 to 4 s placed at equal distance, well developed with full of fresh & healthy leaves in 25 cm size of Earthen pot/ Plastic pot & as per direction of the officer-in-charge.	Each	233.70
3.68	Providing and displaying of Philodendron Oxycodium mounted on moss stick 1.20 m ht., having 3 s placed at equal distance, well developed with full of fresh & healthy leaves in 25 cm size of Earthen pot/Plastic pot & as per direction of the officer-in-charge.	Each	246.00
3.69	Providing and displaying of Philodendron selloum having ht. 30 cm to 45 cm with 8 to 10 leaves, well developed, fresh and healthy foliage in 25 cm size of Earthen pot/Plastic pot & as per direction of the officer-in-charge.	Each	161.95
3.70	Providing and displaying of Philodendron selloum having ht. 45 cm to 60 cm with 12 to 16 leaves, well developed, fresh and healthy foliage in 30 cm size of Earthen pot/Plastic pot & as per direction of the officer-in-charge.	Each	215.25
3.71	Providing and displaying of Philodendron Ceylon gold having ht. 30 cm to 45 cm with 8 to10 leaves, well developed, fresh & healthy bright colour leaves in 15 cm size of Earthen pot/Plastic pot & as per direction of the officer-in-charge.	Each	191.70
3.72	Providing and displaying of Philodendron Xanadu having 15 to 20 leaves, well developed with full of fresh & healthy leaves in 25 cm size of Earthen pot/Plastic pot & as per direction of the officer-in-charge.	Each	183.50
3.73	Providing and displaying of Philodendron moonlight having ht. 30 cm to 45 cm with 10 to 12 leaves, well developed, fresh & healthy bright colour leaves in 25 cm size of Earthen pot/Plastic pot & as per direction of the officer-in-charge.	Each	205.00
3.74	Providing and displaying of Phoenix palm having ht. 75 cm to 90 cm with 10 to 15 or more leaves, well developed, fresh and healthy in 25 cm size of Earthen pot/Plastic pot & as per direction of the officer-in-charge.	Each	215.25
3.75	Providing and displaying of Raphes palm having ht. 45 cm to 60 cm with 5 to 7 suckers, well developed, full of fresh and healthy leaves in 25 cm size of Earthen pot/Plastic pot & as per direction of the officer-in-charge.	Each	184.50
3.76	Providing and displaying of Raphis palm having ht. 75 cm to 90 cm with 12 to 15 equal suckers, well developed, full of fresh & healthy leaves from bottom to top in 25 cm size Earthen pot/Plastic pot & as per direction of the officer-in-charge.	Each	322.90
3.77	Providing and displaying of Raphis Palm having ht. 75 cm to 90 cm with 15 to 18 equal suckers, well developed, full of fresh and healthy leaves from bottom to top in 35 cm PVC Pots/C.Pots & as per direction of the officer-in-charge.	Each	353.65
3.78	Providing and displaying of Raphis palm specimen having ht. 1.50 m to 1.65 m with 40 to 50 lush green suckers, well developed, fresh & healthy foliage leaves in 40 cm size of Earthen Pot/Chali/Tray & as per direction of the officer-in-charge.	Each	530.95
3.79	Providing and Displaying of Rubber black variety, well developed, having 45 to 60 cm ht.with fresh, healthy leaves in 25 cm size Earthen pot/Plastic pot as per direction of officer-in-charge.& as per direction of the officer-in-charge.	Each	92.25
3.80	Providing and Displaying of Rubber variegated, well developed, having 45 to 60 cm ht.with fresh, healthy leaves in 25 cm size Earthen pot/Plastic pot & as per direction of the officer-in-charge.	Each	153.75
3.81	Providing and displaying of Seaforthia Palm having ht. 90 cm to 1.20 m with 6-8 suckers, well developed, fresh and healthy lush green leaves from bottom to top in 20 cm size of Earthen pot/Plastic pot & as per direction of the officer-in-charge.	Each	358.75

Item Code	Description	Unit	Justified Rate
3.82	Providing and displaying of Seaforthia Palm having ht. 1.20 m. to 1.50 m. with 8-10 suckers, well developed, fresh and healthy lush green leaves from bottom to top in 25 cm size of Earthen pot/Plastic pot & as per direction of the officer-in-charge.	Each	394.65
3.83	Providing and displaying of Seaforthia Palm having ht. 1.50 m to 1.80 m with 12-15 suckers, well developed, fresh and healthy lush green leaves from bottom to top in 30 cm size of Earthen pot/Plastic pot & as per direction of the officer-in-charge.	Each	507.40
3.84	Providing and displaying of Sanchezia nobilis having ht. 30 cm & above, well developed with fresh & healthy foliage in 20 cm size of Earthen pot/ Plastic pot & as per direction of the officer-in-charge.	Each	35.90
3.85	Providing and displaying of Schefflera high colour having ht. 25 cm to 30 cm, well developed with fresh & healthy foliage in 25 cm size of Earthen pot/Plastic pot & as per direction of the officer-in-charge.	Each	41.00
3.86	Providing and Displaying of Schefflera green 3 in 1 well developed with fresh, healthy and attractive foliage from having 45 cm to 60 cm ht. in 25 cm size Earthen pot/Plastic pot/as per direction of officer-in-charge.	Each	205.00
3.87	Providing and displaying of Schefflera high colour (three in one), having ht. 25 cm to 30 cm, well developed with fresh and healthy foliage in 30 cm size of Earthen pot/Plastic pot & as per direction of the officer-in-charge.	Each	135.30
3.88	Providing of Schefflera Green (three in one), mounted on moss stick 90 cm, well developed with full of fresh & healthy leaves from bottom to top with rich foliage in 25 cm size of Earthen pot/Plastic pot.as per direction of officer-in-charge.	Each	281.90
3.89	Providing and displaying of Schefflera Varieged, mounted on moss stick 90 cm ht., 3 to 4 s placed in each pot at equal distance, well developed with full of fresh & healthy bright leaves from bottom to top in 25 cm size of Earthen pot/Plastic pot & as per direction of the officer-in-charge.	Each	281.90
3.90	Providing and Displaying of Spathiphyllum (peace lily), having 15 cm to 25 cm ht. blooming stag with fresh & healthy foliage well developed in 15 cm of Earthen pot/plastic pot as per direction of officer-in-charge.	Each	92.25
3.91	Providing and displaying of Syngonium golden mounted on moss stick 90 cm ht., 3 to 4 s placed in each pot at equal distance, well developed with full of fresh & healthy leaves from bottom to top in 25 cm size of Earthen pot/Plastic pot & as per direction of the officer-in-charge.	Each	193.75
3.92	Providing and displaying of Syngonium Variegated mounted on moss stick 90 cm ht., 3 to 4 s placed in each pot at equal distance, well developed with full of fresh & healthy leaves from bottom to top in 25 cm size of Earthen pot/Plastic pot & as per direction of the officer-in-charge.	Each	193.75
4	SEASONAL PLANTS		
4.1	Providing and Displaying Allyssum white in full bloom well developed fresh & healthy Plant in 20 cm Earthen Pot/Plastic Pot and as per direction of the officer-in-charge.	Each	43.05
4.2	Providing and Displaying Anemone hybrid (3 in one) variety well developed with fresh & healthy Flower in full bloom in 25 cm Earthen Pot/Plastic Pot and as per direction of the officer-in-charge.	Each	86.10
4.3	Providing and Displaying Antirrhinum Hybrid Dwarf variety (3 in one) well developed with fresh & healthy Flower multi branch in full bloom in 25 cm Earthen Pot/Plastic Pot and as per direction of the officer-in-charge.	Each	54.35
4.4	Providing and Displaying Antirrhinum Hybrid dwarf variety, specimen (8-10) with fresh & healthy foliage in full bloom well developed in 35 cm Earthen Tray/Challi Pot and as per direction of the officer-in-charge.	Each	538.15
4.5	Providing and Displaying Antirrhinum variety, well developed, fresh & healthy multi branched 30 to 45 cm ht, in full bloom with stacking in 30 cm Earthen Pot/Plastic Pot and as per direction of the officer-in-charge.	Each	54.35

Item Code	Description	Unit	Justified Rate
4.6	Providing and Displaying Asiatic lilly hybrid variety (3 in one) in each pot having in full bloom 3 to 5 flowers 30 to 45 cm ht. well developed in 25 cm Earthen Pot/Plastic Pot and as per direction of the officer-in-charge.	Each	129.15
4.7	Providing and Displaying Aster Hybrid variety in different colour, well developed with fresh & healthy foliage in full bloom 23 to 30 cm ht., in 20 cm Earthen Pot/Plastic Pot and as per direction of the officer-in-charge.	Each	43.05
4.8	Providing and Displaying Begonia rex having 15 to 23 cm ht., well developed with fresh & healthy foliage with 10 to 12 flowers in bloom in 20 cm Earthen Pot/Plastic Pot and as per direction of the officer-in-charge.	Each	64.60
4.9	Providing and Displaying Brachycome well developed with fresh & healthy foliage with 100 to 120 flowers stacking with green painted bamboo stick in 25 cm Earthen Pot/Plastic Pot and as per direction of the officer-in-charge.	Each	129.15
4.10	Providing and Displaying Calceolaria hybrid variety in full bloom well developed with fresh & healthy foliage in 20 cm Earthen Pot/Plastic Pot as per direction of the officer-in-charge.	Each	118.90
4.11	Providing and Displaying Calendula double variety well developed with fresh & healthy foliage in full bloom in 20 cm Earthen Pot/Plastic Pot and as per direction of the officer-in-charge.	Each	54.35
4.12	Providing and Displaying Chrysanthemum double variety, well developed, having 45 to 60 cm ht., with 6 and above flowers with half blooming condition, fresh and healthy with bamboo stacking in 25 cm Earthen Pot and as per direction of the officer-in-charge.	Each	118.90
4.13	Providing and Displaying Chrysanthemum single variety in different colour well developed having 45 to 60 cm ht., minimum 100 and above half bloom flowers open well stacked with bamboo stick having three layer tiding by thread fresh and healthy foliage in 25 cm Earthen Pot and as per direction of the officer-in-charge.	Each	129.15
4.14	Providing and Displaying Chrysanthemum single named variety in different colour well developed, having 45 to 60 cm ht., minimum 150 and above half bloom flowers well stacked with bamboo stick having three layer tiding by thread fresh and healthy foliage in 30 cm Earthen Pot and as per direction of the officer-in-charge.	Each	150.70
4.15	Providing and Displaying Cineraria dwarf in different colour with fresh & healthy foliage well developed in 20 cm Earthen Pot/Plastic Pot and as per direction of the officer-in-charge.	Each	54.35
4.16	Providing and Displaying Cineraria Hybrid dwarf variety in different colour well developed with fresh & healthy foliage in bloom in 25 cm Earthen Pot/ Plastic Pot and as per direction of the officer-in-charge.	Each	64.60
4.17	Providing and Displaying Cineraria long 45 to 60 cm ht., 8 to 10 branch with full bloom specimen plant with green painted stacking in 30 cm Earthen Pot/Plastic Pot and as per direction of the officer-in-charge.	Each	129.15
4.18	Providing and Displaying Clarkia well developed with fresh & healthy foliage, 5 to 6 branches in full bloom with stacking in 25 cm Earthen Pot/Plastic Pot and as per direction of the officer-in-charge.	Each	107.65
4.19	Providing and Displaying Cliathus well developed, with fresh & healthy foliage in bloom 30 to 45 cm ht., with stacking in 25 cm Earthen Pot/ Plastic Pot and as per direction of the officer-in-charge.	Each	86.10
4.20	Providing and Displaying Coleus broad leaves having 3 to 4 branches equal well developed with fresh & healthy foliage in different colour in 25 cm Earthen Pot/Plastic Pot and as per direction of the officer-in-charge.	Each	54.35
4.21	Providing and Displaying Coleus broad leaves having 5 to 6 branches equal well developed with fresh & healthy foliage in different colour in 25 cm Earthen Pot/Plastic Pot and as per direction of the officer-in-charge.	Each	86.10
4.22	Providing and Displaying Cyclamen hybrid variety fresh & healthy in full bloom well developed in 25 cm Earthen Pot/Plastic Pot and as per direction of the officer-in-charge.	Each	215.25

Item Code	Description	Unit	Justified Rate
4.23	Providing and Displaying Cyclamen hybrid variety specimen 5-6 in a pot, fresh & healthy in full bloom well developed in 35 cm Earthen Tray/ Nand. as per direction of the officer-in-charge.	Each	807.70
4.24	Providing and Displaying Dahlia double kenya variety in different colour well developed with 3 to 4 flowers in half bloom, good foliage stacked with Green painted Bamboo sticks, 45 to 60 cm height in 25 cm Earthen Pot/ Plastic Pot and as per direction of the officer-in-charge.	Each	86.10
4.25	Providing and Displaying Dahlia single in different colour with fresh & healthy foliage well developed with 6 to 8 half blooming buds in 20 cm Earthen Pot/ Plastic Pot and as per direction of the officer-in-charge.	Each	26.65
4.26	Providing and Displaying Daisy well developed with fresh & healthy foliage in full bloom in 20 cm Earthen Pot/Plastic Pot and as per direction of the officer-in-charge.	Each	43.05
4.27	Providing and Displaying Dianthus dwarf in different colour fresh & healthy bloom in 20 cm Earthen Pot/Plastic Pot and as per direction of the officer-in-charge.	Each	43.05
4.28	Providing and Displaying Dianthus dwarf specimen 6-8 in a pot with fresh & healthy foliage in full bloom well developed in 35 cm Earthen Tray/Nand as per direction of the officer-in-charge.	Each	377.20
4.29	Providing and Displaying Dianthus in different colour well developed with fresh & healthy foliage 30 cm ht., in full bloom with stacking in 25 cm Earthen Pot/Plastic Pot and as per direction of the officer-in-charge.	Each	54.35
4.30	Providing and Displaying Freesia hybrid 6 to 8 in a pot in full bloom, with fresh and healthy flower and foliage stacked with Green painted bamboo sticks in 25 cm Earthen Pot/Plastic Pot and as per direction of the officer-in-charge.	Each	86.10
4.31	Providing and Displaying Gazania hybrid in different colour well developed with fresh & healthy foliage with full bloom in 25 cm Earthen Pot/Plastic Pot and as per direction of the officer-in-charge.	Each	64.60
4.32	Providing and Displaying Geranium double variety having 30 cm ht., in different colour well developed with fresh & healthy foliage (3 in one) well bloomed in 25 cm Earthen Pot/Plastic Pot and as per direction of the officer-in-charge.	Each	134.30
4.33	Providing and Displaying Gerbera Hybrid, well developed, with fresh and healthy foliage, fully blooms in 25 cm Earthen Pot/Plastic Pot and as per direction of the officer-in-charge.	Each	86.10
4.34	Providing and Displaying Helianthus different colour with full bloom (3 in one) fresh & healthy in 25 cm Earthen Pot/Plastic Pot well developed as per direction of the officer-in-charge.	Each	215.25
4.35	Providing and Displaying Impatiens in different colour well developed fresh and healthy (3 in one) well bloomed in 25 cm Earthen Pot/Plastic Pot and as per direction of the officer-in-charge.	Each	107.65
4.36	Providing and Displaying Marigold jaffri dwarf in different colour well developed with fresh & healthy foliage with 12 to 15 flowers in full bloom specimen plant 23 to 30 cm ht. in 20 cm Earthen Pot/Plastic Pot and as per direction of the officer-in-charge.	Each	54.35
4.37	Providing and Displaying Marigold jaffri orange/yellow/Russet colour well developed with fresh & healthy foliage with 40 to 50 flowers in bloom specimen plant 60 to 75 cm ht in 25 cm Earthen Pot/Plastic Pot and as per direction of the officer-in-charge.	Each	150.70
4.38	Providing and Displaying Marigold jaffri French orange/yellow/Russet colour well developed with fresh & healthy foliage with 60 to 75 flowers in bloom specimen plant 60 to 75 cm ht in 30 cm Earthen Pot/Plastic Pot and as per direction of the officer-in-charge.	Each	107.65
4.39	Providing and Displaying Kalanchoe Hybrid variety in different colour well developed with fresh & healthy foliage in full bloom in 20 cm Earthen pot/ Plastic Pot and as per direction of the officer-in-charge.	Each	54.35
4.40	Providing and Displaying Marigold(Tagetes) inca hybrid different colour having 30 cm and above ht., with 6 to 8 flowers in bloom & blooming condition, well developed pot should be fully covered with fresh and healthy, foliage and flowers in 20 cm Earthen Pot/Plastic Pot and as per direction of the officer-in-charge.	Each	64.60

Item Code	Description	Unit	Justified Rate
4.41	Providing and Displaying Mimulus multi branching bushy plant in different colour well developed fresh & healthy in full bloom in 20 cm Earthen Pot in 20 cm Earthen Pot/Plastic Pot and as per direction of the officer-in-charge.	Each	75.85
4.42	Providing and Displaying Mesembryanthemum in different colour well developed with fresh & healthy foliage in full bloom in 20 cm Earthen Pot/Plastic Pot and as per direction of the officer-in-charge.	Each	32.80
4.43	Providing and Displaying Nemesia well developed with fresh & healthy with good attractive foliage full blooming in 20 cm Earthen Pot/Plastic Pot and as per direction of the officer-in-charge.	Each	54.35
4.44	Providing and Displaying Nasturtium in different colour well developed with fresh & healthy foliage with full bloom in 20 cm Earthen Pot/Plastic Pot as per direction of the officer-in-charge.	Each	54.35
4.45	Providing and Displaying Ornamental Kale Hybrid variety in full bloom with fresh & healthy foliage well developed in 25 cm Earthen Pot in 20 cm Earthen Pot/Plastic Pot and as per direction of the officer-in-charge.	Each	54.35
4.46	Providing and Displaying Pansy Hybrid Sakata in different colour specimen 6-8 in a pot with fresh & healthy foliage in full bloom well developed in 35 cm Earthen Tray/ Nand as per direction of the officer-in-charge.	Each	322.90
4.47	Providing and Displaying Pansy Hybrid Sakata well developed with fresh & healthy foliage with 3 to 4 flower in bloom in 20 cm Earthen Pot/Plastic Pot and as per direction of the officer-in-charge.	Each	54.35
4.48	Providing and Displaying Pansy hybrid sakata in different colour with fresh & healthy foliage well developed in 15 cm Earthen Pot/Plastic Pot and as per direction of the officer-in-charge.	Each	26.65
4.49	Providing and Displaying Petunia hybrid different colour single well developed in full bloom in 20 cm Earthen/Plastic Pot and as per direction of the officer-in-charge.	Each	43.05
4.50	Providing and Displaying Petunia hybrid different variety in different colour well developed with fresh and healthy foliage in full bloom in 25 cm Earthen Pot/Plastic Pot as per direction of the officer-in-charge.	Each	64.60
4.51	Providing and Displaying Petunia hybrid in different colour with fresh & healthy foliage well developed in 15 cm Earthen Pot/Plastic Pot as per direction of the officer-in-charge.	Each	21.55
4.52	Providing and Displaying Petunia hybrid well developed with fresh & healthy foliage in full bloom 6-8 in 35 cm Earthen Tray/Nand as per direction of the officer-in-charge.	Each	322.90
4.53	Providing and Displaying Phlox in different colour well developed with fresh & healthy foliage 30 cm ht., in full bloom with stacking in 25 cm Earthen Pot/Plastic Pot and as per direction of the officer-in-charge.	Each	54.35
4.54	Providing and Displaying Poinsettia Dwarf variety different colour well developed 23 to 30 cm ht., 3 to 4 branch full bloom with fresh & healthy foliage in 15 cm Earthen Pot/Plastic Pot and as per direction of the officer-in-charge.	Each	183.50
4.55	Providing and Displaying Poinsettia dwarf multi head, having upto 30 cm ht., with 3 to 4 branches with fully different colored top with fresh & healthy foliage well developed in 20 cm Earthen Pot/Plastic Pot and as per direction of the officer-in-charge.	Each	258.30
4.56	Providing and Displaying Primula Hybrid variety specimen 5-6 in each Pot with fresh & healthy foliage in full bloom different colour well developed in 35 cm Earthen Tray/ Nand as per direction of the officer-in-charge.	Each	430.50
4.57	Providing and Displaying Primula Hybrid variety well developed with fresh & healthy foliage with full bloom in 25 cm Earthen Pot/Plastic Pot and as per direction of the officer-in-charge.	Each	86.10
4.58	Providing and Displaying Ranunculus Hybrid variety in different colour specimen 5-6 in each Pot with fresh & healthy foliage in full bloom well developed in 35 cm Earthen Tray/ Nand as per direction of the officer-in-charge.	Each	516.60

Item Code	Description	Unit	Justified Rate
4.59	Providing and Displaying Ranunculus Hybrid variety well developed with fresh & healthy foliage with 2-3 flower in bloom in 25 cm Earthen Pot/ Plastic Pot and as per direction of the officer-in-charge.	Each	107.65
4.60	Providing and Displaying Salvia dwarf variety with fresh & healthy foliage well developed multi branching in blooming stage in 15 cm Earthen Pot/ Plastic Pot and as per direction of the officer-in-charge.	Each	26.65
4.61	Providing and Displaying Salvia ht. 45 to 60 cm multi branches stacking with bamboo stick specimen type with full bloom well developed in 30 cm Earthen Pot/Plastic Pot and as per direction of the officer-in-charge.	Each	129.15
4.62	Providing and Displaying Salvia ht. 45 to 60 cm multi branches stacking with bamboo stick specimen type with full bloom well developed in 25 cm Earthen Pot/Plastic Pot and as per direction of the officer-in-charge.	Each	107.65
4.63	Providing and Displaying Salvia red Hybrid dwarf variety having 15 to 25 cm ht.,well developed with fresh & healthy foliage in full bloom in 20 cm Earthen pot /Plastic Pot and as per direction of the officer-in-charge.	Each	54.35
4.64	Providing and Displaying Salvia red Hybrid dwarf variety having 15 cm to 25 cm ht.,specimen 6 plants with fresh & healthy foliage in full bloom well developed in 35 cm Earthen Try/nand and as per direction of the officer-in-charge.	Each	54.35
4.65	Providing and Displaying Star of Bethlehem (Chinchi - Rinchi), 5 to 6 plant in each Pot full bloom, with fresh and healthy foliage flower in 25 cm Earthen Pot/Plastic Pot and as per direction of the officer-in-charge.	Each	344.40
4.66	Providing and Displaying Stock Double Blue non-branching having 30 to 45 cm ht., with full bloom, well developed in 20 cm Earthen Pot/Plastic Pot and as per direction of the officer-in-charge.	Each	54.35
4.67	Providing and Displaying Stock double white colour dwarf variety with fresh and healthy foliage with bloom in 20 cm Earthen Pot/Plastic Pot and as per direction of the officer-in-charge.	Each	64.60
4.68	Providing and Displaying Stock single in different colour well developed with fresh & healthy foliage with full bloom in 20 cm Earthen Pot/Plastic Pot and as per direction of the officer-in-charge.	Each	54.35
4.69	Providing and Displaying Tulip Dutch hybrid variety (3 in one) in each pot in full bloom fresh & bright in different colour well developed in 25 cm Earthen Pot/Plastic Pot and as per direction of the officer-in-charge.	Each	183.50
4.70	Providing and Displaying Verbena in different colour having 30 to 45 cm ht., well developed with fresh & healthy foliage in bloom condition in 25 cm Earthen Pot/Plastic Pot and as per direction of the officer-in-charge.	Each	64.60
4.71	Providing and Displaying Celosia well developed fresh & healthy 20 to 25 cm ht. (attractive) multi branching at blooming stage in 20 cm Earthen Pot/ Plastic Pot and as per direction of the officer-in-charge.	Each	54.35
4.72	Providing and Displaying Caladium Hybrid variety 3 to 4 in a pot well developed with fresh & healthy foliage 30 to 45 cm ht. in different colour 25 cm Earthen Pot/Plastic Pot and as per direction of the officer-in-charge.	Each	64.60
4.73	Providing and Displaying Cockscomb well developed fresh & healthy 20 to 25 cm ht. attractive colors fully bloomed in 20 cm Earthen Pot/Plastic Pot and as per direction of the officer-in-charge.	Each	43.05
4.74	Providing and Displaying Cosmos well developed fresh & healthy 20 to 25 cm ht. attractive colors multi branching at blooming stage in 20 cm Earthen Pot/Plastic Pot and as per direction of the officer-in-charge.	Each	43.05
4.75	Providing and Displaying Gaillardia double hybrid variety well developed 30 to 45 cm ht 20 to 30 fresh & healthy flower with green painted bamboo stick in 25 cm Earthen Pot/Plastic Pot and as per direction of the officer-in-charge.	Each	54.35
4.76	Providing and Displaying Gomphrena well developed fresh & healthy 30 to 45 cm ht. bushy plant 15 & above flower in 25 cm Earthen Pot/Plastic Pot and as per direction of the officer-in-charge.	Each	43.05

Item Code	Description	Unit	Justified Rate
4.77	Providing and Displaying Kochia well developed fresh & healthy 20 to 25 cm ht. lush green well shaped in 20 cm Earthen Pot/Plastic Pot and as per direction of the officer-in-charge.	Each	32.80
4.78	Providing and Displaying Kochia well developed fresh & healthy 30 to 45 cm ht. lush green well shaped in 25 cm Earthen Pot/Plastic Pot and as per direction of the officer-in-charge.	Each	43.05
4.79	Providing and Displaying Portulaca hybrid in different colour with bloom well developed fresh & healthy in 20 cm Earthen Pot/Plastic Pot and as per direction of the officer-in-charge.	Each	86.10
4.80	Providing and Displaying Sunflower hybrid well developed 15 to 20 cm ht. with fresh & healthy foliage at blooming stage in 20 cm Earthen Pot/Plastic Pot and as per direction of the officer-in-charge.	Each	32.80
4.81	Providing and Displaying Sunflower single well developed 8 to 10 half bloom buds multi branched in fresh & healthy full stacked with green painted bamboo stick stacking in 25 cm Earthen Pot/Plastic Pot and as per direction of the officer-in-charge.	Each	64.60
4.82	Providing and Displaying Tapioca variegated (Manihot esculenta) well developed fresh & healthy 30 to 45 cm ht. in bright colour foliage in 25 cm Earthen Pot/Plastic Pot and as per direction of the officer-in-charge.	Each	32.80
4.83	Providing and Displaying Vinca different colour 6 to 8 well developed branch in full bloom stacked with green painted Bamboo stick in 25 cm Earthen Pot/Plastic Pot and as per direction of the officer-in-charge.	Each	54.35
4.84	Providing and Displaying Vinca different colour fresh & healthy 23 to 30 cm ht. with bloom multi branchy in 20 cm Earthen Pot/Plastic Pot and as per direction of the officer-in-charge.	Each	26.65
4.85	Providing and Displaying Vinca Hybrid in different colour fresh & healthy 20 to 25 cm ht. with bloom in 20 cm Earthen Pot/Plastic Pot and as per direction of the officer-in-charge.	Each	43.05
4.86	Providing and Displaying Zinnia hybrid double in different colour well developed fresh & healthy 30 to 45 cm ht. (3 to 4 in each pot) full bloom in 25 cm Earthen Pot/Plastic Pot and as per direction of the officer-in-charge.	Each	43.05
4.87	Providing and stacking of plant Motia of height 25 to 30 cm., 2 to 3 branch in earthen pots of size 20 cm Earthen Pot/Plastic Pot and as per direction of the officer-in-charge.	Each	41.00
4.88	Providing and stacking of plant Mogra of height 25 to 30 cm., 2 to 3 branch in earthen pots of size 20 cm Earthen Pot/Plastic Pot and as per direction of the officer-in-charge.	Each	46.15
4.89	Providing and stacking of plant Canna dwarf of height 25 to 30 cm., 2 to 3 suckers in earthen pots of size 20 cm Earthen Pot/Plastic Pot and as per direction of the officer-in-charge.	Each	35.90
4.90	Bush Rose in different colour 2 to 3 healthy branch 30 cm and above ht. well developed with 8 or more flowers / flower buds in 20 cm Earthen pot / Plastic pot as per direction of the officer-in-charge.	Each	25.65
4.91	Providing and Displaying Budded Rose (H.T. variety) 3 to 4 healthy branch 30 cm and above ht. well developed with one and above flower plant in 20 cm Earthen Pot, as per direction of the officer-in-charge.	Each	32.80
4.92	Providing and Displaying Creeper Rose variety 3 to 4 healthy branch 60 cm and above ht. well developed with one and above flowers in 25 cm Earthen Pot, as per direction of the officer-in-charge.	Each	75.85
4.93	Providing and Displaying Standard Rose (H.T. variety) 3 to 4 healthy branch 90 cm and above ht. well developed with one and above flowers in 25 cm Earthen Pot, as per direction of the officer-in-charge.	Each	150.70
5	ORNAMENTAL PLANTS		
5.1	Providing and Displaying Acalypha Different colour well developed, fresh & healthy with good foliage, multi branch 30 to 45 cm ht. in 20 cm size of Earthen Pot/ Plastic Pot bushy as per direction of the officer-in-charge.	Each	35.90

Item Code	Description	Unit	Justified Rate
5.1C	Providing and laying in position specified grade of reinforced cement concrete, excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level :		
5.1C.3	1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	cum	6,918.80
5.2	Providing and Displaying Acalypha green well developed, fresh & healthy with good foliage, multi branch 30 to 45 cm ht. in 20 cm size Earthen Pot/ Plastic Pot bushy as per direction of the officer-in-charge.	Each	35.90
5.3	Providing and Displaying Acalypha red well developed with fresh & healthy 30 to 45 cm ht. in 20 cm size Earthen Pot/ Plastic Pot as per direction of the officer-in-charge.	Each	41.00
5.4	Providing and Displaying Acalypha twisted well developed with fresh & healthy 30 cm ht. in 20 cm size Earthen Pot/ Plastic Pot as per direction of the officer-in-charge.	Each	41.00
5.5	Providing and Displaying Adenium Obesum grafted well developed with fresh & healthy 30 to 60 cm ht. in 25 cm size Earthen Pot/ Plastic Pot as per direction of the officer-in-charge.	Each	287.00
5.6	Providing and Displaying Adenium Obesum well developed with fresh & healthy 4 to 5 branch 60 to 75 cm ht. in 40 cm size Earthen Pot/ Plastic Pot as per direction of the officer-in-charge.	Each	563.75
5.7	Providing and Displaying Bamboo Buddha valley with fresh & healthy 3 to 4 suckers having 75 to 90 cm ht. in 25 cm size Earthen Pot/ Plastic Pot as per direction of the officer-in-charge.	Each	461.25
5.8	Providing and Displaying Bamboo Buddha vally variety with umbrella shape having 120 to 135 ht. with fresh & healthy foliage well developed in 40 cm Cement pot multy branch, bushy as per direction of the officer-in-charge.	Each	1,025.00
5.9	Providing and Displaying Bamboo Buddha Valley with fresh & healthy 5 to 6 suckers 1.80 m to 2.10m ht umbrella type well developed in 50 cm Cement Pot as per direction of the officer-in-charge.	Each	1,435.00
5.9C	Centering and shuttering including strutting, propping etc. and removal of form for :		
5.9C.15	Small lintels not exceeding 1.5 m clear span, moulding as in cornices, window sills, string courses, bands, copings, bed plates, anchor blocks and the like	sqm	243.10
5.10	Providing and Displaying Bird of paradise well developed with fresh & healthy 90 to 120 cm ht in 30 cm Earthen Pot/ Plastic Pot as per direction of the officer-in-charge.	Each	389.50
5.11	Providing and Displaying Bismarckia Palm 115 to 180 cm ht., well developed 12 and above good color fresh and healthy leaves in 40 cm Cement Pot as per direction of the officer-in-charge.	Each	1,937.25
5.12	Providing and Displaying Bougainvillea named variety, Sobhra, Thima, Marry palmar, Cherry Blossom etc. well developed with fresh & healthy bushy in full bloom 75 to 90 cm ht. in 40 cm Cement Pot as per direction of the officer-in-charge.	Each	322.90
5.13	Providing and Displaying Cycus cirsnallis well developed with fresh & healthy 35 to 40 lush green leaves in 40 cm Cement Pot as per direction of the officer-in-charge.	Each	1,947.50
5.14	Providing and Displaying Cycus revoluta in 35 cm challi, specimen , having 30 to 40 with fresh and healthy, leaves having 25cm to 30cm circumfrance of base stem well developed as per direction of the officer-in-charge.	Each	1,183.90
5.15	Providing and Displaying Cycus revoluta specimen , having 45 to 50 fresh and healthy, leaves having 30cm to 35cm circumfrance of base stem well developed in 40 cm challi, as per direction of the officer-in-charge.	Each	1,537.50
5.16	Providing and Displaying Cyprus Golden 30 to 45 cm ht. well developed good Golden colour foliage, Conial Shape in 25 cm Earthen Pots as per direction of the officer-in-charge.	Each	379.25
5.17	Providing and Displaying Cyprus golden well shaped developed with good colored foliage fresh & healthy 60 to 75 cm ht in 30 cm Earthen Pot as per direction of the officer-in-charge.	Each	430.50
5.18	Providing and Displaying Cyprus Golden Conical Shape 150 to 165 cm ht., with fresh and healthy Golden colour foliage in 35cm Cement Pot as per direction of the officer-in-charge.	Each	1,614.40

Item Code	Description	Unit	Justified Rate
5.19	Providing and Displaying Euphorbia milli hybrid variety with multi branch, full bloom, with fresh and healthy well developed having 30 to 45 cm ht. in 35 cm Cement Pots as per direction of the officer-in-charge.	Each	645.75
5.20	Providing and Displaying Ficus black vivion piller topiary (sylinder type) well developed with fresh & healthy 180 to 210 cm ht in 40 cm Cement Pot as per direction of the officer-in-charge.	Each	2,050.00
5.21	Providing and Displaying Ficus Long Island topiary well developed with fresh & healthy 5 to 6 ball specific size and shape 120 to 150 cm ht in 40 cm Cement Pot as per direction of the officer-in-charge.	Each	1,230.00
5.22	Providing and Displaying Ficus Nuda topiary well developed with fresh & healthy 5 to 6 big ball specific size and shape 180to 210cm ht in 40 cm Cement Pot as per direction of the officer-in-charge.	Each	2,593.25
5.22C	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level		
5.22C.1	Mild steel and Medium Tensile steel bars	kg	75.20
5.23	Providing and Displaying Ficus nuda topiary well developed with fresh & healthy foliage 45 to 60cm spread 75 to 90 cm ht. bushy in 35 cm Cement Pot as per direction of the officer-in-charge.	Each	338.25
5.24	Providing and Displaying Ficus Retusa topiary well developed with fresh & healthy 5 to 6 big ball specific size and shape 180 to 210cm ht in 40 cm Cement Pot as per direction of the officer-in-charge.	Each	2,152.50
5.25	Providing and Displaying Ficus reginold well developed fresh & healthy foliage 60 to 75 cm spread 105 to 120 cm ht., Bushy in 35 cm Cement Pot as per direction of the officer-in-charge.	Each	377.20
5.26	Providing and Displaying Ficus reginold piller type Topiary well developed with fresh & healthy 210 to 240 cm ht in 40 cm Cement Pot as per direction of the officer-in-charge.	Each	2,460.00
5.27	Providing and Displaying Ficus reginold Topiary well developed with fresh & healthy 6 to 7 big ball specific size 210 to 240 cm ht in 45 cm Cement Pot as per direction of the officer-in-charge.	Each	2,044.90
5.28	Providing and Displaying Ficus Starlight with fresh, healthy and attractive foliage 45 to 60 cm spread 75 to 90 cm ht., specimen bushy ,in 35 cm Cement Pot as per direction of the officer-in-charge.	Each	861.00
5.29	Providing and Displaying Fishtail palm well developed with fresh & healthy foliage leaves of ht 210 to 240cm Specimen in 35 cm Cement Pot as per direction of the officer-in-charge.	Each	307.50
5.30	Providing and Displaying Foxtail palm well developed with fresh & healthy foliage of ht. 210 to 240 cm in big 40 cm Cement Pot as per direction of the officer-in-charge.	Each	1,183.90
5.31	Providing and Displaying Furcaira variegated well developed with fresh & healthy foliage 8 to 10 leaves in 30 cm Earthen Pot as per direction of the officer-in-charge.	Each	225.50
5.32	Providing and Displaying Furcaria Variegated hybrid well developed with fresh & healthy foliage 20 and above attractive leaves in 35 cm Cement Pot as per direction of the officer-in-charge.	Each	451.00
5.33	Providing and Displaying Golden Bottle brush Topiary well developed with fresh & healthy foliage 5 to 6 big ball 115 to 180 cm ht in 40 cm Cement Pot as per direction of the officer-in-charge.	Each	973.75
5.34	Providing and Displaying Zamia palm well developed with fresh & healthy leaves 90 cm ht in 35 cm cement pot as per direction of the officer-in-charge.	Each	922.50
5.35	Providing and Displaying Latania Rubra Palm well developed with fresh & healthy foliage 150 to 180 cm ht. with 6 to 7 leaves in big 35 cm Cement Pot as per direction of the officer-in-charge.	Each	1,025.00
5.36	Providing and Displaying Mascarena palm well developed with fresh & healthy foliage leaves 150 to 180 cm ht in 35 cm Cement Pot as per direction of the officer-in-charge.	Each	1,845.00
5.37	Providing and Displaying Phoenix roebelenii palm well developed having 20 to 25 fresh & healthy leaves 90 to 105 cm ht. in 30 cm Cement Pot as per direction of the officer-in-charge.	Each	538.15

Item Code	Description	Unit	Justified Rate
5.38	Providing and Displaying Topiary of Ficus Bush King well developed with fresh & healthy foliage from Top to Bottom with single pillar 60 to 75 cm spread, 210 to 225 cm ht., in 35 cm Cement Tray/Cement Pot as per direction of the officer-in-charge.	Each	1,291.50
5.39	Providing and Displaying Topiary of Ficus Nuda well developed with fresh & healthy foliage from Top to Bottom with single pillar 75 to 90 cm spread, 195 to 210 cm ht. in 35 cm Cement Tray /Cement Pot as per direction of the officer-in-charge.	Each	1,291.50
5.40	Providing and Displaying Topiary of Ficus Panda well developed with fresh & healthy foliage with 3 to 4 Ball and 60 to 75 cm spread each Ball, 135 to 150 cm ht., in 35 cm Cement Tray /Cement Pot as per direction of the officer-in-charge.	Each	1,127.50
5.41	Providing and Displaying Topiary of Casuarina fresh & healthy having 5 to 6 specific shape and size ball well developed 195 to 210 cm ht. in 40 cm Cement Pot as per direction of the officer-in-charge.	Each	1,076.25
5.42	Providing and Displaying Travelers palm well developed with fresh & healthy foliage 120 to 150 cm ht. in 35 cm Cement Pot as per direction of the officer-in-charge.	Each	484.85
5.43	Providing and Displaying Travelers palm well developed with fresh & healthy leaves foliage 210 to 240 cm ht specimen in 40 cm Cement Pot as per direction of the officer-in-charge.	Each	973.75
5.44	Providing and Displaying Washingtonia filifera palm well developed 90 to 105 cm ht. having 5 to 6 straight fresh and healthy leaves in 35 cm Cement Pot as per direction of the officer-in-charge.	Each	538.15
6	GROUND COVERS PLANTS		
6.1	Providing and stacking of Alpinia Variegated (three in one) having ht. 30 cm and above, with fresh and healthy variegated foliage in 25 cm size of Earthen Pot/Plastic Pot & as per direction of the officer-in-charge.	Each	121.00
6.2	Providing and stacking of Alternanthera species of height 15 cm to 20 cm, full of branches and foliage in 15 cm size of Earthen Pot/Plastic Pot & as per direction of the officer-in-charge.	Each	20.00
6.3	Providing and stacking of Asparagus marrie, well developed 15 to 20 leaves, full of branches and foliage in 25 cm size of Earthen Pot/Plastic Pot & as per direction of the officer-in-charge.	Each	55.00
6.4	Providing and stacking of Asparagus sprengeri of height 30 cm to 45 cm, full of leafy branches in 15 cm size of Earthen Pot/Plastic Pot & as per direction of the officer-in-charge.	Each	20.00
6.5	Providing and stacking of Aspidistra, having 10 to 15 leaves well developed with fresh & healthy in 25 cm size of Earthen Pot/Plastic Pot & as per direction of the officer-in-charge.	Each	40.00
6.6	Providing and stacking of Clerodendrum inerme having ht. 25 cm to 30 cm multi branched in 20 cm size of Earthen Pot/Plastic Pot & as per direction of the officer-in-charge.	Each	10.00
6.7	Providing and stacking of Clerodendrum inerme of ht. 20 cm to 30 cm multi branched in 15 cm size of Earthen Pot/Plastic Pot & as per direction of the officer-in-charge.	Each	20.00
6.8	Providing and stacking of Chlorophytum (Green), full of leafy suckers in 15 cm size of Earthen Pot/Plastic Pot & as per direction of the officer-in-charge.	Each	20.00
6.9	Providing and stacking of Chlorophytum-variegated, full of leafy suckers in 15 cm size of Earthen Pot/Plastic Pot & as per direction of the officer-in-charge.	Each	20.00
6.10	Providing and stacking of Cuphea chinensis of ht. 20-30 cm full of branches and healthy foliage in 15 cm size of Earthen Pot/Plastic Pot & as per direction of the officer-in-charge.	Each	20.00
6.11	Providing and stacking of Daniella variegated, with 3 to 4 variegated leaves in 20 cm size of Earthen Pot/Plastic Pot & as per direction of the officer-in-charge.	Each	30.00
6.12	Providing and stacking of Duranta Golden, having ht.15 to 20 cm bushy shape with fresh and healthy leaves in 15 cm size of Earthen Pot/Plastic Pot & as per direction of the officer-in-charge.	Each	20.00

Item Code	Description	Unit	Justified Rate
6.13	Providing and stacking of Euphorbia milli hybrid variety, having ht.30 cm to 45 cm with multi branch, full bloom, fresh and healthy leaves in 20 cm size of Earthen Pot/Plastic Pot & as per direction of the officer-in-charge.	Each	70.00
6.14	Providing and stacking of Euphorbia milli hybrid variety, having ht. 30 cm to 45 cm with multi branch, full bloom, fresh and healthy leaves in 30 cm size of Earthen Pot/Plastic Pot & as per direction of the officer-in-charge..	Each	105.00
6.15	Providing and stacking of Ipomea (Golden leaves),with fresh and healthy leaves in 15 cm size of Earthen Pot/Plastic Pot & as per direction of the officer-in-charge.	Each	20.00
6.16	Providing and stacking of Iresine herbstii, of height 20-25 cm. full of branches well developed in 15 cm size of Earthen Pot/Plastic Pot & as per direction of the officer-in-charge.	Each	15.00
6.17	Providing and stacking of Iresine herbstii, of height 25-30 cm., full of branches well developed in 15 cm size of Earthen Pot/Plastic Pot & as per direction of the officer-in-charge.	Each	20.00
6.18	Providing and stacking of Juniperus prostrata with 5 to 6 lateral branches and green foliage in 20 cm size of Earthen Pot/Plastic Pot & as per direction of the officer-in-charge.	Each	30.00
6.19	Providing and stacking of Ophiopogon, Green/Black full of leaves in 15 cm size of Earthen Pot/Plastic Pot & as per direction of the officer-in-charge.	Each	20.00
6.20	Providing and stacking of Ophiopogon jaburan (variegated), full of variegated leaves in 15 cm size of Earthen Pot/Plastic Pot & as per direction of the officer-in-charge.	Each	20.00
6.21	Providing and stacking of Ophiopogon jaburan (variegated),full of variegated leaves in Earthen Pot/Plastic Pot of size 20 cm. as per direction of the officer-in-charge.	Each	30.00
6.22	Providing and stacking of Portulacaria afra (Jade) with 5 to 6 branches in 20 cm size of Earthen Pot/Plastic Pot & as per direction of the officer-in-charge.	Each	30.00
6.23	Providing and stacking of Schefflera green, having 3 to 4 branch, ht. 30 to 45 cm well developed with fresh & healthy in 20 cm size of Earthen Pot/ Plastic Pot as per direction of the officer-in-charge	Each	30.00
6.24	Providing and stacking of Setcreasea purpurea full of variegated leaves in 15 cm size of Earthen Pot/Plastic Pot as per direction of the officer-in-charge	Each	20.00
6.25	Providing and stacking of Syngonium (Butterfly) variegated with 2-3 suckers healthy foliage in Earthen Pot/Plastic Pot of size 20 cm. as per direction of the officer-in-charge.	Each	30.00
6.26	Providing and stacking of Syngonium golden of height 30-45 cm. with 2-3 suckers healthy foliage in Earthen Pot/Plastic Pot of size 20 cm. as per direction of the officer-in-charge.	Each	30.00
6.27	Providing and stacking of Syngonium miniature dwarf, having height 30-45 cm. with 2-3 suckers healthy foliage in Earthen Pot/Plastic Pot of size 20 cm. as per direction of the officer-in-charge.	Each	42.00
6.28	Providing and stacking of Syngonium variegated,of height 20-30 cm. with 2-3 suckers healthy foliage in Earthen Pot/Plastic Pot of size 15 cm. as per direction of the officer-in-charge.	Each	21.00
6.29	Providing and stacking of Tradescantia, full of leaves in Earthen Pot/Plastic Pot of size 15 cm. as per direction of the officer-in-charge.	Each	21.00
6.30	Providing and stacking of Tradescantia zebrina having in 15 cm size of Earthen Pot/Plastic Pot & as per direction of the officer-in-charge.	Each	20.00
6.31	Providing and stacking of Wedelia trilobata,full of leaves in 15 cm size of Earthen Pot/Plastic Pot & as per direction of the officer-in-charge.	Each	15.00
7	TREE PLANTS		
7.1	Providing and stacking of Acacia auriculiformis of ht 150-165 cm in bag size of 25 cm as per direction of the officer-in-charge.	Each	65.00
7.2	Providing and stacking of Adansonia digitata (kalp vricksh) of ht 150-165 cm in bag size of 25 cm as per direction of the officer-in-charge.	Each	265.00

Item Code	Description	Unit	Justified Rate
7.3	Providing and stacking of Albizzia lebbek of height 150-165 cm. in bag of size 25 cm as per direction of the officer-in-charge.	Each	65.00
7.4	Providing and stacking of Alstonia scholaris of height 150-165 cm. in bag of size 25 cm as per direction of the officer-in-charge.	Each	65.00
7.5	Providing and stacking of Azadirachta indica (Neem) of height 120-130cm in big polybag of size 25 cm as per direction of the officer-in-charge.	Each	65.00
7.6	Providing and stacking of Bassia latifolia (Mahua) of height 90-105 cm. in big polybag of size 25 cm as per direction of the officer-in-charge.	Each	65.00
7.7	Providing and stacking of Bauhinia blakeana (Kachnar) of height 120-150 cm. in big poly bags of size 25 cm as per direction of the officer-in-charge. Each	Each	80.00
7.8	Providing and stacking of Bauhinia purpurea (Kachnar) of height 150-165 cm. in big poly bags of size 25 cm as per direction of the officer-in-charge. Each	Each	50.00
7.9	Providing and stacking of Bombax ceiba of height 150-165 cm. in big poly bags of size 25 cm as per direction of the officer-in-charge.	Each	70.00
7.10	Providing and stacking of Bottle palm of ht. 150-180 cm bottom girth 20-25 cm well developed in big poly bags of size 25 cm as per direction of the officer-in-charge.	Each	180.00
7.11	Providing and stacking of Bottle palm of ht. 210-240 cm bottom girth 30-35 cm well developed in big HDPE bags.	Each	350.00
7.12	Providing and stacking of Bottle palm of ht. 270-300 cm bottom girth 40-50 cm well developed in big HDPE bags as per direction of the officer-in-charge.Each	Each	550.00
7.13	Providing and stacking of Butea frondosa (Flame of Forest) of height 60-75 cm. in big poly bags of size 25 cm as per direction of the officer-in-charge. Each	Each	55.00
7.14	Providing and stacking of Callistemon lanceolatus of height 150-165 cm. in big poly bags of size 25 cm as per direction of the officer-in-charge.	Each	65.00
7.15	Providing and stacking of Casuarina equisetifolia of height 150-165 cm in big poly bags of size 25 cm as per direction of the officer-in-charge.	Each	60.00
7.16	Providing and stacking of Cassia fistula (Amaltash) of height 120-135 cm. in big poly bags of size 25 cm as per direction of the officer-in-charge.	Each	65.00
7.17	Providing and stacking of Cassia siamea of height 150-165 cm. in big poly bags of size 25 cm as per direction of the officer-in-charge.	Each	65.00
7.18	Providing and stacking of Cassia javanica of height 120-150 cm. in big poly bags of size 25 cm as per direction of the officer-in-charge.	Each	85.00
7.19	Providing and stacking of Cassia nodosa of height 120-150 cm. in big poly bags of size 25 cm as per direction of the officer-in-charge.	Each	65.00
7.20	Providing and stacking of Ceiba pentandra of height 150-165 cm. in big poly bags of size 25 cm as per direction of the officer-in-charge.	Each	65.00
7.21	Providing and stacking of Chorisia speciosa of height 150-165 cm. in big poly bags of size 25 cm as per direction of the officer-in-charge.	Each	80.00
7.22	Providing and stacking of Chukrassia tabularis of height 150-165 cm. in big poly bags of size 25 cm as per direction of the officer-in-charge.	Each	65.00
7.23	Providing and stacking of Dalbergia sissoo (Seasam) of height 120-135 cm. in big poly bags of size 25 cm as per direction of the officer-in-charge.	Each	55.00
7.24	Providing and stacking of Delonix regia (Gulmohar) of height 150-165 cm. in big poly bags of size 25 cm as per direction of the officer-in-charge.v	Each	60.00
7.25	Providing and stacking of Erythrina indica of height 150-165 cm. in big polybag of size 25 cm as per direction of the officer-in-charge.	Each	65.00

Item Code	Description	Unit	Justified Rate
7.26	Providing and stacking of Ficus benjamina (green) of height 120-135 cm. with 6-8 branches and lush green foliage in g. bags of size 25 cm as per direction of the officer-in-charge.	Each	105.00
7.27	Providing and stacking of Ficus benjamina (green) of height 150-165 cm., bushy with healthy branches and lush green foliage in big size HDPE bags as per direction of the officer-in-charge.	Each	180.00
7.28	Providing and stacking of Ficus bengalensis (Bargad) of height 120-135 cm. in big poly bags of size 25 cm as per direction of the officer-in-charge.	Each	65.00
7.29	Providing and stacking of Ficus bengalensis (varigated) of height 75-90 cm., multibranching in earthen pots of size 30 cm as per direction of the officer-in-charge.	Each	80.00
7.30	Providing and stacking of Ficus bengalensis krishna of height 75-90 cm., multibranching in earthen pots of size 30 cm as per direction of the officer-in-charge.	Each	120.00
7.31	Providing and stacking of Ficus elastica Decora (Rubber) of height 45-60 cm. in earthen pots of size 25 cm as per direction of the officer-in-charge.	Each	65.00
7.32	Providing and stacking of Ficus infectoria (Pilkhan) of height 150-165 cm. in big polybag of size 25 cm as per direction of the officer-in-charge.	Each	65.00
7.33	Providing and stacking of Ficus Iyrata of height 45-60 cm. in earthen pots of size 25 cm as per direction of the officer-in-charge.	Each	90.00
7.34	Providing and stacking of Ficus nuda of height 120-135 cm. with 6-8 branches and lush green foliage in g. bags of size 25 cm as per direction of the officer-in-charge.	Each	120.00
7.35	Providing and stacking of Ficus nuda of height 150-165 cm., bushy with healthy branches and lush green foliage in big size HDPE bags as per direction of the officer-in-charge.	Each	190.00
7.36	Providing and stacking of Ficus religiosa (Peepal) of height 150-165 cm. in big poly bags of size 30 cm as per direction of the officer-in-charge.	Each	65.00
7.37	Providing and stacking of Ficus retusa well branched of height 120-135 cm. in big poly bags of size of 30 cm as per direction of the officer-in-charge.	Each	120.00
7.38	Providing and stacking of Ficus shiela of height 150-165 cm. in big poly bags of size 25 cm as per direction of the officer-in-charge.	Each	85.00
7.39	Providing and stacking of Fishtail palm of ht. 150-180 cm bottom girth 15- 20 cm well developed in big poly bags of size 25 cm as per direction of the officer-in-charge.	Each	200.00
7.40	Providing and stacking of Fishtail palm of ht. 210-240 cm bottom girth 25- 30 cm well developed in big size HDPE bags as per direction of the officer-in-charge.	Each	300.00
7.41	Providing and stacking of Fishtail palm of ht. 270-300 cm bottom girth 40- 50 cm well developed in big size HDPE bags as per direction of the officer-in-charge.	Each	550.00
7.42	Providing and stacking of Foxtail palm of ht. 120-150 cm bottom girth 15- 20 cm well developed in big poly bags of size 25 cm as per direction of the officer-in-charge.	Each	230.00
7.43	Providing and stacking of Foxtail palm of ht. 180-210 cm bottom girth 25- 30 cm well developed in big size HDPE bags as per direction of the officer-in-charge.	Each	480.00
7.44	Providing and stacking of Foxtail palm of ht. 240-270 cm bottom girth 35- 40 cm well developed in big size HDPE bags as per direction of the officer-in-charge.	Each	650.00
7.45	Providing and stacking of Grevillea robusta (Silver Oak) of height 150-165 cm. in big poly bags of size 25 cm as per direction of the officer-in-charge.	Each	50.00
7.46	Providing and stacking of Heterophragma adenophyllum (Marore fali) of height 150-165 cm. in Big poly bag of size 25 cm as per direction of the officer-in-charge.	Each	60.00
7.47	Providing and stacking of Inga dulcis (Jungle Jalebi) of height 150-165 cm. in big poly bags of size 25 cm as per direction of the officer-in-charge.	Each	80.00
7.48	Providing and stacking of Jacaranda mimosifolia of height 150-165 cm. in big poly bags of size 25 cm as per direction of the officer-in-charge.	Each	60.00

Item Code	Description	Unit	Justified Rate
7.49	Providing and stacking of Kigelia pinnata of height 150-165 cm. in big poly bags of size 25 cm as per direction of the officer-in-charge.	Each	80.00
7.50	Providing and stacking of Lagerstroemia flosreginae of height 150-165 cm.in big poly bag of size 25 cm as per direction of the officer-in-charge.	Each	120.00
7.51	Providing and stacking of Lagerstroemia thorelli of height 150-165 cm.in big poly bag of size 25 cm as per direction of the officer-in-charge.	Each	120.00
7.52	Providing and stacking of Magnolia grandiflora of height 150-165 cm. in big poly bag of size 25 cm as per direction of the officer-in-charge.v	Each	380.00
7.53	Providing and stacking of Mangifera indica (Mango-grafted) of height 60-75 cm. in big poly bag of size 25 cm as per direction of the officer-in-charge.	Each	55.00
7.54	Providing and stacking of Melia azedarach of height 120-135 cm. in big poly bag of size 25 cm as per direction of the officer-in-charge.	Each	45.00
7.55	Providing and stacking of Michelia champa (Golden Champa) of height 90- 105 cm. in earthen pots of size 25 cm as per direction of the officer-in-charge.	Each	90.00
7.56	Providing and stacking of Millelita ovalifolia of height 120-135 cm. in big poly bag of size 25 cm as per direction of the officer-in-charge.	Each	55.00
7.57	Providing and stacking of Millingtonia hortensis of height 150-165 cm. in big poly bag of size 25 cm as per direction of the officer-in-charge.	Each	70.00
7.58	Providing and stacking of Mimusops elengi (Maulsri) of height 150-165 cm. in big poly bag of size 25 cm as per direction of the officer-in-charge.	Each	75.00
7.59	Providing and stacking of Mimusops elengi (Maulsri) of height 180-195 cm., well developed with thick stem in big in big size HDPE bag as per direction of the officer-in-charge.	Each	125.00
7.60	Providing and stacking of Nauclea cadamba (Kadam) of height 150-165 cm. in big poly bag of size 25 cm as per direction of the officer-in-charge.	Each	65.00
7.61	Providing and stacking of Parkinsonia species of height 120-135 cm. in big poly bag of size 25 cm as per direction of the officer-in-charge.	Each	45.00
7.62	Providing and stacking of Peltophorum species of height 150-165 cm. in big poly bags of size 25 cm as per direction of the officer-in-charge.	Each	60.00
7.63	Providing and stacking of Phoenix sylvestris Roxb. (Wild date palm/khajur) of height 150-165 cm. in Big HDPE Bag as per direction of the officer-in-charge.	Each	650.00
7.64	Providing and stacking of Phyllanthus emblica (Amla) of height 150-165 cm. in Big HDPE Bag as per direction of the officer-in-charge.	Each	90.00
7.65	Providing and stacking of Pinus longifolia (Pinus) of height 90-105 cm. in cement pots of size 35 cm as per direction of the officer-in-charge.	Each	550.00
7.66	Providing and stacking of Pithecellobium dulce (Jungle Jalebi) of height 120-150 cm. in Big HDPE Bag as per direction of the officer-in-charge.	Each	60.00
7.67	Providing and stacking of Plumeria acutifolia of height 120-135 cm. with 2- 3 branches in HDPE bag of size 30 cm as per direction of the officer-in-charge.	Each	110.00
7.68	Providing and stacking of Plumeria acutifolia of height 150-165 cm. with 3- 4 branches in big size HDPE bag as per direction of the officer-in-charge.	Each	200.00
7.69	Providing and stacking of Plumeria alba of height 120-135 cm. with 2-3 branches in bags of size 30 cm as per direction of the officer-in-charge.	Each	120.00
7.70	Providing and stacking of Plumeria alba of height 165-180 cm. with 3-4 branches and thick stem in big size HDPE bags as per direction of the officer-in-charge.	Each	225.00
7.71	Providing and stacking of Plumeria alba dwarf dwarf of height 90-105 cm. with 3-4 branches and thick stem in big size HDPE bags as per direction of the officer-in-charge.	Each	750.00

Item Code	Description	Unit	Justified Rate
7.72	Providing and stacking of Plumeria rubra of height 120-150 cm. with 3-4 branches and thick stem in big size HDPE bags as per direction of the officer-in-charge.	Each	400.00
7.73	Providing and stacking of Pongamia glabra (Papri) of height 120-135 cm. in big poly bag of size 25 cm as per direction of the officer-in-charge.	Each	50.00
7.74	Providing and stacking of Polyalthia longifolia (Ashok) of height 150-165 cm. in earthen pots of size 25 cm as per direction of the officer-in-charge.	Each	80.00
7.75	Providing and stacking of Polyalthia longifolia (Ashok) of height 180-195 cm. in gunny bag of size 30 cm as per direction of the officer-in-charge.	Each	100.00
7.76	Providing and stacking of Polyalthia pendula (Ashok Pendula) of height 150-165 cm. in earthen pots of size 25 cm as per direction of the officer-in-charge.	Each	80.00
7.77	Providing and stacking of Polyalthia pendula (Ashok Pendula) of height 180-195 cm. in gunny bag of size 30 cm as per direction of the officer-in-charge.	Each	100.00
7.78	Providing and stacking of Pterospermum acerifolium (Kanak Champa) of height 150-165 cm. in big poly bags of size 25 cm as per direction of the officer-in-charge.	Each	65.00
7.79	Providing and stacking of Putranjiva roxburghii of height 90-105 cm. in big polybag of size 25 cm as per direction of the officer-in-charge.	Each	45.00
7.80	Providing and stacking of Saraca indica (Sita Ashok) of height 105-120 cm. in big poly bags of size 25 cm as per direction of the officer-in-charge.	Each	80.00
7.81	Providing and stacking of Schleicheria trijuga (Kusum) of height 150-165 cm. in big poly bags of size 25 cm as per direction of the officer-in-charge.	Each	70.00
7.82	Providing and stacking of Spathodea campanulata of height 150-165 cm. in big poly bags of size 25 cm as per direction of the officer-in-charge.	Each	75.00
7.83	Providing and stacking of Eugenia jambolana (Jamun) of height 150-165 cm. in big poly bags of size 25 cm as per direction of the officer-in-charge. Each	Each	75.00
7.84	Providing and stacking of Tabebuia sp. of height 150-165 cm. in big polybags of size 25 cm as per direction of the officer-in-charge.	Each	85.00
7.85	Providing and stacking of Tamarindus indica (Imli) of height 120-150 cm. in big polybags of size 25 cm as per direction of the officer-in-charge.	Each	80.00
7.86	Providing and stacking of Tecoma argentea of height 120-135 cm. in big poly bag of size 25 cm as per direction of the officer-in-charge.	Each	80.00
7.87	Providing and stacking of Tectona grandis (Teak) of height 150-165 cm. in big polybags of size 25 cm as per direction of the officer-in-charge.	Each	110.00
7.88	Providing and stacking of Terminalia arjuna of height 150-165 cm. in big polybags of size 25 cm as per direction of the officer-in-charge.	Each	60.00
7.89	Providing and stacking of Washingtonia filifea palm stem ht. 90-105 cm with 6-7 healthy leaves lush green leaves well developed in big size HDPE Bags as per direction of the officer-in-charge.	Each	400.00
7.90	Providing and stacking of Washingtonia filifea palm stem ht. 120-135 cm with 8-10 healthy leaves lush green leaves well developed in big size HDPE Bags as per direction of the officer-in-charge.	Each	650.00
8	SHRUBS		
8.1	Providing and stacking of Bauhinia acuminata height 60-75 cm. in earthen pots of size 20 cm as per direction of the officer-in-charge.	Each	45.00
8.2	Providing and stacking of Bauhinia tomentosa (yellow) of height 60-75 cm. in earthen pots of size 20 cm as per direction of the officer-in-charge.	Each	45.00
8.3	Providing and stacking of Beloperone species of height 30-45 cm. in poly bags of size 20 cm as per direction of the officer-in-charge.	Each	40.00

Item Code	Description	Unit	Justified Rate
8.4	Providing and stacking of Caesalpinia pulcherrima species of height 45-60 cm. in earthen pot of size 20 cm as per direction of the officer-in-charge.	Each	45.00
8.5	Providing and stacking of Calliandra, emarginata of height 45-60 cm. in earthen pot of size 20 cm as per direction of the officer-in-charge.	Each	35.00
8.6	Providing and stacking of Calliandra hybrida of height 75-90 cm. with 4-5 branches in bag of size 25 cm as per direction of the officer-in-charge.	Each	45.00
8.7	Providing and stacking of Calliandra hybrida of height 105-120 cm., well branched, bushy in big size HDPE bag as per direction of the officer-in-charge.	Each	90.00
8.8	Providing and stacking of Cassia biflora of height 45-60 cm. in earthen pots of size 20 cm as per direction of the officer-in-charge.	Each	45.00
8.9	Providing and stacking of Cassia biflora of height 60-75 cm. with 4-5 branches in poly bags of size 25 cm as per direction of the officer-in-charge. Each	Each	55.00
8.10	Providing and stacking of Cassia biflora of height 90-105 cm., well branched, bushy in big size HDPE bag as per direction of the officer-in-charge.	Each	100.00
8.11	Providing and stacking of Cassia laevigata of height 45-60 cm. in earthen pots of size 20 cm as per direction of the officer-in-charge.	Each	35.00
8.12	Providing and stacking of Cassia laevigata of height 60-75 cm. with 4-5 branches in bag of size 25 cm as per direction of the officer-in-charge.	Each	40.00
8.13	Providing and stacking of Cestrum nocturnum (Raat ki Rani) of height 60- 75 cm. with 4-5 branches in bag of size 25 cm as per direction of the officer-in-charge.	Each	40.00
8.14	Providing and stacking of Chandni dwarf of height 15-20 cm., well branched in earthen pots of size 20 cm as per direction of the officer-in-charge. s per direction of the officer-in-charge.	Each	35.00
8.15	Providing and stacking of Dombeya mastersii of height 60-75 cm. with 4- 5 branches in bag of size 25 cm as per direction of the officer-in-charge.	Each	110.00
8.16	Providing and stacking of Euphorbia caracasana (bronze colour leaves) of height 60-75 cm. with 2-3 branches in earthen pots of size 20 cm as per direction of the officer-in-charge.	Each	40.00
8.17	Providing and stacking of Euphorbia caracasana (bronze colour leaves) of height 60-75 cm. with 4-5 branches in bag of size 25 cm as per direction of the officer-in-charge.	Each	55.00
8.18	Providing and stacking of Euphorbia caracasana (bronze colour leaves) of height 90-105 cm., bushy in big size HDPE bag as per direction of the officer-in-charge.	Each	105.00
8.19	Providing and stacking of Euphorbia pulcherrima (dark red double bracts) well branched of height 60-75 cm. in earthen pots of size 25 cm as per direction of the officer-in-charge.	Each	110.00
8.20	Providing and stacking of Euphorbia pulcherrima (dark red) well branched (poinsettia Red Hegg) of height 60-75 cm. in earthen pots of size 25 cm as per direction of the officer-in-charge.	Each	60.00
8.21	Providing and stacking of Excoecaria bicolor of height 45-60 cm. in earthen pots of size 20 cm as per direction of the officer-in-charge.	Each	40.00
8.22	Providing and stacking of Ficus blackii (F.vivion) of height 45-60 cm. with 6- 8 branches healthy foliage in earthen pots of size 25 cm as per direction of the officer-in-charge.	Each	110.00
8.23	Providing and stacking of Ficus blackii (F.vivion) (bushy) of height 150-165 cm. with 8-10 branches and healthy foliage in earthen pots of size 30 cm as per direction of the officer-in-charge.	Each	250.00
8.24	Providing and stacking of Ficus reginald well branched, bushy of height 60- 75 cm. in earthen pots of size 25 cm as per direction of the officer-in-charge.	Each	100.00
8.25	Providing and stacking of Ficus panda of height 30-45 cm. with 3-4 branches and healthy foliage in p.bag of size 20 cm as per direction of the officer-in-charge.	Each	35.00
8.26	Providing and stacking of Ficus panda of height 45-60 cm. with 6-7 branches and healthy foliage in p.bag of size 25 cm as per direction of the officer-in-charge.	Each	55.00

Item Code	Description	Unit	Justified Rate
8.27	Providing and stacking of Ficus panda of height 60-90 cm, with 8-10 branches, and healthy foliage, bushy in big size HDPE bag as per direction of the officer-in-charge.	Each	180.00
8.28	Providing and stacking of Ficus panda of height 90-105 cm. with 10-12 branches and healthy foliage, well formed in cement pots of size 30 cm as per direction of the officer-in-charge.	Each	225.00
8.29	Providing and stacking of Ficus long Island of height 15 cm to 20 cm, full of branches and foliage in 20 cm size of Earthen Pot / Plastic Pot & as per direction of the officer-in-charge.	Each	45.00
8.30	Providing and stacking of Gardenia jasminoides of height 45-60 cm. with 3- 4 branches in earthen pots of size 20 cm as per direction of the officer-in-charge.	Each	50.00
8.31	Providing and stacking of Hamelia patens of height 30-45 cm. with 3-4 branches in poly bags of size 20 cm as per direction of the officer-in-charge.	Each	20.00
8.32	Providing and stacking of Hamelia patens of height 60-75 cm. with 6-8 branches in poly bags of size 25 cm as per direction of the officer-in-charge.	Each	50.00
8.33	Providing and stacking of Hamelia patens of height 90-105 cm. bushy in big size HDPE bags as per direction of the officer-in-charge.	Each	100.00
8.34	Providing and stacking of Hamelia patens (Dwarf) of height 30-45 cm. with 3-4 branches in earthen pots of size 20 cm as per direction of the officer-in-charge.	Each	40.00
8.35	Providing and stacking of Hibiscus rosasinensis of height 45-60 cm. with 3-4 branches in earthen pots of size 20 cm as per direction of the officer-in-charge.	Each	35.00
8.36	Providing and stacking of Hibiscus rosasinensis of height 60-75 cm. with 5-6 branches in p.bag of size 25 cm as per direction of the officer-in-charge. Each	Each	45.00
8.37	Providing and stacking of Hibiscus rosasinensis of height 90-105 cm., bushy in big size HDPE bag as per direction of the officer-in-charge.	Each	90.00
8.38	Providing and stacking of Hibiscus variegated of height 45-60 cm. with 3-4 branches and healthy variegated foliage in earthen pots of size 20 cm as per direction of the officer-in-charge.	Each	45.00
8.39	Providing and stacking of Hibiscus variegated of height 60-75 cm. with 8- 10 branches and healthy variegated foliage in cement pots of size 35 cm as per direction of the officer-in-charge.	Each	180.00
8.40	Providing and stacking of Hibiscus variegated of height 60-75 cm. with healthy variegated foliage in earthen pots size 25 cm as per direction of the officer-in-charge.	Each	55.00
8.41	Providing and stacking of Jatropha multifida (red colour) of height 45-60 cm. with 2-3 branches in earthen pots of size 20 cm as per direction of the officer-in-charge.	Each	35.00
8.42	Providing and stacking of Jatropha multifida (red colour) of height 60-75 cm. multibranching in p.bag of size 25 cm as per direction of the officer-in-charge.	Each	45.00
8.43	Providing and stacking of Largerstroemia indica of height 90-105 cm. multibranching in poly bags of size 25 cm as per direction of the officer-in-charge.	Each	40.00
8.44	Providing and stacking of Largerstroemia indica of height 45-60 cm. in polybag of size 20 cm as per direction of the officer-in-charge.	Each	30.00
8.45	Providing and stacking of Malpighia coccigera of height 30-45 cm., multibranching in earthen pots of size 20 cm as per direction of the officer-in-charge.	Each	50.00
8.46	Providing and stacking of Murraya exotica of height 45-60 cm. in poly bags of size 15 cm as per direction of the officer-in-charge.	Each	15.00
8.47	Providing and stacking of Murraya Koenigii spreng (Kadipatta/meetha neem) of ht 45-60 cm well developed in earthen pots of size 20 cm. per direction of the officer-in-charge.	Each	25.00
8.48	Providing and stacking of Mussaenda erythrophylla (Rosea) of height 60- 75 cm. multi branched in earthen pots of size 25 cm as per direction of the officer-in-charge.	Each	110.00
8.49	Providing and stacking of Nerium oleander (kaner) of height 45-60 cm. with 3-4 branches in poly bags of size 20 cm as per direction of the officer-in-charge.	Each	30.00

Item Code	Description	Unit	Justified Rate
8.50	Providing and stacking of Nerium oleander (kaner) of height 60-75 cm. with 5-6 branches in poly bags of size 25 cm as per direction of the officer-in-charge.	Each	40.00
8.51	Providing and stacking of Nerium oleander (kaner) dwarf of height 30-40 cm. in earthen pot of size 20 cm as per direction of the officer-in-charge.	Each	40.00
8.52	Providing and stacking of Nerium oleander variegated of height 45-60 cm. in earthen pots of size 20 cm as per direction of the officer-in-charge.	Each	40.00
8.53	Providing and stacking of Nerium oleander variegated of height 60-75 cm., multibranching in earthen pots of size 25 cm as per direction of the officer-in-charge.	Each	60.00
8.54	Providing and stacking of Nyctanthes arbor-tristis (Hasingar) of ht. 90-105 cm in Earthen pots of size 20 cm as per direction of the officer-in-charge.	Each	40.00
8.55	Providing and stacking of Plumbago capensis well developed with fresh and healthy 30 to 45 cm ht., with bloom in 20 cm Earthen Pot/Plastic Pot as per direction of the officer-in-charge.	Each	60.00
8.56	Providing and stacking of Putranjiva roxburghii of ht. 45-60 cm in bag of size 15 cm as per direction of the officer-in-charge.	Each	20.00
8.57	Providing and stacking of Putranjiva roxburghii of ht. 60-75 cm in bag of size 20 cm as per direction of the officer-in-charge.	Each	30.00
8.58	Providing and stacking of Tabernaemontana coronaria (Chandni single) of height 45-60 cm. in earthen pots of size 20 cm as per direction of the officer-in-charge.	Each	35.00
8.59	Providing and stacking of Tabernaemontana coronaria (Chandni single) of height 75-90 cm. with 5-6 branches in bag of size 25 cm as per direction of the officer-in-charge.	Each	45.00
8.60	Providing and stacking of Tabernaemontana coronaria (Chandni single) of height 90-105 cm.,bushy in big size HDPE bag as per direction of the officer-in-charge.	Each	80.00
8.61	Providing and stacking of Tabernaemontana coronaria (chandni variegated) of height 45-60 cm. with 3-4 branches earthen pots of size 20 cm as per direction of the officer-in-charge.	Each	45.00
8.62	Providing and stacking of Tabernaemontana coronaria (Chandni single) variegated of height 60-75 cm., 5-6 branches in p.bags of size 25 cm as per direction of the officer-in-charge.	Each	55.00
8.63	Providing and stacking of Tabernaemontana coronaria (Chandni single) variegated of height 105-120 cm., multibranching, bushy in big size HDPE bag as per direction of the officer-in-charge.	Each	110.00
8.64	Providing and stacking of Tabernaemontana divaricata (Chandni double) of height 45-60 cm. in earthen pots of size 20 cm as per direction of the officer-in-charge.	Each	40.00
8.65	Providing and stacking of Tabernaemontana divaricata (Chandni double) of height 75-90 cm. with 4-5 branches in bag of size 25 cm as per direction of the officer-in-charge.	Each	40.00
8.66	Providing and stacking of Tabernaemontana divaricata (Chandni double) of height 90-105 cm., bushy in big size HDPE bag as per direction of the officer-in-charge.	Each	90.00
8.67	Providing and stacking of Tecoma gaudichaudi of height 45-60 cm. in earthen pots of size 20 cm as per direction of the officer-in-charge.	Each	35.00
8.68	Providing and stacking of Tecoma gaudichaudi of height 60-75 cm. with 5- 6 branches in p.bag of size 25 cm as per direction of the officer-in-charge.	Each	50.00
8.69	Providing and stacking of Tecoma gaudichaudi of height 90-105 cm.,bushy in big size HDPE bag as per direction of the officer-in-charge.	Each	110.00
8.70	Providing and stacking of Tecoma stans of height 45-60 cm. branched in earthen pots of size 20 cm as per direction of the officer-in-charge.	Each	45.00
8.71	Providing and stacking of Tecoma stans of height 60-75 cm. branched in earthen pots of size 20 cm as per direction of the officer-in-charge.	Each	60.00
8.72	Providing and stacking of Tecoma stans of height 90-105 cm. bushy in big size HDPE bag as per direction of the officer-in-charge.	Each	120.00

Item Code	Description	Unit	Justified Rate
8.73	Providing and stacking of Thevetia nerifolia of height 30-45 cm. with 3-4 branches in poly bags of size 20 cm as per direction of the officer-in-charge. Each	Each	35.00
8.74	Providing and stacking of Thevetia nerifolia of height 60-75 cm. with 5-6 branches in poly bags of size 25 cm as per direction of the officer-in-charge.	Each	45.00
8.75	Providing and stacking of Thuja compacta of height 45-60 cm., well branched in earthen pots of size 25 cm as per direction of the officer-in-charge.	Each	65.00
8.76	Providing and stacking of Thuja compacta of height 75-90 cm., conical shaped, well formed with healthy foliage in earthen pots of size 30 cm as per direction of the officer-in-charge.	Each	130.00
9	CREEPER PLANTS		
9.1	Providing and stacking of Allamanda cathartica of height 30 cm to 45 cm. in 20 cm size of Earthen pots / Plastic pots & as per direction of the officer-in-charge.	Each	45.00
9.2	Providing and stacking of Allamanda violacea of height 30 cm to 45 cm. in poly bag of size 20 cm as per direction of the officer-in-charge.	Each	45.00
9.3	Providing and stacking of Bignonia venusta (Golden shower) of height 30 cm to 45 cm. in 20 cm size of Earthen pots / Plastic pots & as per direction of the officer-in-charge.	Each	40.00
9.4	Providing and stacking of Bougainvillea (Variety Butiana, Lady Mary Baring, Mahara, Mohan, Scarlet Queen, Variegated, Glabra Formosa, Peruviana Odissi, Paratha, Subhra, Thimma, Spectabilis L.N Birla, Refulgens) of height 30 cm. to 45 cm. with 2-3 branches in 20 cm size of Earthen pots / Plastic pots & as per direction of the officer-in-charge.	Each	40.00
9.5	Providing and stacking of Clerodendrum splendens of height 30 cm to 45 cm. in 20 cm size of Earthen pots / Plastic pots & as per direction of the officer-in-charge.	Each	30.00
9.6	Providing and stacking of Clerodendrum thomsoniae of height 30 cm. to 45 cm in 20 cm size of poly bag & as per direction of the officer-in-charge.	Each	45.00
9.7	Providing and stacking of Ipomoea purpurea (Morning glory) of height 30 cm to 45 cm. in 20 cm size of Earthen pots / Plastic pots & as per direction of the officer-in-charge.	Each	35.00
9.8	Providing and stacking of Jasmine grandiflorum (chameli) of height 30 cm to 45 cm. in 20 cm size of Earthen pots / Plastic pots & as per direction of the officer-in-charge.	Each	30.00
9.9	Providing and stacking of Jasmine humile (Yellow) of height 30 cm to 45 cm. in 20 cm size of Earthen pots / Plastic pots & as per direction of the officer-in-charge.	Each	30.00
9.10	Providing and stacking of Passiflora caerulea (Rakhi bel) of height 30 cm to 45 cm. in 20 cm size of Earthen pots / Plastic pots & as per direction of the officer-in-charge.	Each	50.00
9.11	Providing and stacking of Petra volubilis of height 30 cm to 45 cm. in 20 cm size of Earthen pots / Plastic pots & as per direction of the officer-in-charge.	Each	48.00
9.11C	Providing and fixing Bamboo jaffery/ fencing consisting of superior quality 25 mm dia (Average) half cut bamboo placed vertically and fixed together with three numbers horizontal running members of hollock wood in scantling of section 50X25 mm, fixed with nails and G.I wire on existing support complete as per direction of Engineer-in-charge.	sqm	490.55
9.12	Providing and stacking of Quisqualis indica of height 30 cm to 45 cm. in 20 cm size of Earthen pots / Plastic pots & as per direction of the officer-in-charge.	Each	25.00
9.13	Providing and stacking of Tecoma grandiflora of height 30 cm to 45 cm. in 20 cm size of Earthen pots / Plastic pots & as per direction of the officer-in-charge.	Each	40.00
9.14	Providing and stacking of Vernonia elaeagnifolia (curtain creeper) plant of height 30 cm to 45 cm. in 20 cm size of Earthen pots / Plastic pots & as per direction of the officer-in-charge.	Each	25.00
10	ANNUAL FLOWER SEEDLINGS/CUTTINGS		

Item Code	Description	Unit	Justified Rate
10.1	Providing and stacking of winter seasonal seedling/cutting at site of work well developed and healthy free from disease in per tray and each tray having 100 Nos plants as per direction of the officer-in-charge.		
10.1.1	Alyssum	Per Tray	420.00
10.1.2	Antirrhinum dwarf	Per Tray	600.00
10.1.3	Aster dwarf	Per Tray	500.00
10.1.4	Brachycome	Per Tray	500.00
10.1.5	Calendula double	Per Tray	500.00
10.1.6	Carnation (double) Dutch	Per Tray	1,000.00
10.1.7	Carnation (double) Lilliput	Per Tray	1,200.00
10.1.8	Carnation hybrid	Per Tray	850.00
10.1.9	Chrysanthemum double	Per Tray	400.00
10.1.10	Cineraria	Per Tray	525.00
10.1.11	Cineraria dwarf hybrid	Per Tray	700.00
10.1.12	Clarkia hybrid	Per Tray	700.00
10.1.13	Cosmos hybrid	Per Tray	700.00
10.1.14	Dahlia double	Per Tray	525.00
10.1.15	Daisy hybrid	Per Tray	400.00
10.1.16	Dianthus hybrid	Per Tray	500.00
10.1.17	Gazania hybrid	Per Tray	500.00
10.1.18	Gerbera hybrid double	Per Tray	2,200.00
10.1.19	Lupine hybrid	Per Tray	420.00
10.1.20	Marigold French Hybrid dwarf	Per Tray	420.00
10.1.21	Marigold Inca hybrid	Per Tray	500.00
10.1.22	Nasturtium	Per Tray	500.00
10.1.23	Nemesia hybrid	Per Tray	420.00
10.1.24	Pansy Hybrid	Per Tray	650.00
10.1.25	Petunia hybrid	Per Tray	600.00
10.1.26	Phlox mix colour hybrid	Per Tray	500.00
10.1.27	Poppy double	Per Tray	500.00
10.1.28	Salvia	Per Tray	420.00
10.1.29	Salvia Hybrid different colour	Per Tray	500.00
10.1.30	Stock double	Per Tray	500.00
10.1.31	Verbena hybrid	Per Tray	400.00
10.2	Providing and stacking of summer & rainy seasonal seedling at site of work well developed and healthy free from disease in per tray and each tray having 100 Nos plants as per direction of the officer-in-charge.		
10.2.1	Balsam seedling	Per Tray	500.00
10.2.2	Celosia argentea & Celosia crostata Hybrid	Per Tray	420.00
10.2.3	Cosmos hybrid	Per Tray	600.00
10.2.4	Gaillardia Double	Per Tray	420.00
10.2.5	Gomphrena	Per Tray	500.00
10.2.6	Kochia	Per Tray	420.00
10.2.7	Portulaca hybrid	Per Tray	420.00
10.2.8	Sunflower Dwarf	Per Tray	500.00
10.2.9	Vinca Hybrid	Per Tray	420.00
10.2.10	Zinnia hybrid	Per Tray	420.00

Item Code	Description	Unit	Justified Rate
10.2C	Structural steel work riveted, bolted or welded in built up sections, trusses and framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete.	kg	92.70
11	MEDICINAL PLANTS		
11.1	Providing and Stacking of Anjeer of height 75-90 cm. in poly bags of size 25 cm as per direction of the officer-in-charge.	Each	150.00
11.2	Providing and Stacking of Curry leaf of height 75-90 cm in poly bag of size 25 cm as per direction of the officer-in-charge.	Each	75.00
11.3	Providing and Stacking of Ashwagandha of ht. 30 cm with multi branches in Poly bag of size 20 cm.as per direction of the officer-in-charge.	Each	50.00
11.4	Providing and Stacking of Kalmegh of ht. 30 cm with multi branches in Poly bag of size 20 cm. as per direction of the officer-in-charge.	Each	30.00
11.5	Providing and Stacking of Adusha of ht. 30 cm with multi branches in Poly bag of size 20 cm. as per direction of the officer-in-charge.	Each	30.00
11.6	Providing and Stacking of Satavari, well developed in earthen pot of size 20 cm as per direction of the officer-in-charge.	Each	30.00
11.7	Providing and Stacking of Tulsi of ht. 30 cm with multi branches in Poly bag of size 20 cm. as per direction of the officer-in-charge.	Each	20.00
11.8	Providing and Stacking of Alovera well developed in earthen pot of size 20cm as per direction of the officer-in-charge.	Each	50.00
11.9	Providing and Stacking of Bryophyllum of ht. 30cm with multi branches in Poly bag of size 20 cm. as per direction of the officer-in-charge.	Each	30.00
11.10	Providing and Stacking of Lemon grass of ht. 30cm with multi branches in Poly bag of size 20 cm. as per direction of the officer-in-charge.	Each	50.00
11.11	Providing and Stacking of Karonda of ht. 45-60cm in Poly bag of size 25 cm. as per direction of the officer-in-charge.	Each	50.00
11.12	Providing and Stacking of Giloy well developed in poly bag of size 20 cm as per direction of the officer-in-charge.	Each	20.00
11.13	Providing and Stacking of Brahmi well developed in poly bag of size 20 cm as per direction of the officer-in-charge.	Each	20.00
11.14	Providing and Stacking of Sarpghandha well developed in poly bag of size 20 cm as per direction of the officer-in-charge.	Each	50.00
11.15	Providing and Stacking of Mandukparni well developed in poly bag of size 20cm as per direction of the officer-in-charge.	Each	50.00
11.16	Providing and Stacking of Stevia well developed in poly bag of size 20 cm as per direction of the officer-in-charge.	Each	50.00
11.17	Providing and Stacking of Aprajita Blue well developed in poly bag of size 20 cm as per direction of the officer-in-charge.	Each	30.00
11.18	Providing and Stacking of Aprajita White well developed in poly bag of size 20 cm as per direction of the officer-in-charge.	Each	30.00
11.19	Providing and Stacking of Peepli well developed in poly bag of size 20cm as per direction of the officer-in-charge.	Each	30.00
11.20	Providing and Stacking of Chitrak of ht. 30cm with multi branches in Poly bag of size 20 cm. as per direction of the officer-in-charge.	Each	30.00
11.21	Providing and Stacking of Dambel of ht. 30cm with multi branches in Poly bag of size 20 cm. as per direction of the officer-in-charge.	Each	30.00
11.22	Providing and Stacking of Hadjod of ht. 30cm with multi branches in Poly bag of size 20 cm. as per direction of the officer-in-charge.	Each	30.00
11.23	Providing and Stacking of Lajvanti well developed in poly bag of size 20cm as per direction of the officer-in-charge.	Each	30.00
11.24	Providing and Stacking of Kapoor kachri well developed in poly bag of size 20cm as per direction of the officer-in-charge.	Each	40.00
11.25	Providing and Stacking of Bajradanti well developed in poly bag of size 20 cm as per direction of the officer-in-charge.	Each	40.00
11.26	Providing and Stacking of Shivnath well developed in poly bag of size 20 cm as per direction of the officer-in-charge.	Each	40.00
11.27	Providing and Stacking of Neer Brahmi well developed in poly bag of size 20 cm as per direction of the officer-in-charge.	Each	50.00
11.28	Providing and Stacking of Shankpushpi well developed in poly bag of size 20 cm as per direction of the officer-in-charge.	Each	50.00
11.29	Providing and Stacking of Nirgundi well developed in poly bag of size 20 cm as per direction of the officer-in-charge.	Each	30.00

Item Code	Description	Unit	Justified Rate
11.30	Providing and Stacking of Marwa Dona of ht. 30cm with multi branches in Poly bag of size 20 cm.as per direction of the officer-in-charge.	Each	30.00
11.31	Providing and Stacking of Minia erecta plant of height 45-60 cm. multibranches, well developed in poly bags of size 20 cm as per direction of the officer-in-charge.	Each	60.00
11.32	Providing and Stacking of Justicia brandegeana plant of height 45-60 cm. multibranches, well developed in poly bags of size 20 cm as per direction of the officer-in-charge.	Each	120.00
11.33	Providing and Stacking of Ficus panda plant of height 90 -105 cm. multibranches, well developed in poly bags of size 25 cm as per direction of the officer-in-charge.	Each	160.00
12	TRANSPLANTATION OF TREES		
12.1	Transplantation of trees with in a distance of 2km including excavation around existing tree, pruning of branches, lifting, loading and transportation of existing tree, digging pits for placing tree at new place, adding manure, sand, fertilizer, hormones and bio fertilizer to it. Levelled and neatly dressed and disposal of surplus materials from old existing and new sites to designated place. Each tree should be firmly secured to the stake so as to prevent excessive movement, flooding with water, treatment of roots, rope and gunny bags as per direction of the officer incharge. T&P and all required materials shall be arranged by the contractor and nothing extra shall be paid on this account. (a) Girth of tree shall be measured at a height of 1m above ground level.		
12.1.1	Girth of trees upto 50cm.	Each tree	3,640.95
12.1.2	Girth of trees beyond 50cm and upto 90cm.	Each tree	5,580.85
12.1.3	Girth of trees beyond 90cm and upto 150cm.	Each tree	9,586.60
12.1.4	Girth of trees beyond 150cm.	Each tree	20,705.40
13	CIVIL ITEMS		
13.18	Neat cement punning	sqm	55.15
13.50	Applying priming coat:		
13.50.3	With ready mixed red oxide zinc chromate primer of approved brand and manufacture on steel galvanised iron/steel works	sqm	41.85
13.59	Coal tarring two coats on new work using 0.16 litre and 0.12 litre coal tar per sqm in the first coat and second coat respectively.	sqm	42.05
13.61	Painting with synthetic enamel paint of approved brand and manufacture to give an even shade:		
13.61.1	Two or more coats on new work	sqm	99.90

Item Code	Description	Unit	Justified Rate
SOR for Electrification works			
All Areas except Ranchi			
Item Code	Description	Unit	Justified Rate
1	WIRING IN STEEL & PVC CONDUIT		
1.1	Wiring for light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed steel conduit, with piano type switch, phenolic laminated sheet, suitable size MS box and earthing the point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable etc. as required.		
1.1.1	Group A	Point	1,000.00
1.1.2	Group B	Point	1,205.00
1.1.3	Group C	Point	1,494.00
1.2	Wiring for twin control light point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed steel conduit, 2 way piano type switch, phenolic laminated sheet, suitable size MS box and earthing the point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable etc. as required.	Point	1,504.00
1.3	Wiring for light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed steel conduit, with modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable etc. as required.		
1.3.1	Group A	Point	1,010.00
1.3.2	Group B	Point	1,225.00
1.3.3	Group C	Point	1,513.00
1.4	Wiring for twin control light point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed steel conduit, 2 way modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm. FRLS PVC insulated copper conductor single core cable etc .as required.	Point	1,632.00
1.5	Wiring for light/ power plug with 2X4 sq. mm FRLS PVC insulated copper conductor single core cable in surface/ recessed steel conduit alongwith 1 No. 4 sq. mm FRLS PVC insulated copper conductor single core cable for loop earthing as required.	Metre	363.00
1.6	Wiring for light/ power plug with 4X4 sq. mm FRLS PVC insulated copper conductor single core cable in surface/ recessed steel conduit alongwith 2 Nos. 4 sq. mm FRLS PVC insulated copper conductor single core cable for loop earthing as required.	Metre	562.00
1.7	Wiring for circuit/ submain wiring alongwith earth wire with the following sizes of FRLS PVC insulated copper conductor, single core cable in surface/ recessed steel conduit as required.		
1.7.1	2 X 1.5 sq. mm + 1 X 1.5 sq. mm earth wire	Metre	270.00
1.7.2	2 X 2.5 sq. mm + 1 X 2.5 sq. mm earth wire	Metre	307.00
1.7.3	2 X 4 sq. mm + 1 X 4 sq. mm earth wire	Metre	359.00
1.7.4	2 X 6 sq. mm + 1 X 6 sq. mm earth wire	Metre	495.00
1.7.5	2 X 10 sq. mm + 1 X 6 sq. mm earth wire	Metre	601.00
1.7.6	2 X 16 sq. mm + 1 X 6 sq. mm earth wire	Metre	805.00
1.7.7	4 X 2.5 sq. mm + 2 X 2.5 sq. mm earth wire	Metre	469.00
1.7.8	4 X 4 sq. mm + 2 X 4 sq. mm earth wire	Metre	572.00
1.7.9	4 X 6 sq. mm + 2 X 6 sq. mm earth wire	Metre	789.00
1.7.10	4 X 10 sq. mm + 2 X 6 sq. mm earth wire	Metre	1,000.00
1.7.11	4 X 16 sq. mm + 2 X 6 sq. mm earth wire	Metre	1,419.00

Item Code	Description	Unit	Justified Rate
1.8	Wiring for light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed medium class PVC conduit, with piano type switch, phenolic laminated sheet, suitable size M.S. box and earthing the point with 1.5 sq.mm. FRLS PVC insulated copper conductor single core cable etc. as required.		
1.8.1	Group A	Point	791.00
1.8.2	Group B	Point	937.00
1.8.3	Group C	Point	1,163.00
1.9	Wiring for twin control light point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed medium class PVC conduit, 2 way piano type switch, phenolic laminated sheet, suitable size MS box and earthing the point with 1.5 sq.mm. FRLS PVC insulated copper conductor single core cable etc. as required.	Point	1,173.00
1.10	Wiring for light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed medium class PVC conduit, with modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable etc. as required.		
1.10.1	Group A	Point	811.00
1.10.2	Group B	Point	957.00
1.10.3	Group C	Point	1,182.00
1.11	Wiring for twin control light point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed medium class PVC conduit, 2 way modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable etc. as required.	Point	1,266.00
1.12	Wiring for light/ power plug with 2X4 sq. mm FRLS PVC insulated copper conductor single core cable in surface/ recessed medium class PVC conduit alongwith 1 No. 4 sq. mm FRLS PVC insulated copper conductor single core cable for loop earthing as required.	Metre	279.00
1.13	Wiring for light/ power plug with 4X4 sq. mm FRLS PVC insulated copper conductor single core cable in surface/ recessed medium class PVC conduit alongwith 2 Nos. 4 sq. mm FRLS PVC insulated copper conductor single core cable for loop earthing as required.	Metre	455.00
1.14	Wiring for circuit/ submain wiring alongwith earth wire with the following sizes of FRLS PVC insulated copper conductor, single core cable in surface/ recessed medium class PVC conduit as required.		
1.14.1	2 X 1.5 sq. mm + 1 X 1.5 sq. mm earth wire	Metre	190.00
1.14.2	2 X 2.5 sq. mm + 1 X 2.5 sq. mm earth wire	Metre	227.00
1.14.3	2 X 4 sq. mm + 1 X 4 sq. mm earth wire	Metre	279.00
1.14.4	2 X 6 sq. mm + 1 X 6 sq. mm earth wire	Metre	371.00
1.14.5	2 X 10 sq. mm + 1 X 6 sq. mm earth wire	Metre	484.00
1.14.6	2 X 16 sq. mm + 1 X 6 sq. mm earth wire	Metre	661.00
1.14.7	4 X 2.5 sq. mm + 2 X 2.5 sq. mm earth wire	Metre	345.00
1.14.8	4 X 4 sq. mm + 2 X 4 sq. mm earth wire	Metre	455.00
1.14.9	4 X 6 sq. mm + 2 X 6 sq. mm earth wire	Metre	645.00
1.14.10	4 X 10 sq. mm + 2 X 6 sq. mm earth wire	Metre	864.00
1.14.11	4 X 16 sq. mm + 2 X 6 sq. mm earth wire	Metre	1,180.00
1.15	Rewiring for light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable and 1.5 sq.mm FRLS PVC insulated copper conductor single core cable as earth wire in existing surface/ recessed steel/PVC conduit including dismantling as required.		
1.15.1	Group A	Point	455.00
1.15.2	Group B	Point	509.00

Item Code	Description	Unit	Justified Rate
1.15.3	Group C	Point	710.00
1.16	Rewiring for twin control light point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable and 1.5 sq.mm FRLS PVC insulated copper conductor single core cable as earth wire in existing surface/ recessed steel/PVC conduit including dismantling as required.	Point	710.00
1.17	Supplying and drawing following sizes of FRLS PVC insulated copper conductor, single core cable in the existing surface/ recessed steel/ PVC conduit as required.		
1.17.1	1 x 1.5 sq. mm	Metre	37.00
1.17.2	2x 1.5 sq. mm	Metre	59.00
1.17.3	3 x 1.5 sq. mm	Metre	81.00
1.17.4	4x 1.5 sq. mm	Metre	103.00
1.17.5	5x 1.5 sq. mm	Metre	133.00
1.17.6	6 x 1.5 sq. mm	Metre	155.00
1.17.7	7 x 1.5 sq. mm	Metre	184.00
1.17.8	8 x 1.5 sq. mm	Metre	206.00
1.17.9	9x 1.5 sq. mm	Metre	243.00
1.17.10	10 x 1.5 sq. mm	Metre	265.00
1.17.11	2 x 2.5 sq. mm	Metre	83.00
1.17.12	3 x 2.5 sq. mm	Metre	118.00
1.17.13	4 x 2.5 sq. mm	Metre	152.00
1.17.14	5 x 2.5 sq. mm	Metre	194.00
1.17.15	6 x 2.5 sq. mm	Metre	229.00
1.17.16	7 x 2.5 sq. mm	Metre	270.00
1.17.17	8 x 2.5 sq. mm	Metre	305.00
1.17.18	9 x 2.5 sq. mm	Metre	354.00
1.17.19	10 x 2.5 sq. mm	Metre	388.00
1.17.20	2 x 4 sq. mm	Metre	125.00
1.17.21	3 x 4 sq. mm	Metre	177.00
1.17.22	4 x 4 sq. mm	Metre	118.00
1.17.23	5 x 4 sq. mm	Metre	290.00
1.17.24	6 x 4 sq. mm	Metre	342.00
1.17.25	7 x 4 sq. mm	Metre	395.00
1.17.26	8 x 4 sq. nmm	Metre	447.00
1.17.27	9 x 4 sq. mm	Metre	502.00
1.17.28	10 x 4 sq. mm	Metre	561.00
1.17.29	2 x 6 sq. nmm	Metre	184.00
1.17.30	3 x 6 sq. mm	Metre	262.00
1.17.31	4 x 6 sq. mm	Metre	347.00
1.17.32	5 x 6 sq. mm	Metre	424.00
1.17.33	6 x 6 sq. mm	Metre	516.00
1.17.34	7 x 6 sq. mm	Metre	594.00
1.17.35	8 x 6 sq. mm	Metre	679.00
1.17.36	9 x 6 sq. mm	Metre	756.00
1.17.37	10 x 6 sq. mm	Metre	838.00
1.18	Supplying and drawing following pair 0.5 mm dia FRLS PVC insulated annealed copper conductor, unarmored telephone cable in the existing surface/ recessed steel/ PVC conduit as required.		
1.18.1	1 Pair	Metre	24.00
1.18.2	2 Pair	Metre	30.00
1.18.3	4 Pair	Metre	45.00

Item Code	Description	Unit	Justified Rate
1.19	Supplying and drawing co-axial TV cable RG-6 grade, 0.7 mm solid copper conductor PE insulated, shielded with fine tinned copper braid and protected with PVC sheath in the existing surface/ recessed steel/ PVC conduit as required.	Metre	39.00
1.20	Supplying and fixing of following sizes of steel conduit along with accessories in surface/recess including painting in case of surface conduit, or cutting the wall and making good the same in case of recessed conduit as required.		
1.20.1	20 mm	Metre	182.00
1.20.2	25 mm	Metre	211.00
1.20.3	32 mm	Metre	272.00
1.20.4	40 mm	Metre	398.00
1.20.5	50 mm	Metre	498.00
1.21	Supplying and fixing of following sizes of medium class PVC conduit along with accessories in surface/recess including cutting the wall and making good the same in case of recessed conduit as required.		
1.21.1	20 mm	Metre	102.00
1.21.2	25 mm	Metre	116.00
1.21.3	32 mm	Metre	151.00
1.21.4	40 mm	Metre	188.00
1.21.5	50 mm	Metre	237.00
1.22	Supplying and fixing metal box of following sizes (nominal size) on surface or in recess with suitable size of phenolic laminated sheet cover in front including painting etc. as required.		
1.22.1	75 mm X 75 mm X 60 mm deep	Each	139.00
1.22.2	100 mm X 100 mm X 60 mm deep	Each	166.00
1.22.3	150 mm X 75 mm X 60 mm deep	Each	172.00
1.22.4	150 mm X 150 mm X 60 mm deep	Each	250.00
1.22.5	180 mm X 100 mm X 60 mm deep	Each	197.00
1.22.6	200 mm X 125 mm X 60 mm deep	Each	260.00
1.22.7	200 mm X 150 mm X 60 mm deep	Each	288.00
1.22.8	200 mm X 150 mm X 75 mm deep	Each	295.00
1.22.9	200 mm X 250 mm X 60 mm deep	Each	384.00
1.22.10	200 mm X 250 mm X 75 mm deep	Each	401.00
1.22.11	200 mm X 150 mm X 100 mm deep	Each	335.00
1.22.12	200 mm X 250 mm X 100 mm deep	Each	418.00
1.22.13	200 mm X 300 mm X 60 mm deep	Each	434.00
1.22.14	200 mm X 300 mm X 100 mm deep	Each	465.00
1.22.15	250 mm X 300 mm X 60 mm deep	Each	505.00
1.22.16	250 mm X 300 mm X 100 mm deep	Each	546.00
1.23	Supplying and fixing following piano type switch/ socket on the existing switch box/ cover including connections etc. as required.		
1.23.1	5/6 amps switch	Each	41.00
1.23.2	2 way 5/6 A switch	Each	51.00
1.23.3	15/16 A switch	Each	99.00
1.23.4	3 pin 5/6 A socket outlet	Each	56.00
1.23.5	6 pin 15/16 A socket outlet	Each	113.00
1.23.6	Telephone socket outlet	Each	89.00
1.23.7	TV antenna socket outlet	Each	76.00
1.23.8	Bell push	Each	65.00
1.24	Supplying and fixing following modular switch/ socket on the existing modular plate & switch box including connections but excluding modular plate etc. as required.		

Item Code	Description	Unit	Justified Rate
1.24.1	5/6 A switch	Each	83.00
1.24.2	2 way 5/6 A switch	Each	122.00
1.24.3	15/16 A switch	Each	129.00
1.24.4	3 pin 5/6 A socket outlet	Each	102.00
1.24.5	6 pin 15/16 A socket outlet	Each	165.00
1.24.6	Telephone socket outlet	Each	122.00
1.24.7	TV antenna socket outlet	Each	122.00
1.24.8	Bell push	Each	115.00
1.25	Supplying and fixing two module stepped type electronic fan regulator on the existing modular plate switch box including connections but excluding modular plate etc. as required.	Each	313.00
1.26	Supplying and fixing modular blanking plate on the existing modular plate & switch box excluding modular plate as required.	Each	33.00
1.27	Supplying and fixing following size/ modules, GI box alongwith modular base & cover plate for modular switches in recess etc. as required.		
1.27.1	1 or 2 Module (75mmX75mm)	Each	233.00
1.27.2	3 Module (100mmX75mm)	Each	259.00
1.27.3	4 Module (125mmX75mm)	Each	273.00
1.27.4	6 Module (200mmX75mm)	Each	324.00
1.27.5	8 Module (125mmX125mm)	Each	370.00
1.27.6	12 Module (200mmX150nm)	Each	452.00
1.28	Supplying and fixing following Modular base & cover plate on existing modular metal boxes etc. as required.		
1.28.1	1 or 2 Module	Each	107.00
1.28.2	3 Module	Each	123.00
1.28.3	4 Module	Each	129.00
1.28.4	6 Module	Each	150.00
1.28.5	8 Module	Each	175.00
1.28.6	12 Module	Each	229.00
1.29	Supplying and fixing metal box of 150mm X 75nm X 60mm deep (nominal size) on surface or in recess with suitable size of phenolic laminated sheet cover in front including providing and fixing 3 pin 5/6 A socket outlet and 5/6 A piano type switch, connections, painting etc. as required.	Each	284.00
1.30	Supplying and fixing metal box of 180mm X 100mm X 60mm deep (nominal size) on surface or in recess with suitable size of phenolic laminated sheet cover in front including providing and fixing 6 pin 5/6 & 15/16 A socket outlet and 15/16 A piano type switch, connections, painting etc. as required.	Each	398.00
1.31	Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 3 pin 5/6 A modular socket outlet and 5/6 A modular switch, connections etc. as required.	Each	389.00
1.32	Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 6 pin 5/6 & 15/16 A modular socket outlet and 15/16 A modular switch, connections etc. as required.	Each	484.00
1.33	Supplying and fixing 3 pin, 5 A ceiling rose on the existing junction box/ wooden block including connections etc. as required.	Each	69.00
1.34	Supplying and fixing brass batten/ angle holder including connection etc. as required.	Each	105.00
1.35	Installation ,Testing, Commissioning of wall bracket /ceiling fittings of all sizes and shapes containing upto two GLS/CFL/LED lamps per fitting, complete with all accessories including connections etc. as required.	Each	90.00

Item Code	Description	Unit	Justified Rate
1.36	Supplying and fixing stiff pendent with 300 mm long, 20 mm dia X 1.6 mm thick steel conduit, aluminium cast back plate and brass holder complete, including wiring the down rod with 1.5 sq. mm FRLS PVC insulated, copper conductor, single core cable and painting etc. as required.	Each	246.00
1.38	Supplying and fixing call bell/ buzzer suitable for single phase, 230 V, complete as required.	Each	82.00
1.39	Providing and fixing plain 16/0.20mm (0.50sqmm) twin flat flexible, FRLS PVC insulated, copper conductor cable, in PVC sleeve of suitable size on the floor/ wall, or side of the table/ door etc. as required.	Metre	36.00
1.40	Providing and fixing plain 16/0.20mm (0.50sqmm) twin circular flexible FRLS PVC insulated, PVC sheathed copper conductor cable direct on the wall with PVC clips etc. as required.	Metre	34.00
1.41	Installation, testing and commissioning of pre-wired, fluorescent fitting / compact fluorescent fitting of all types, complete with all accessories and tube/lamp etc. directly on ceiling/ wall, including connections with 1.5 sq. mm FRLS PVC insulated, copper conductor, single core cable and earthing etc. as required.	Each	156.00
1.42	Installation, testing and commissioning of pre-wired, fluorescent fitting / compact fluorescent fitting of all types, complete with all accessories and tube/lamp etc., including supplying and fixing ball and socket arrangement, 2 Nos. down rods of 20 mm dia X 1.6 mm thick steel conduit upto 30 cm length, painting and wiring the down rods and connections with 1.5 sq. mm FRLS PVC insulated, copper conductor, single core cable and earthing etc. as required.	Each	377.00
1.43	Providing and fixing extra conduit down rod of 20 mm dia, 2 X 10 cm length, wiring with 2 X 1.5 sq. mm FRLS PVC insulated, copper conductor, single core cable including painting etc. as required. (Note: More than 5 cm length shall be rounded to the nearest 10 cm and 5 cm or less shall be ignored)	Each	45.00
1.44	Installation, testing and commissioning of ceiling fan, including wiring the down rods of standard length (upto 30 cm) with 1.5 sq. mm FRLS PVC insulated, copper conductor, single core cable etc. as required.	Each	162.00
1.45	Installation, testing and commissioning of ceiling fan, including wiring the down rods of standard length (upto 30 cm) with 1.5 sq. mm FRLS PVC insulated, copper conductor, single core cable, including providing and fixing phenolic laminated sheet cover on the fan box etc. as required.	Each	217.00
1.47	Supplying and fixing extra down rod of 10 cm length G.I. pipe ,15 mm dia, heavy gauge including painting etc. as required. (Note : More than 5 cm length shall be rounded to the nearest 10 cm and 5 cm or less shall be ignored)	Each	38.00
1.48	Supplying and fixing extra conduit down rod of 20 cm length G.I. pipe 15 mm dia, heavy gauge including painting etc. as required. (Note: More than 5 cm length shall be rounded to the nearest 10 cm and 5 cm or less shall be ignored)	Each	43.00
1.49	Numbering of ceiling fan/ exhaust fan/ fluorescent fittings as required.	Each	41.00
1.50	Installation of exhaust fan in the existing opening, including making good the damage, connection, testing, commissioning etc. as required.		
1.50.1	Upto 450 mm sweep	Each	346.00
1.50.2	510 mm sweep	Each	490.00
1.51	Extra for fixing the louvers/ shutters complete with frame for a exhaust fan of all sizes.	Each	157.00
1.52	Painting of ceiling fan in installed position with one or more coats of spray painting with synthetic enamel paint of approved brand and manufacture to give an even shade, including cleaning of surface with detergent etc. as required.	Each	117.00
1.53	Supplying and drawing of UTP 4 pair CAT 6 LAN Cable in the existing surface/ recessed Steel/ PVC conduit as required.		
1.53.1	1 run of cable	Metre	48.00

Item Code	Description	Unit	Justified Rate
1.53.2	2 run of cable	Metre	81.00
1.53.3	3 run of cable	Metre	115.00
1.54	Wiring for group controlled (looped) light point/fan point/exhaust fan point/call bell point (without independent switch etc.) with 1.5 sq. mm FRLS PVC insulated copper conductor single core cable in surface/ recessed steel conduit, and earthing the point with 1.5 sq. mm FRLS PVC insulated copper conductor single core cable etc. as required.		
1.54.1	Group A	Point	619.00
1.54.2	Group B	Point	764.00
1.54.3	Group C	Point	901.00
1.55	Wiring for group controlled (looped) light point/fan point/exhaust fan point/call bell point (without independent switch etc.) with 1.5 sq. mm FRLS PVC insulated copper conductor single core cable in surface/ recessed PVC conduit, and earthing the point with 1.5 sq. mm FRLS PVC insulated copper conductor single core cable etc. as required.		
1.55.1	Group A	Point	513.00
1.55.2	Group B	Point	604.00
1.55.3	Group C	Point	696.00
1.56	Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 2 nos. 3 pin 5/6 A modular socket outlet and 2 nos. 5/6 A modular switch, connections etc. as required. (For light plugs to be used in non residential buildings).	Each	567.00
1.57	Supplying & fixing suitable size GI box with modular plate and cover in front on surface or in recess including providing and fixing 25 A modular socket outlet and 25 A modular SP MCB, "C" curve including connections, painting etc. as required.	Each	608.00
1.58	Supplying and fixing PVC batten/ angle holder including connections etc. as required.	Each	86.00
1.59	Dismantling of ceiling fan and painting the same with with one or more coats of spray painting with synthetic enamel paint of approved brand and manufacture to give an even shade, including cleaning of surface with detergent and replacing the damaged rubber reel, nuts and bolts with washers and safety pins, reinstalling the same as required.	Each	196.00
2	MCCB, MCB & DB'S		
2.1	Providing and fixing following capacity TP&N disconnecter fuse switch unit inside the existing panel board with ISI marked HRC fuses including drilling holes in cubicle panel, making connections, etc. as required.		
2.1.1	32A TP&N	Each	1,862.00
2.1.2	63A TP&N	Each	2,725.00
2.1.3	100A TP&N	Each	5,303.00
2.1.4	125A TP&N	Each	6,266.00
2.1.5	160A TP&N	Each	7,080.00
2.1.6	200A TP&N	Each	8,453.00
2.1.7	315A TP&N	Each	12,722.00
2.1.8	400A TP&N	Each	15,557.00
2.2	Providing and fixing following rating and breaking capacity and pole MCCB with thermomagnetic release and terminal spreaders in existing cubicle panel board including drilling holes in cubicle panel, making connections, etc. as required.		
2.2.1	100 A, 16 KA,TPMCCB	Each	3,280.00
2.2.2	125 A, 16 KA,TPMCCB	Each	4,190.00
2.2.3	150 A, 16 KA,TPMCCB	Each	5,217.00
2.2.4	200 A, 16 KA,TPMCCB	Each	6,702.00
2.2.5	200 A, 25 KA,TPMCCB	Each	9,618.00

Item Code	Description	Unit	Justified Rate
2.2.6	250 A, 25 KA,TPMCCB	Each	11,341.00
2.2.7	250 A, 35 KA,TPMCCB	Each	12,127.00
2.2.8	315 A, 35 KA,TPMCCB	Each	18,878.00
2.2.9	400 A, 35 KA,TPMCCB	Each	18,878.00
2.2.10	500 A, 35 KA,TPMCCB	Each	22,345.00
2.2.11	630 A, 50 KA,TPMCCB	Each	24,367.00
2.2.12	800 A, 50 KA,TPMCCB	Each	31,644.00
2.2.13	100 A,30KA,FPMCCB	Each	6,740.00
2.2.14	125 A,36KA,FPMCCB	Each	7,161.00
2.2.15	200 A,36KA,FPMCCB	Each	13,296.00
2.2.16	250 A,36KA,FPMCCB	Each	15,311.00
2.2.17	250 A,50KA,FPMCCB	Each	16,101.00
2.2.18	400 A,50KA,FPMCCB	Each	37,365.00
2.2.19	630 A,50KA,FPMCCB	Each	37,739.00
2.3	Supplying and fixing following way, single pole and neutral, sheet steel, MCB distribution board, 240 V, on surface/ recess, complete with tinned copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powder painted including earthing etc. as required. (But without MCB/RCCB/Isolator)		
2.3.1	6 way , Double door	Each	1,878.00
2.3.2	8 way , Double door	Each	2,200.00
2.3.3	12 way , Double door	Each	1,973.00
2.3.4	16 way, Double door	Each	2,698.00
2.4	Supplying and fixing following way, horizontal type three pole and neutral, sheet steel, MOB distribution board, 415 V, on surface/ recess, complete with tinned copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powder painted including earthing etc. as required. (But without MCB/RCCB/Isolator)		
2.4.1	4 way (4 + 12), Double door	Each	3,521.00
2.4.2	6 way (4 + 18), Double door	Each	4,295.00
2.4.3	8 way (4 + 24), Double door	Each	5,166.00
2.5	Supplying and fixing of following ways surface/ recess mounting, vertical type, 415 V, TPN MOB distribution board of sheet steel, dust protected, duly powder painted, inclusive of 200 A tinned copper bus bar, common neutral link, earth bar, din bar for mounting MCBs (but without MCBs and incomer) as required . (Note : Vertical type MOB TPDB is normally used where 3 phase outlets are required.)		
2.5.1	4 way (4 + 12), Double door	Each	6,520.00
2.5.2	8 way (4 + 24), Double door	Each	8,847.00
2.5.3	12 way (4 + 36), Double door	Each	11,186.00
2.10	Supplying and fixing 5 A to 32 A rating, 240/415 V, 10 kA, "C" curve, miniature circuit breaker suitable for inductive load of following poles in the existing MOB DB complete with connections, testing and commissioning etc. as required.		
2.10.1	Single pole	Each	215.00
2.10.2	Single pole and neutral	Each	515.00
2.10.3	Double pole	Each	565.00
2.10.4	Triple pole	Each	873.00
2.10.5	Triple pole and neutral	Each	1,067.00
2.11	Supplying and fixing single pole blanking plate in the existing MOB DB complete etc. as required.	Each	11.00
2.12	Supplying and fixing following rating, double pole, 240 V, isolator in the existing MOB DB complete with connections, testing and commissioning etc. as required.		
2.12.1	40A	Each	371.00

Item Code	Description	Unit	Justified Rate
2.12.2	63A	Each	453.00
2.13	Supplying and fixing following rating, four pole, 415 V, isolator in the existing MOB DB complete with connections, testing and commissioning etc. as required.		
2.13.1	40A	Each	831.00
2.13.2	63A	Each	887.00
2.13.3	100A	Each	1,056.00
2.14	Supplying and fixing following rating, double pole, (single phase and neutral), 240 V, residual current circuit breaker (RCCB), having a sensitivity current 30 mA in the existing MCB DB complete with connections, testing and commissioning etc. as required.		
2.14.1	25A	Each	1,766.00
2.14.2	40A	Each	2,305.00
2.14.3	63A	Each	2,374.00
2.15	Supplying and fixing following rating, four pole, (three phase and neutral), 415 volts, residual current circuit breaker (RCCB), having a sensitivity current 30 mA in the existing MCB DB complete with connections, testing and commissioning etc. as required.		
2.15.1	25A	Each	2,248.00
2.15.2	40A	Each	2,775.00
2.15.3	63A	Each	2,499.00
2.16	Supplying and fixing DP sheet steel enclosure on surface/ recess along with 25/32 A 240 V "C" curve DP MCB complete with connections, testing and commissioning etc. as required.	Each	1,000.00
2.17	Supplying and fixing TP sheet steel enclosure on surface/ recess along with 16/25/32 A 415 V "C" curve TP MCB complete with connections, testing and commissioning etc. as required.	Each	1,371.00
2.18	Supplying and fixing 20 A, 240 V, SPN Industrial type socket outlet, with 2 pole and earth, metal enclosed plug top alongwith 20 A "C" curve, SP, MCB, in sheet steel enclosure, on surface or in recess, with chained metal cover for the socket out let and complete with connections, testing and commissioning etc. as required.	Each	1,357.00
2.19	Supplying and fixing 20 A, 415 V, TPN Industrial type socket outlet, with 4 pole and earth, metal enclosed plug top alongwith 20 A "C" curve, TPMCB, in sheet steel enclosure, on surface or in recess, with chained metal cover for the socket out let and complete with connections, testing and commissioning etc. as required.	Each	2,229.00
2.20	Supplying and fixing 30 A, 415 V, TPN Industrial type socket outlet, with 4 pole and earth, metal enclosed plug top alongwith 30 A "C" curve, TPMCB, in sheet steel enclosure, on surface or in recess, with chained metal cover for the socket out let and complete with connections, testing and commissioning etc. as required.	Each	3,559.00
2.21	Providing and fixing M.V. danger notice plate of 200 mm X 150 mm, made of mild steel, at least 2 mm thick, and vitreous enameled white on both sides, and with inscription in single red colour on front side as required.	Each	216.00
2.22	Providing and fixing H.T. danger notice plate of 250 mm X 200 mm, made of mild steel, at least 2 mm thick, and vitreous enameled white on both sides, and with inscription in single red colour on front side as required.	Each	237.00
2.23	Supplying and fixing Cable End Box (Loose Wire Box) suitable for following single pole and neutral, sheet steel, MCB distribution board, 240 Volts, on surface/ recess, complete with testing and commissioning etc. as required.		
2.23.1	For 6 way, Double door SPN MCBDB	Each	631.00
2.23.2	For 8 way, Double door SPN MCBDB	Each	701.00
2.23.3	For 10 way, Double door SPN MCBDB	Each	682.00
2.23.4	For 14 way, Double door SPN MCBDB	Each	762.00

Item Code	Description	Unit	Justified Rate
2.24	Supplying and fixing Cable End Box (Loose Wire Box) suitable for following triple pole and neutral, sheet steel, MCB distribution board, 415 Volts, on surface/ recess, complete with testing and commissioning etc.as required.		
2.24.1	For 4 way, Double door TPN MCBDB	Each	918.00
2.24.2	For 6 way, Double door TPN MCBDB	Each	957.00
2.24.3	For 8 way, Double door TPN MCBDB	Each	1,146.00
2.25	Supplying and fixing Cable End Box (Loose Wire Box) suitable for triple pole and neutral, sheet steel, Vertical MCB distribution board, 415 Volts, on surface/ recess, complete with testing and commissioning etc. as required.	Each	997.00
3	RISING MAINS & BUS TRUNKING		
3.1	Supplying, installing on wall, testing and commissioning of following capacity rising mains made of 1.6mm thick IF 42 sheet steel enclosure duly painted with powder coating, wall straps, fully PVC insulated 4 Nos aluminium bus bars having current density of 130 Al sq cm at nominal current rating in convenient sections and suitable for 415 V, 3 phase, 4 wire, 50 Hz, A.C. supply with extension joints, fire proof barriers, expansion joints, thrust pads including jointing and earthing with 2 runs of galvanised iron strips etc. as required. (Rising mains confirming to IS 8623, TEC 439)		
3.1.1	200 A (S.C. rating for 1 sec- 15 kA)	Metre	6,339.00
3.1.2	300 A (S.C. rating for 1 sec - 20 kA)	Metre	6,339.00
3.1.3	400 A (S.C. rating for 1 sec - 25 kA)	Metre	8,111.00
3.1.4	600 A (S.C. rating for 1 sec - 45 kA)	Metre	9,055.00
3.1.5	800 A (S.C. rating for 1 sec - 50 kA)	Metre	10,893.00
3.2	Supplying, installing, testing and commissioning of following capacity TPN tap off box made of 1.6mm thick sheet steel enclosure duly painted with powder coating on existing rising mains complete with TPN disconnecter FSU and HRC fuses, connections, earthing etc. as required.		
3.2.1	16 A TPN	Each	7,113.00
3.2.2	32 A TPN	Each	8,926.00
3.2.3	63 A TPN	Each	10,087.00
3.2.4	100 A TPN	Each	12,424.00
3.2.5	200 A TPN	Each	16,513.00
3.2.6	315 A TPN	Each	22,458.00
3.2.7	400 A TPN	Each	25,567.00
3.3	Supplying, installing, testing and commissioning of following capacity TPN distribution tap off box made of 1.6mm thick sheet steel enclosure duly painted with powder coating on existing rising mains complete with HRC fuses, interconnections, earthing etc. as required.		
3.3.1	16 A TPN, 2 way	Each	10,675.00
3.3.2	16 A TPN, 4 way	Each	23,832.00
3.3.3	16 A TPN, 6 way	Each	33,777.00
3.3.4	16 A TPN, 8 way	Each	46,772.00
3.3.5	32 A TPN, 2 way	Each	13,155.00
3.3.6	32 A TPN, 4 way	Each	26,884.00
3.3.7	32 A TPN, 6 way	Each	35,301.00
3.3.8	32 A TPN, 8 way	Each	49,059.00
3.3.9	63 A TPN, 2 way	Each	14,984.00
3.3.10	63 A TPN, 4 way	Each	25,357.00
3.3.11	63 A TPN, 6 way	Each	27,369.00
3.3.12	63 A TPN, 8 way	Each	47,077.00

Item Code	Description	Unit	Justified Rate
3.4	Supplying, installing, testing and commissioning of following capacity End Feed Unit made of 1.6mm thick sheet steel enclosure duly painted with powder coating to existing rising mains complete with TPN disconnecter FSU and HRC fuses, mounting stands, cable end box, brass compression gland, connections, earthing etc. as required.		
3.4.1	200 A TPN	Each	21,436.00
3.4.2	300 A TPN	Each	23,504.00
3.4.3	400 A TPN	Each	26,032.00
3.4.4	600 A TPN	Each	28,152.00
3.4.5	800 A TPN	Each	31,698.00
3.5	Supplying, installation, including suspension, testing and commissioning of following capacity bus trunking with aluminium bus bars having current density of 130 A/ sq cm at nominal current rating in 1.6mm thick IF 42 sheet steel enclosure in convenient sections for use on, 3 phase, 4 wire, 415 V, 50 Hz, A.C. supply including jointing of sections, flexible joints, expansion joints, bends and earthing with 2 runs of galvanised iron strips, suspenders, angle iron bracket, steel fasteners, connecting to earthing system etc. as required.		
3.5.1	800A	Metre	12,223.00
3.5.2	1000 A	Metre	14,436.00
3.5.3	1250 A	Metre	18,561.00
3.5.4	1400 A	Metre	23,137.00
3.5.5	1600 A	Metre	18,625.00
3.6	Supplying, installation, testing and commissioning of following capacity overhead distribution bus trunking with aluminium bus bars having current density of 130A/ sq cm at nominal current rating in 1.6mm thick IF 42 sheet steel enclosure in convenient sections with provision of tapping points for use on, 3 phase, 4 wire, 415 volts, 50 Hz, A.C. supply including jointing of sections, bends, earthing with 2 runs of galvanised iron strips, all installation accessories etc. as required.		
3.6.1	200 A	Metre	7,114.00
3.6.2	400 A	Metre	9,096.00
3.7	Supplying, installing, testing and commissioning of following capacity TPN tap of box / plug-in box made of 1.6mm thick sheet steel enclosure duly painted with powder coating on existing overhead bus bar system complete with TPN disconnecter FSU and HRC fuses, connections, earthing etc. as required.		
3.7.1	32A	Each	8,926.00
3.7.2	63A	Each	10,087.00
3.7.3	100A	Each	12,424.00
3.8	Supplying, installing on wall, testing and commissioning of following capacity Air Insulated Compact Type Rising Mains for use on 3 phase 4 wire 415 volts, 50Hz A.C. supply with enclosure having IP-54 rating after fixing the tap of boxes and all accessories, made of 1.6mm thick steel sheet duly powder coated in convenient sections complete with 4 Nos aluminium bus bars having current density of 130 A/ sq cm at nominal current rating, necessary joints & expansion joints, fire barrier at each floor, provision of tapping at every metre, continuous earthing with 2 Nos aluminium strip of suitable size (one on each side) including, G.I. clamping brackets, angle iron bracket, steel fasteners, connecting to earthing system etc. as required.		
3.8.1	200 A, I _{sc} = 15kA for 1 second	Metre	6,915.00
3.8.2	315 A, I _{sc} = 25kA for 1 second	Metre	8,093.00
3.8.3	400A, I _{sc} = 30kA for 1 second	Metre	9,645.00
3.8.4	500A, I _{sc} = 35kA for 1 second	Metre	9,681.00

Item Code	Description	Unit	Justified Rate
3.8.5	630 A, Isc = 50kA for 1 second	Metre	11,180.00
3.8.6	800 A, Isc = 50kA for 1 second	Metre	16,324.00
3.8.7	1000 A, Isc = 50kA for 1 second	Metre	16,909.00
3.8.8	1250 A, Isc = 50kA for 1 second	Metre	20,066.00
3.9	Supplying, installing on wall or suspension on ceiling, testing and commissioning of following capacity Air Insulated Compact Type Bus Trunking for use on 3 phase 4 wire 415 volts, 50Hz A.C. supply with metal clad enclosure having IP-54 rating after fixing the tap of boxes and all accessories, made of 1.6mm thick steel sheet duly powder coated in convenient sections complete with 4 Nos aluminium bus bars having current density of 130 Al sq cm at nominal current rating, necessary joints, elbow joints & expansion joints, fire barrier at each floor, continuous earthing with 2 Nos aluminium strip of suitable size (one on each side) including, G.I. clamping brackets, suspenders, angle iron bracket, steel fasteners, connecting to earthing system etc. as required.		
3.9.1	200 A, Isc = 15kA for 1 second	Metre	6,980.00
3.9.2	315 A, Isc = 25kA for 1 second	Metre	8,170.00
3.9.3	400A, Isc = 30kA for 1 second	Metre	9,736.00
3.9.4	500 A, Isc = 35kA for 1 second	Metre	9,773.00
3.9.5	630 A, Isc = 50kA for 1 second	Metre	11,287.00
3.9.6	800 A, Isc = 50kA for 1 second	Metre	16,481.00
3.9.7	1000 A, Isc = 50kA for 1 second	Metre	16,464.00
3.9.8	1250A, Isc = 50kA for 1 second	Metre	19,163.00
3.11	Supplying, installation, testing & commissioning of following capacity End Feed Unit for the existing Air Insulated Compact Type bus trunking/ rising mains for use on 3 phase 4 wire 415 volts, 50Hz A.C. supply made with 1.6mm thick steel sheet enclosure (IP54) duly powder coated with provision of MCCB/ACB (but without MCCB/ACB) complete with necessary joints including clamping brackets, angle iron bracket, steel fasteners, connecting to earthing system etc. as required		
3.11.1	200 A, Isc= 15kA for 1 sec	Each	7,406.00
3.11.2	315 A, Isc= 25kA for 1 sec	Each	8,932.00
3.11.3	400A, Isc= 30kA for 1 sec	Each	9,896.00
3.11.4	500 A, Isc= 35kA for 1 sec	Each	9,896.00
3.11.5	630 A, Isc= 50kA for 1 sec	Each	11,744.00
3.11.6	800A, Isc= 50kA for 1 sec	Each	15,647.00
3.11.7	1000A, Isc= 50kA for 1 sec	Each	15,647.00
3.11.8	1250A, Isc= 50kA for 1 sec	Each	15,647.00
3.12	Supplying, installation, testing & commissioning of following capacity Plug In/ tap off box on the existing Air Insulated Compact Type bus trunking/ rising mains for use on 3 phase 4 wire 415 volts, 50Hz A.C. supply made with 1.6mm thick sheet steel enclosure (IP54) duly powder coated with provision of MCCB/ACB (but without MCCB/ACB) complete etc. as required		
3.12.1	125 A, Isc= 15kA for 1 sec	Each	7,578.00
3.12.2	200A, Isc= 25kA for 1 sec	Each	7,578.00
3.12.3	250 A, Isc= 30kA for 1 sec	Each	9,294.00
3.12.4	400A, Isc= 35kA for 1 sec	Each	9,294.00
3.12.5	500A, Isc= 50kA for 1 sec	Each	13,998.00
3.12.6	630A, Isc= 50kA for 1 sec	Each	13,998.00

Item Code	Description	Unit	Justified Rate
3.13	Supplying, installing by suspension on ceiling, testing and commissioning of following capacity Sandwich Type Rising Mains for use on 3 phase 4 wire 415 volts, 50Hz A.C. supply with metal clad enclosure having IP-54 rating after fixing the tap of boxes and all accessories, made of 1.6mm thick steel sheet duly powder coated in convenient sections complete with 4 Nos aluminium bus bars having current density of 130 A/ sq cm at nominal current rating, necessary joints, elbow joints & expansion joints and bends, fire barrier at each floor, provision of tapping at every metre, adopter box and copper flexible for joints, continuous earthing with 2 Nos aluminium strip of suitable size (one on each side) including, G.I. clamping brackets, suspenders, angle iron bracket, steel fasteners, connecting to earthing system etc. as required		
3.13.1	400A, Isc= 25kA for 1 sec	Metre	13,372.00
3.13.2	500 A, Isc= 30kA for 1 sec	Metre	14,174.00
3.13.3	630 A, Isc= 50kA for 1 sec	Metre	16,752.00
3.13.4	800 A, Isc= 50kA for 1 sec	Metre	18,948.00
3.13.5	1000A, Isc= 50kA for 1 sec	Metre	21,108.00
3.13.6	1250A, Isc= 50kA for 1 sec	Metre	23,052.00
3.13.7	1600A, Isc= 50kA for 1 sec	Metre	27,450.00
3.13.8	2000A, Isc= 50kA for 1 sec	Metre	35,116.00
3.13.9	2500A, Isc= 50kA for 1 sec	Metre	39,004.00
3.13.10	3200A, Isc= 50kA for 1 sec	Metre	48,761.00
3.13.11	4000A, Isc= 50kA for 1 sec	Metre	82,829.00
4	CABLE TRAYS		
4.1	Supplying and installing following size of perforated painted with powder coating M.S. cable trays with perforation not more than 17.5%, in convenient sections, joined with connectors, suspended from the ceiling with M.S. suspenders including bolts & nuts, painting suspenders etc as required.		
4.1.1	100 mm width X 50 mm depth X 1.6 mm thickness	Metre	436.00
4.1.2	150 mm width X 50 mm depth X 1.6 mm thickness	Metre	489.00
4.1.3	200 mm width X 50 mm depth X 1.6 mm thickness	Metre	563.00
4.1.4	300 mm width X 50 mm depth X 1.6 mm thickness	Metre	640.00
4.1.5	375 mm width X 50 mm depth X 2.0 mm thickness	Metre	849.00
4.1.6	450 mm width X 50 mm depth X 2.0 mm thickness	Metre	956.00
4.1.7	600 mm width X 50 mm depth X 2.0 mm thickness	Metre	1,157.00
4.1.8	300 mm width X 62.5 mm depth X 2.0 mm thickness	Metre	773.00
4.1.9	375 mm width X 62.5 mm depth X 2.0 mm thickness	Metre	887.00
4.1.10	450 mm width X 62.5 mm depth X 2.0 mm thickness	Metre	1,023.00
4.1.11	600 mm width X 62.5 mm depth X 2.0 mm thickness	Metre	1,232.00
4.1.12	750 mm width X 62.5 mm depth X 2.0 mm thickness	Metre	1,427.00
4.1.13	900 mm width X 62.5 mm depth X 2.0 mm thickness	Metre	1,686.00
4.1.14	600 mm width X 75 mm depth X 2.0 mm thickness	Metre	1,262.00
4.1.15	750 mm width X 75 mm depth X 2.0 mm thickness	Metre	1,439.00
4.1.16	900 mm width X 75 mm depth X 2.0 mm thickness	Metre	1,691.00
4.2	Supplying and installing following size of perforated painted with powder coating M.S. cable trays bends with perforation not more than 17.5%, joined with connectors, suspended from the ceiling with M.S. suspenders including bolts & nuts, painting suspenders etc as required.		
4.2.1	100 mm width X 50 mm depth X 1.6 mm thickness	Each	730.00
4.2.2	150 mm width X 50 mm depth X 1.6 mm thickness	Each	862.00
4.2.3	200 mm width X 50 mm depth X 1.6 mm thickness	Each	1,045.00
4.2.4	300 mm width X 50 mm depth X 1.6 mm thickness	Each	1,230.00

Item Code	Description	Unit	Justified Rate
4.2.5	375 mm width X 50 mm depth X 2.0 mm thickness	Each	1,729.00
4.2.6	450 mm width X 50 mm depth X 2.0 mm thickness	Each	1,963.00
4.2.7	600 mm width X 50 mm depth X 2.0 mm thickness	Each	2,460.00
4.2.8	300 mm width X 62.5 mm depth X 2.0 mm thickness	Each	1,554.00
4.2.9	375 mm width X 62.5 mm depth X 2.0 mm thickness	Each	1,818.00
4.2.10	450 mm width X 62.5 mm depth X 2.0 mm thickness	Each	2,125.00
4.2.11	600 mm width X 62.5 mm depth X 2.0 mm thickness	Each	2,553.00
4.2.12	750 mm width X 62.5 mm depth X 2.0 mm thickness	Each	3,024.00
4.2.13	900 mm width X 62.5 mm depth X 2.0 mm thickness	Each	3,590.00
4.2.14	600 mm width X 75 mm depth X 2.0 mm thickness	Each	2,692.00
4.2.15	750 mm width X 75 mm depth X 2.0 mm thickness	Each	3,099.00
4.2.16	900 mm width X 75 mm depth X 2.0 mm thickness	Each	3,666.00
4.3	Supplying and installing following size of perforated painted with powder coating M.S. cable trays Tee with perforation not more than 17.5%, joined with connectors, suspended from the ceiling with M.S. suspenders including bolts & nuts, painting suspenders etc as required.		
4.3.1	100 mm width X 50 mm depth X 1.6 mm thickness	Each	849.00
4.3.2	150 mm width X 50 mm depth X 1.6 mm thickness	Each	1,010.00
4.3.3	225 mm width X 50 mm depth X 1.6 mm thickness	Each	1,237.00
4.3.4	300 mm width X 50 mm depth X 1.6 mm thickness	Each	1,467.00
4.3.5	375 mm width X 50 mm depth X 2.0 mm thickness	Each	2,081.00
4.3.6	450 mm width X 50 mm depth X 2.0 mm thickness	Each	2,388.00
4.3.7	600 mm width X 50 mm depth X 2.0 mm thickness	Each	2,979.00
4.3.8	300 mm width X 62.5 mm depth X 2.0 mm thickness	Each	1,869.00
4.3.9	375 mm width X 62.5 mm depth X 2.0 mm thickness	Each	2,189.00
4.3.10	450 mm width X 62.5 mm depth X 2.0 mm thickness	Each	2,552.00
4.3.11	600 mm width X 62.5 mm depth X 2.0 mm thickness	Each	3,155.00
4.3.12	750 mm width X 62.5 mm depth X 2.0 mm thickness	Each	3,737.00
4.3.13	900 mm width X 62.5 mm depth X 2.0 mm thickness	Each	4,351.00
4.3.14	600 mm width X 75 mm depth X 2.0 mm thickness	Each	3,248.00
4.3.15	750 mm width X 75 mm depth X 2.0 mm thickness	Each	3,832.00
4.3.16	900 mm width X 75 mm depth X 2.0 mm thickness	Each	4,445.00
4.4	Supplying and installing following size of perforated painted with powder coating M.S. cable trays Cross Member with perforation not more than 17.5%, joined with connectors, suspended from the ceiling with M.S. suspenders including bolts & nuts, painting suspenders etc as required.		
4.4.1	100 mm width X 50 mm depth X 1.6 mm thickness	Each	968.00
4.4.2	150 mm width X 50 mm depth X 1.6 mm thickness	Each	1,158.00
4.4.3	225 mm width X 50 mm depth X 1.6 mm thickness	Each	1,431.00
4.4.4	300 mm width X 50 mm depth X 1.6 mm thickness	Each	1,705.00
4.4.5	375 mm width X 50 mm depth X 2.0 mm thickness	Each	2,434.00
4.4.6	450 mm width X 50 mm depth X 2.0 mm thickness	Each	2,796.00
4.4.7	600 mm width X 50 mm depth X 2.0 mm thickness	Each	3,499.00
4.4.8	300 mm width X 62.5 mm depth X 2.0 mm thickness	Each	2,185.00
4.4.9	375 mm width X 62.5 mm depth X 2.0 mm thickness	Each	2,570.00
4.4.10	450 mm width X 62.5 mm depth X 2.0 mm thickness	Each	2,978.00
4.4.11	600 mm width X 62.5 mm depth X 2.0 mm thickness	Each	3,682.00
4.4.12	750 mm width X 62.5 mm depth X 2.0 mm thickness	Each	4,387.00
4.4.13	900 mm width X 62.5 mm depth X 2.0 mm thickness	Each	5,102.00

Item Code	Description	Unit	Justified Rate
4.4.14	600 mm width X 75 mm depth X 2.0 mm thickness	Each	3,805.00
4.4.15	750 mm width X 75 mm depth X 2.0 mm thickness	Each	4,500.00
4.4.16	900 mm width X 75 mm depth X 2.0 mm thickness	Each	5,224.00
4.5	Supplying and installing following size of perforated painted with powder coating M.S. cable trays Reducer with perforation not more than 17.5%, joined with connectors, suspended from the ceiling with M.S. suspenders including bolts & nuts, painting suspenders etc as required.		
4.5.1	100 mm width X 50 mm depth X 1.6 mm thickness	Each	849.00
4.5.2	150 mm width X 50 mm depth X 1.6 mm thickness	Each	1,006.00
4.5.3	225 mm width X 50 mm depth X 1.6 mm thickness	Each	1,246.00
4.5.4	300 mm width X 50 mm depth X 1.6 mm thickness	Each	1,476.00
4.5.5	375 mm width X 50 mm depth X 2.0 mm thickness	Each	2,094.00
4.5.6	450 mm width X 50 mm depth X 2.0 mm thickness	Each	2,396.00
4.5.7	600 mm width X 50 mm depth X 2.0 mm thickness	Each	2,979.00
4.5.8	300 mm width X 62.5 mm depth X 2.0 mm thickness	Each	1,947.00
4.5.9	375 mm width X 62.5 mm depth X 2.0 mm thickness	Each	2,280.00
4.5.10	450 mm width X 62.5 mm depth X 2.0 mm thickness	Each	2,552.00
4.5.11	600 mm width X 62.5 mm depth X 2.0 mm thickness	Each	3,155.00
4.5.12	750 mm width X 62.5 mm depth X 2.0 mm thickness	Each	3,687.00
4.5.13	900 mm width X 62.5 mm depth X 2.0 mm thickness	Each	4,351.00
4.5.14	600 mm width X 75 mm depth X 2.0 mm thickness	Each	3,248.00
4.5.15	750 mm width X 75 mm depth X 2.0 mm thickness	Each	3,832.00
4.5.16	900 mm width X 75 mm depth X 2.0 mm thickness	Each	4,445.00
4.6	Supplying and installing following size of perforated Hot Dipped Galvanised Iron cable tray (Galvanisation thickness not less than 50 microns) with perforation not more than 17.5%, in convenient sections, joined with connectors, suspended from the ceiling with G.I. suspenders including G.I. bolts & nuts, etc. as required.		
4.6.1	100 mm width X 50 mm depth X 1.6 mm thickness	Metre	546.00
4.6.2	150 mm width X 50 mm depth X 1.6 mm thickness	Metre	587.00
4.6.3	225 mm width X 50 mm depth X 1.6 mm thickness	Metre	744.00
4.6.4	300 mm width X 50 mm depth X 1.6 mm thickness	Metre	804.00
4.6.5	375 mm width X 50 mm depth X 2.0 mm thickness	Metre	1,023.00
4.6.6	450 mm width X 50 mm depth X 2.0 mm thickness	Metre	1,121.00
4.6.7	600 mm width X 50 mm depth X 2.0 mm thickness	Metre	1,529.00
4.6.8	300 mm width X 62.5 mm depth X 2.0 mm thickness	Metre	1,002.00
4.6.9	375 mm width X 62.5 mm depth X 2.0 mm thickness	Metre	1,203.00
4.6.10	450 mm width X 62.5 mm depth X 2.0 mm thickness	Metre	1,329.00
4.6.11	600 mm width X 62.5 mm depth X 2.0 mm thickness	Metre	1,623.00
4.6.12	750 mm width X 62.5 mm depth X 2.0 mm thickness	Metre	1,929.00
4.6.13	900 mm width X 62.5 mm depth X 2.0 mm thickness	Metre	2,235.00
4.6.14	600 mm width X 75 mm depth X 2.0 mm thickness	Metre	1,663.00
4.6.15	750 mm width X 75 mm depth X 2.0 mm thickness	Metre	1,940.00
4.6.16	900 mm width X 75 mm depth X 2.0 mm thickness	Metre	2,240.00
4.7	Supplying and installing following size of perforated Hot Dipped Galvanised Iron cable tray "bends" (galvanisation not less than 50 microns) with perforation not more than 17.5%, in convenient sections, joined with connectors, suspended from the ceiling with G.I. suspenders including G.I. bolts & nuts, etc. as required.		
4.7.1	100 mm width X 50 mm depth X 1.6 mm thickness	Each	986.00
4.7.2	150 mm width X 50 mm depth X 1.6 mm thickness	Each	1,083.00

Item Code	Description	Unit	Justified Rate
4.7.3	225 mm width X 50 mm depth X 1.6 mm thickness	Each	1,454.00
4.7.4	300 mm width X 50 mm depth X 1.6 mm thickness	Each	1,594.00
4.7.5	375 mm width X 50 mm depth X 2.0 mm thickness	Each	2,100.00
4.7.6	450 mm width X 50 mm depth X 2.0 mm thickness	Each	2,309.00
4.7.7	600 mm width X 50 mm depth X 2.0 mm thickness	Each	3,278.00
4.7.8	300 mm width X 62.5 mm depth X 2.0 mm thickness	Each	2,055.00
4.7.9	375 mm width X 62.5 mm depth X 2.0 mm thickness	Each	2,407.00
4.7.10	450 mm width X 62.5 mm depth X 2.0 mm thickness	Each	2,799.00
4.7.11	600 mm width X 62.5 mm depth X 2.0 mm thickness	Each	3,224.00
4.7.12	750 mm width X 62.5 mm depth X 2.0 mm thickness	Each	4,193.00
4.7.13	900 mm width X 62.5 mm depth X 2.0 mm thickness	Each	4,873.00
4.7.14	600 mm width X 75 mm depth X 2.0 mm thickness	Each	3,574.00
4.7.15	750 mm width X 75 mm depth X 2.0 mm thickness	Each	4,222.00
4.7.16	900 mm width X 75 mm depth X 2.0 mm thickness	Each	4,894.00
4.8	Supplying and installing following size of perforated Hot Dipped Galvanised Iron cable tray "Tee" (galvanisation not less than 50 microns) with perforation not more than 17.5%, in convenient sections, joined with connectors, suspended from the ceiling with G.I. suspenders including G.I. bolts & nuts, etc. as required.		
4.8.1	100 mm width X 50 mm depth X 1.6 mm thickness	Each	1,133.00
4.8.2	150 mm width X 50 mm depth X 1.6 mm thickness	Each	1,182.00
4.8.3	225 mm width X 50 mm depth X 1.6 mm thickness	Each	1,695.00
4.8.4	300 mm width X 50 mm depth X 1.6 mm thickness	Each	1,860.00
4.8.5	375 mm width X 50 mm depth X 2.0 mm thickness	Each	2,462.00
4.8.6	450 mm width X 50 mm depth X 2.0 mm thickness	Each	2,724.00
4.8.7	600 mm width X 50 mm depth X 2.0 mm thickness	Each	3,907.00
4.8.8	300 mm width X 62.5 mm depth X 2.0 mm thickness	Each	2,422.00
4.8.9	375 mm width X 62.5 mm depth X 2.0 mm thickness	Each	2,876.00
4.8.10	450 mm width X 62.5 mm depth X 2.0 mm thickness	Each	3,284.00
4.8.11	600 mm width X 62.5 mm depth X 2.0 mm thickness	Each	4,162.00
4.8.12	750 mm width X 62.5 mm depth X 2.0 mm thickness	Each	4,942.00
4.8.13	900 mm width X 62.5 mm depth X 2.0 mm thickness	Each	5,756.00
4.8.14	600 mm width X 75 mm depth X 2.0 mm thickness	Each	4,206.00
4.8.15	750 mm width X 75 mm depth X 2.0 mm thickness	Each	4,981.00
4.8.16	900 mm width X 75 mm depth X 2.0 mm thickness	Each	5,780.00
4.9	Supplying and installing following size of perforated Hot Dipped Galvanised Iron cable tray "Cross member" (galvanisation not less than 50 microns) with perforation not more than 17.5%, in convenient sections, joined with connectors, suspended from the ceiling with G.I. suspenders including G.I. bolts & nuts, etc as required.		
4.9.1	100 mm width X 50 mm depth X 1.6 mm thickness	Each	1,133.00
4.9.2	150 mm width X 50 mm depth X 1.6 mm thickness	Each	1,182.00
4.9.3	225 mm width X 50 mm depth X 1.6 mm thickness	Each	1,711.00
4.9.4	300 mm width X 50 mm depth X 1.6 mm thickness	Each	2,044.00
4.9.5	375 mm width X 50 mm depth X 2.0 mm thickness	Each	2,695.00
4.9.6	450 mm width X 50 mm depth X 2.0 mm thickness	Each	3,099.00
4.9.7	600 mm width X 50 mm depth X 2.0 mm thickness	Each	3,919.00
4.9.8	300 mm width X 62.5 mm depth X 2.0 mm thickness	Each	2,429.00
4.9.9	375 mm width X 62.5 mm depth X 2.0 mm thickness	Each	2,828.00
4.9.10	450 mm width X 62.5 mm depth X 2.0 mm thickness	Each	3,289.00

Item Code	Description	Unit	Justified Rate
4.9.11	600 mm width X 62.5 mm depth X 2.0 mm thickness	Each	1,301.00
4.9.12	750mm width X 62.5 mm depth X 2 mm thickness	Each	4,942.00
4.9.13	900 mm width X 62.5 mm depth X 2.0 mm thickness	Each	5,756.00
4.9.14	600 mm width X 75 mm depth X 2.0 mm thickness	Each	2,192.00
4.9.15	750 mm width X 75 mm depth X 2.0 mm thickness	Each	3,676.00
4.9.16	900 mm width X 75 mm depth X 2.0 mm thickness	Each	4,256.00
4.10	Supplying and installing following size of perforated Hot Dipped Galvanised Iron cable tray "Reducer" (galvanisation not less than 50 microns) with perforation not more than 17.5%, in convenient sections, joined with connectors, suspended from the ceiling with G.I. suspenders including G.I. bolts & nuts, etc as required.		
4.10.1	100 mm width X 50 mm depth X 1.6 mm thickness	Each	1,430.00
4.10.2	150 mm width X 50 mm depth X 1.6 mm thickness	Each	1,654.00
4.10.3	225 mm width X 50 mm depth X 1.6 mm thickness	Each	2,105.00
4.10.4	300 mm width X 50 mm depth X 1.6 mm thickness	Each	2,445.00
4.10.5	375 mm width X 50 mm depth X 2.0 mm thickness	Each	2,975.00
4.10.6	450 mm width X 50 mm depth X 2.0 mm thickness	Each	3,232.00
4.10.7	600 mm width X 50 mm depth X 2.0 mm thickness	Each	4,481.00
4.10.8	300 mm width X 62.5 mm depth X 2.0 mm thickness	Each	2,942.00
4.10.9	375 mm width X 62.5 mm depth X 2.0 mm thickness	Each	3,453.00
4.10.10	450 mm width X 62.5 mm depth X 2.0 mm thickness	Each	4,091.00
4.10.11	600 mm width X 62.5 mm depth X 2.0 mm thickness	Each	5,162.00
4.10.12	750mm width X 62.5 mm depth X 2 mm thickness	Each	5,567.00
4.10.13	900 mm width X 62.5 mm depth X 2.0 mm thickness	Each	6,462.00
4.10.14	600 mm width X 75 mm depth X 2.0 mm thickness	Each	4,567.00
4.10.15	750 mm width X 75 mm depth X 2.0 mm thickness	Each	5,637.00
4.10.16	900 mm width X 75 mm depth X 2.0 mm thickness	Each	6,535.00
5	EARTHING		
5.1	Earthing with G.I. earth pipe 4.5 metre long, 40 mm dia including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc. (but without charcoal/ coke and salt) as required.	Set	4,419.00
5.2	Earthing with G.I. earth pipe 4.5 metre long, 40 mm dia including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc. with charcoal/ coke and salt as required.	Each	5,601.00
5.3	Earthing with G.I. earth plate 600 mm X 600 mm X 6 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 metre long etc. (but without charcoal/ coke and salt) as required.	Set	5,035.00
5.4	Earthing with G.I. earth plate 600 mm X 600 mm X 6 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 metre long etc. with charcoal/ coke and salt as required.	Set	6,101.00
5.5	Earthing with copper earth plate 600 mm X 600 mm X 3 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 metre long etc. (but without charcoal/ coke and salt) as required.	Set	10,617.00
5.6	Earthing with copper earth plate 600 mm X 600 mm X 3 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 metre long etc. with charcoal/ coke and salt as required.	Set	11,683.00
5.7	Supplying and laying 6 SWG G.I. wire at 0.50 metre below ground level for conductor earth electrode, including connection/ termination with GI thimble etc. as required.	Metre	38.00

Item Code	Description	Unit	Justified Rate
5.8	Supplying and laying 25 mm X 5 mm copper strip at 0.50 metre below ground as strip earth electrode, including connection/ terminating with nut, bolt, spring, washer etc. as required. (Jointing shall be done by overlapping and with 2 sets of brass nut bolt & spring washer spaced at 50mm)	Metre	846.00
5.9	Supplying and laying 25 mm X 5 mm G.I strip at 0.50 metre below ground as strip earth electrode, including connection/ terminating with G.I. nut, bolt, spring, washer etc. as required. (Jointing shall be done by overlapping and with 2 sets of G.I. nut bolt & spring washer spaced at 50mm)	Metre	122.00
5.10	Providing and fixing 25 mm X 5 mm copper strip in 40 mm dia G.I. pipe from earth electrode including connection with brass nut, bolt, spring, washer excavation and re-filling etc. as required.	Metre	1,348.00
5.11	Providing and fixing 25 mm X 5 mm G.I. strip in 40 mm dia G.I. pipe from earth electrode including connection with G.I. nut, bolt, spring, washer excavation and re-filling etc. as required.	Metre	607.00
5.12	Providing and laying earth connection from earth electrode with 6 SWG dia G.I. Wire in 15 mm dia G.I. pipe from earth electrode including connection with G.I. thimble excavation and re-filling as required.	Metre	242.00
5.13	Providing and laying earth connection from earth electrode with 4.00 mm dia copper wire in 15 mm dia G.I. pipe from earth electrode including connection with copper thimble excavation and re-filling as required.	Metre	314.00
5.14	Providing and fixing 25 mm X 5 mm copper strip on surface or in recess for connections etc. as required.	Metre	999.00
5.15	Providing and fixing 25 mm X 5 mm GI. strip on surface or in recess for connections etc. as required.	Metre	194.00
5.16	Providing and fixing 6 SWG dia GI. wire on surface or in recess for loop earthing as required.	Metre	55.00
5.17	Providing and fixing 4.00 mm dia copper wire on surface or in recess for loop earthing as required.	Metre	129.00
5.18	Providing and fixing 6 SWG dia GI. wire on surface or in recess for loop earthing along with existing surface/ recessed conduit/ subnain wiring/ cable as required.	Metre	33.00
5.19	Providing and fixing 4.00 mm dia copper wire on surface or in recess for loop earthing along with existing surface/ recessed conduit/ submain wiring/ cable as required.	Metre	107.00
5.20	Providing and fixing earth bus of 50 mm X 5 mm copper strip on surface for connections etc. as required.	Metre	1,831.00
6	LIGHTNING CONDUCTOR		
6.2	Providing and fixing of lightning conductor finial, made of 25 mm dia 300 mm long, G.I. tube, having single prong at top, with 85 mm dia 6 mm thick G.I. base plate including holes etc. complete as required.	Each	410.00
6.3	Fixing of lightning conductor finial (single prong) with base plate including holes etc. complete as required.	Each	253.00
6.4	Jointing copper/ G.I. tape (with another copper/ G I tape, base of the finial or any other metallic object) by riveting / nut bolting/ sweating and soldering etc as required.	Each	84.00
6.7	Providing and fixing GI. tape 20 mm X 3 mm thick on parapet or surface of wall for lightning conductor complete as required.(For horizontal run)	Metre	101.00
6.8	Providing and fixing GI. tape 20 mm X 3 mm thick on parapet or surface of wall for lightning conductor complete as required.(For vertical run)	Metre	153.00
6.9	Fixing of copper/ G.I. tape 20 mm X 3 mm thick on parapet or surface of wall for lightning conductor complete as required.(For horizontal run)	Metre	60.00
6.10	Fixing of copper/ G.I. tape 20 mm X 3 mm thick on parapet or surface of wall for lightning conductor complete as required.(For vertical run)	Metre	122.00
6.12	Providing and fixing testing joint, made of 20 mm X 3 mm thick GI. strip, 125 mm long, with 4 nos. of al. bolts, nuts, chuck nuts and spring washers etc. complete as required.	Each	99.00

Item Code	Description	Unit	Justified Rate
6.14	Providing and laying GI tape 32 mm X 6 mm from earth electrode directly in ground as required.	Metre	159.00
6.15	Laying copper/ G.I. tape 32 mm X 6 mm from earth electrode directly in ground as required.	Metre	54.00
7	MV CABLE LAYING		
7.1	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size direct in ground including excavation, sand cushioning, protective covering and refilling the trench etc as required.		
7.1.1	Upto 35 sq. mm	Metre	277.00
7.1.2	Above 35 sq. mm and upto 95 sq. mm	Metre	289.00
7.1.3	Above 95 sq. mm and upto 185 sq. mm	Metre	301.00
7.1.4	Above 185 sq. mm and upto 400 sq. mm	Metre	337.00
7.2	Laying of one number additional PVC insulated and PVC sheathed! XLPE power cable of 1.1 KV grade of following size direct in ground in the same trench in one tier horizontal formation including excavation, sand cushioning, protective covering and refilling the trench etc as required.		
7.2.1	Upto 35 sq. mm	Metre	193.00
7.2.2	Above 35 sq. mm and upto 95 sq. mm	Metre	205.00
7.2.3	Above 95 sq. mm and upto 185 sq. mm	Metre	217.00
7.2.4	Above 185 sq. mm and upto 400 sq. mm	Metre	253.00
7.3	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size direct in ground including excavation and refilling the trench etc as required, but excluding sand cushioning and protective covering.		
7.3.1	Upto 35 sq. mm	Metre	135.00
7.3.2	Above 35 sq. mm and upto 95 sq. mm	Metre	147.00
7.3.3	Above 95 sq. mm and upto 185 sq. mm	Metre	159.00
7.3.4	Above 185 sq. mm and upto 400 sq. mm	Metre	195.00
7.4	Laying of one number additional PVC insulated and PVC sheathed! XLPE power cable of 1.1 KV grade of following size direct in ground in the same trench in one tier horizontal formation including excavation and refilling the trench etc as required, but excluding sand cushioning and protective covering.		
7.4.1	Upto 35 sq. mm	Metre	86.00
7.4.2	Above 35 sq. mm and upto 95 sq. mm	Metre	98.00
7.4.3	Above 95 sq. mm and upto 185 sq. mm	Metre	110.00
7.4.4	Above 185 sq. mm and upto 400 sq. mm	Metre	146.00
7.5	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size in the existing RCC/ HUME/ METAL pipe as required.		
7.5.1	Upto 35 sq. mm	Metre	26.00
7.5.2	Above 35 sq. mm and upto 95 sq. mm	Metre	41.00
7.5.3	Above 95 sq. mm and upto 185 sq. mm	Metre	55.00
7.5.4	Above 185 sq. mm and upto 400 sq. mm	Metre	95.00
7.6	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size in the existing masonry open duct as required.		
7.6.1	Upto 35 sq. mm	Metre	20.00
7.6.2	Above 35 sq. mm and upto 95 sq. mm	Metre	32.00
7.6.3	Above 95 sq. mm and upto 185 sq. mm	Metre	44.00
7.6.4	Above 185 sq. mm and upto 400 sq. mm	Metre	80.00
7.7	Laying and fixing of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size on wall surface as required.		
7.7.1	Upto 35 sq. mm (clamped with 1mm thick saddle)	Metre	43.00

Item Code	Description	Unit	Justified Rate
7.7.2	Above 35 sq. mm and upto 95 sq. mm (clamped with 25x3mm MS flat clamp)	Metre	103.00
7.7.3	Above 95 sq. mm and upto 185 sq. mm (clamped with 25/40x3mm MS flat clamp)	Metre	121.00
7.7.4	Above 185 sq. mm and upto 400 sq. mm (clamped with 40x3mm MS flat clamp)	Metre	173.00
7.8	Laying and fixing of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size on cable tray as required.		
7.8.1	Upto 35 sq. mm (clamped with 1mm thick saddle)	Each	35.00
7.8.2	Above 35 sq. mm and upto 95 sq. mm (clamped with 25x3mm MS flat clamp)	Metre	71.00
7.8.3	Above 95 sq. mm and upto 185 sq. mm (clamped with 25/40x3mm MS flat clamp)	Metre	88.00
7.8.4	Above 185 sq. mm and upto 400 sq. mm (clamped with 40x3mm MS flat clamp)	Metre	138.00
7.9	Supplying and making cable route marker with cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) of size 60 cm X 60 cm at the bottom and 50 cm X 50 cm at the top with a thickness of 10cm including inscription duly engraved as required.	Each	454.00
7.10	Supplying and fixing cable route marker with 10 cm X 10 cm X 5 mm thick G.I. plate with inscription there on, bolted /welded to 35 mm X 35 mm X 6 mm angle iron, 60 cm long and fixing the same in ground as required.	Each	398.00
8	HT CABLE LAYING		
8.1	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 11 KV grade of following size direct in ground including excavation, sand cushioning, protective covering and refilling the trench etc as required.		
8.1.1	Upto 120 sq. mm	Metre	370.00
8.1.2	Above 120 sq. mm and upto 400 sq. mm	Metre	406.00
8.2	Laying of one number additional PVC insulated and PVC sheathed / XLPE power cable of 11 KV grade of following size direct in ground in the same trench in one tier horizontal formation including excavation, sand cushioning, protective covering and refilling the trench etc as required.		
8.2.1	Upto 120 sq. mm	Metre	257.00
8.2.2	Above 120 sq. mm and upto 400 sq. mm	Metre	293.00
8.3	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 11 KV grade of following size in the existing RCC/ HUME/ METAL pipe as required.		
8.3.1	Upto 120 sq. mm	Metre	55.00
8.3.2	Above 120 sq. mm and upto 400 sq. mm	Metre	95.00
8.4	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 11 KV grade of following size in the existing masonry open duct as required.		
8.4.1	Upto 120 sq. mm	Metre	44.00
8.4.2	Above 120 sq. mm and upto 400 sq. mm	Metre	80.00
8.5	Laying of one number XLPE power cable of 33 KV grade of following size direct in ground including excavation, sand cushioning, protective covering and refilling the trench etc as required.		
8.5.1	Upto 120 sq. mm	Metre	374.00
8.5.2	Above 120 sq. mm and upto 400 sq. mm	Metre	410.00
8.6	Laying of one number additional XLPE power cable of 33 KV grade of following size direct in ground in the same trench in one tier horizontal formation including excavation, sand cushioning, protective covering and refilling the trench etc as required.		
8.6.1	Upto 120 sq. mm	Metre	261.00
8.6.2	Above 120 sq. mm and upto 400 sq. mm	Metre	297.00

Item Code	Description	Unit	Justified Rate
8.7	Laying of one number XLPE power cable of 33 KV grade of following size in the existing RCC/ HUME/ METAL pipe as required.		
8.7.1	Upto 120 sq. mm	Metre	59.00
8.7.2	Above 120 sq. mm and upto 400 sq. mm	Metre	99.00
8.8	Laying of one number XLPE power cable of 33 KV grade of following size in the existing masonry open duct as required.		
8.8.1	Upto 120 sq. mm	Metre	49.00
8.8.2	Above 120 sq. mm and upto 400 sq. mm	Metre	85.00
9	MV CABLE JOINTING & END TERMINATION		
9.1	Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required.		
9.1.1	2 X 6 sq. mm (19mm)	Each	186.00
9.1.2	2 X 10 sq. mm (19mm)	Each	187.00
9.1.3	2 X 16 sq. mm (22mm)	Each	200.00
9.1.4	2 X 25 sq. mm (22mm)	Each	203.00
9.1.5	2 X 35 sq. mm (25mm)	Each	242.00
9.1.6	2 X 50 sq. mm (28mm)	Each	279.00
9.1.7	3 X 10 sq. mm (22mm)	Each	201.00
9.1.8	3 X 16 sq. mm (25mm)	Each	212.00
9.1.9	3 X 25 sq. mm (25mm)	Each	216.00
9.1.10	3 X 35 sq. mm (28mm)	Each	279.00
9.1.11	3 X 50 sq. mm (32mm)	Each	298.00
9.1.12	3 X 70 sq. mm (35mm)	Each	343.00
9.1.13	3 X 95 sq. mm (38mm)	Each	436.00
9.1.14	3 X 120 sq. mnn (45mm)	Each	485.00
9.1.15	3X 150 sq. mm (50mm)	Each	558.00
9.1.16	3 X 185 sq. mm (57mm)	Each	704.00
9.1.17	3 X 225 sq. mm (62mm)	Each	803.00
9.1.18	3 X 240 sq. mm (62mm)	Each	832.00
9.1.19	3 X 300 sq. mm (70mm)	Each	973.00
9.1.20	31/2X 25 sq. mm (28mm)	Each	250.00
9.1.21	31/2X 35 sq. mm (32mm)	Each	294.00
9.1.22	3% X 50 sq. mm (35mm)	Each	333.00
9.1.23	312 X 70 sq. mm (38mm)	Each	381.00
9.1.24	312 X 95 sq. mm (45mm)	Each	476.00
9.1.25	312 X 120 sq. mm (45mm)	Each	498.00
9.1.26	3% X 150 sq. mm (50mm)	Each	572.00
9.1.27	312 X 185 sq. mm (57mm)	Each	718.00
9.1.28	312 X 225 sq. mm (62mm)	Each	823.00
9.1.29	3% X 240 sq. mm (62mm)	Each	852.00
9.1.30	312 X 300 sq. mm (70mm)	Each	999.00
9.1.31	312 X 400 sq. mm (82mm)	Each	1,315.00
9.1.32	4 X 10 sq. mm (25mm)	Each	212.00
9.1.33	4 X 16 sq. mm (28mm)	Each	246.00
9.1.34	4 X 25 sq. mm (28mm)	Each	252.00
9.1.35	4 X 35 sq. mm (32mm)	Each	295.00
9.1.36	4 X 50 sq. mm (35mm)	Each	337.00

Item Code	Description	Unit	Justified Rate
9.2	Supplying and making outdoor end termination with cast resin compound including aluminium lugs and other jointing materials for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required.		
9.2.1	2 X 16 sq. mm	Each	1,087.00
9.2.2	2 X 25 sq. mm	Each	1,175.00
9.2.3	2 X 35 sq. mm	Each	1,175.00
9.2.4	2 X 50 sq. mm	Each	1,175.00
9.2.5	3 X 16 sq. mm	Each	1,175.00
9.2.6	3 X 25 sq. mm	Each	1,175.00
9.2.7	3 X 35 sq. mm	Each	1,175.00
9.2.8	3 X 50 sq. mm	Each	1,257.00
9.2.9	3 X 70 sq. mm	Each	1,257.00
9.2.10	3 X 95 sq. mm	Each	1,496.00
9.2.11	3 X 120 sq. mm	Each	1,496.00
9.2.12	3 X 150 sq. mm	Each	1,496.00
9.2.13	3 X 185 sq. mm	Each	2,017.00
9.2.14	3 X 225 sq. mm	Each	2,017.00
9.2.15	3 X 240 sq. mm	Each	2,340.00
9.2.16	3 X 300 sq. mm	Each	2,340.00
9.2.17	31/ X 25 sq. mm	Each	1,175.00
9.2.18	3% X 35 sq. mm	Each	1,257.00
9.2.19	3% X 50 sq. mm	Each	1,257.00
9.2.20	31/2X 70 sq. mm	Each	1,381.00
9.2.21	31/ X 95 sq. mm	Each	1,496.00
9.2.22	3% X 120 sq. mm	Each	1,496.00
9.2.23	3% X 150 sq. mm	Each	2,017.00
9.2.24	312 X 185 sq. mm	Each	1,575.00
9.2.25	31/2X 225 sq. mm	Each	2,340.00
9.2.26	3% X 240 sq. mm	Each	2,340.00
9.2.27	3% X 300 sq. mm	Each	2,585.00
9.2.28	312 X 400 sq. mm	Each	2,965.00
9.2.29	4 X 16 sq. mm	Each	1,175.00
9.2.30	4 X 25 sq. mm	Each	1,175.00
9.2.31	4 X 35 sq. mm	Each	1,257.00
9.2.32	4 X 50 sq. mm	Each	1,257.00
9.3	Supplying and making straight through joint with cast resin compound including ferrules and other jointing materials for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required.		
9.3.1	2 X 16 sq. mm	Each	2,282.00
9.3.2	2 X 25 sq. mm	Each	2,282.00
9.3.3	2 X 35 sq. mm	Each	2,282.00
9.3.4	2 X 50 sq. mm	Each	2,604.00
9.3.5	3 X 16 sq. mm	Each	2,604.00
9.3.6	3 X 25 sq. mm	Each	2,282.00
9.3.7	3 X 35 sq. mm	Each	2,282.00
9.3.8	3 X 50 sq. mm	Each	2,604.00
9.3.9	3 X 70 sq. mm	Each	3,044.00
9.3.10	3 X 95 sq. mm	Each	3,233.00
9.3.11	3 X 120 sq. mm	Each	3,629.00

Item Code	Description	Unit	Justified Rate
9.3.12	3 X 150 sq. mm	Each	3,629.00
9.3.13	3 X 185 sq. mm	Each	4,318.00
9.3.14	3 X 225 sq. mm	Each	4,889.00
9.3.15	3 X 240 sq. mm	Each	4,889.00
9.3.16	3 X 300 sq. mm	Each	6,278.00
9.3.17	31/2X 25 sq. mm	Each	2,604.00
9.3.18	31/ X 35 sq. mm	Each	2,604.00
9.3.19	3% X 50 sq. mm	Each	3,044.00
9.3.20	31/2X 70 sq. mm	Each	3,071.00
9.3.21	31/2X 95 sq. mm	Each	3,629.00
9.3.22	31/2X 120 sq. mm	Each	4,318.00
9.3.23	31/2X 150 sq. mm	Each	4,318.00
9.3.24	31/ X 185 sq. mm	Each	4,889.00
9.3.25	3% X 225 sq. mm	Each	4,977.00
9.3.26	31/ X 240 sq. mm	Each	6,032.00
9.3.27	31/ X 300 sq. mm	Each	7,378.00
9.3.28	3% X 400 sq. mm	Each	4,295.00
9.3.29	4 X 16 sq. mm	Each	2,282.00
9.3.30	4 X 25 sq. mm	Each	2,604.00
9.3.31	4 X 35 sq. mm	Each	2,604.00
9.3.32	4 X 50 sq. mm	Each	3,044.00
9.4	Supplying and making straight through joint with heat shrinkable kit including ferrules and other jointing materials for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required.		
9.4.1	2 X 16 sq. mm	Each	1,839.00
9.4.2	2 X 25 sq. mm	Each	2,111.00
9.4.3	2 X 35 sq. mm	Each	2,111.00
9.4.4	2 X 50 sq. mm	Each	2,111.00
9.4.5	3 X 16 sq. mm	Each	1,839.00
9.4.6	3 X 25 sq. mm	Each	2,111.00
9.4.7	3 X 35 sq. mm	Each	2,111.00
9.4.8	3 X 50 sq. mm	Each	2,111.00
9.4.9	3 X 70 sq. mm	Each	2,887.00
9.4.10	3 X 95 sq. mm	Each	3,003.00
9.4.11	3X 120 sq. mm	Each	3,898.00
9.4.12	3 X 150 sq. mm	Each	3,898.00
9.4.13	3 X 185 sq. mm	Each	3,898.00
9.4.14	3 X 225 sq. mm	Each	4,232.00
9.4.15	3 X 240 sq. mm	Each	4,232.00
9.4.16	3 X 300 sq. mm	Each	5,232.00
9.4.17	3% X 25 sq. mm	Each	2,111.00
9.4.18	31/ X 35 sq. mm	Each	2,111.00
9.4.19	3% X 50 sq. mm	Each	2,111.00
9.4.20	31/ X 70 sq. mm	Each	2,887.00
9.4.21	31/ X 95 sq. mm	Each	3,003.00
9.4.22	3% X 120 sq. mm	Each	3,898.00
9.4.23	31/ X 150 sq. mm	Each	3,898.00
9.4.24	3% X 185 sq. mm	Each	3,898.00
9.4.25	31/ X 225 sq. mm	Each	4,232.00

Item Code	Description	Unit	Justified Rate
9.4.26	3% X 240 sq. mm	Each	4,232.00
9.4.27	31/ X 300 sq. mm	Each	5,232.00
9.4.28	3% X 400 sq. mm	Each	6,862.00
9.4.29	4 X 16 sq. mm	Each	1,839.00
9.4.30	4 X 25 sq. mm	Each	2,111.00
9.4.31	4 X 35 sq. mm	Each	2,887.00
9.4.32	4 X 50 sq. mm	Each	2,887.00
10	HV CABLE JOINTING & END TERMINATION		
10.1	Supplying and making indoor cable end jointing with cast resin compound, including lugs and other jointing materials, for following size of 3 core, XLPE aluminium conductor cable of 11 KV grade as required:		
10.1.1	70 sq. mm	Each	1,697.00
10.1.2	120 sq. mm	Each	2,130.00
10.1.3	240 sq. nmm	Each	2,867.00
10.1.4	300 sq. mm	Each	2,920.00
10.2	Supplying and making outdoor cable end jointing with cast resin compound, including lugs and other jointing materials, for following size of 3 core, XLPE aluminium conductor cable of 11 KV grade as required:		
10.2.1	70 sq. mm	Each	4,059.00
10.2.2	120 sq. mm	Each	4,537.00
10.2.3	240 sq. mm	Each	5,273.00
10.2.4	300 sq. mm	Each	5,273.00
10.3	Supplying and making straight through cable jointing with cast resin compound, including ferrule and other jointing materials, for following size of 3 core, XLPE aluminium conductor cable of 11 KV grade as required:		
10.3.1	70 sq. mm	Each	3,772.00
10.3.2	120 sq. mm	Each	4,308.00
10.3.3	240 sq. mm	Each	6,432.00
10.3.4	300 sq. mm	Each	7,354.00
10.4	supplying and making indoor cable end termination with heat shrinkable jointing kit complete with all accessories including lugs suitable for following size of 3 core, XLPE aluminium conductor cable of 11 KV grade as required:		
10.4.1	70 sq. mm	Each	10,558.00
10.4.2	120 sq. mm	Each	12,928.00
10.4.3	240 sq. mm	Each	14,002.00
10.4.4	300 sq. mm	Each	14,002.00
10.5	Supplying and making outdoor cable end termination with heat shrinkable jointing kit complete with all accessories including lugs suitable for following size of 3 core, XLPE aluminium conductor cable of 11 KV grade as required:		
10.5.1	70 sq. mm	Each	15,878.00
10.5.2	120 sq. mm	Each	17,427.00
10.5.3	240 sq. mm	Each	19,742.00
10.5.4	300 sq. mm	Each	19,742.00
10.6	Supplying and making straight through cable jointing with heat shrinkable jointing kit complete with all accessories including ferrules suitable for following size of 3 core, XLPE aluminium conductor cable of 11 KV grade as required:		
10.6.1	70 sq. mm	Each	25,355.00
10.6.2	120 sq. mm	Each	33,196.00
10.6.3	240 sq. mm	Each	36,487.00

Item Code	Description	Unit	Justified Rate
10.6.4	300 sq. mm	Each	36,487.00
10.7	Supplying and making indoor cable end termination with heat shrinkable jointing kit complete with all accessories including lugs suitable for following size of 3 core, XLPE aluminium conductor cable of 33 KV grade as required:		
10.7.1	70 sq. mm	Each	17,274.00
10.7.2	120 sq. mm	Each	26,184.00
10.7.3	240 sq. mm	Each	29,756.00
10.8	Supplying and making outdoor cable end termination with heat shrinkable jointing kit complete with all accessories including lugs suitable for following size of 3 core, XLPE aluminium conductor cable of 33 KV grade as required :		
10.8.1	70 sq. mm	Each	27,553.00
10.8.2	120 sq. mm	Each	35,932.00
10.8.3	240 sq. mm	Each	62,573.00
10.9	Supplying and making straight through cable jointing with heat shrinkable jointing kit complete with all accessories including ferrules suitable for following size of 3 core, XLPE aluminium conductor cable of 33 KV grade as required :		
10.9.1	70 sq. mm	Each	47,963.00
10.9.2	120 sq. mm	Each	60,854.00
10.9.3	240 sq. mm	Each	86,228.00
11	POLE ERECTION		
11.1	Erection of RCC/ PCC pole of following length in brick ballast and ramming the foundation, finishing with 150mm thick cement concrete (1:3:6) layer on top with including excavation and refilling etc as required.		
11.1.1	Above 4.5 metre and upto 6.5 metre	Each	4,043.00
11.1.2	Above 6.5 metre and upto 8.0 metre	Each	4,483.00
11.1.3	Above 8.0 metre and upto 11.0 metre	Each	5,354.00
11.1.4	Above 11.00 metre and upto 13.00 metre	Each	5,877.00
11.2	Erection of RCC/ PCC pole strut in brick ballast and ramming the foundation including excavation and refilling and secured with holding clamps, bolts, nuts, etc. as required.	Each	6,882.00
11.3	Erection of metallic pole of following length in cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) foundation including excavation and refilling etc. as required.		
11.3.1	Above 4.5 metre and upto 6.5 metre	Each	3,844.00
11.3.2	Above 6.5 metre and upto 8.0 metre	Each	4,596.00
11.3.3	Above 8.0 metre and upto 10.0 metre	Each	5,408.00
11.3.4	Above 10.00 metre and upto 12.00 metre	Each	6,292.00
11.4	Erection of steel tubular or rail pole strut in cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) foundation including excavation and refilling and secured with holding clamps, bolts, nuts, etc. as required.	Each	6,508.00
11.5	Providing and making steel pole collar with cement concrete (1 cement: 3 coarse sand : 6 stone aggregate 20mm) of specified size and shape including form work, plastering if required, curing etc as required. (volume of pole/ pipe not to be deducted)	cum	5,960.00
11.6	Supplying and embedding following dia G.I. pipe (medium class) in pole collar/ foundation (during casting) for cable entry including bending the pipe to the required shape complete as required.		
11.6.1	32 mm dia	Metre	452.00
11.6.2	40 mm dia	Metre	509.00
12	MV OVER HEAD LINE WORK		

Item Code	Description	Unit	Justified Rate
12.1	Supplying and erection of stay set complete (galvanised) with 19/20 mm dia X 1.8 metres long stay rod, anchor plate of size 45 cm X 45 cm X 7.5 mm, thimble, stay clamps, turn buckle (20 mm X 60 cm), 7/ 4.00 mm dia G.I. stay wire and strain insulator etc in cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) foundation including excavation and refilling etc. as required.	Each	4,514.00
12.2	Supplying and erection of stay set complete (galvanised) with 19/20 mm dia X 1.8 metres long stay rod, anchor plate of size 45 cm X 45 cm X 7.5 mm, thimble, stay clamps, turn buckle (20 mm X 60 cm), 7/ 3.15 mm dia G.I. stay wire and strain insulator etc in cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) foundation including excavation and refilling etc. as required.	Each	4,399.00
12.3	Supplying and erection of stay set complete (galvanised) with 19/20 mm dia X 1.8 metres long stay rod, anchor plate of size 45 cm X 45 cm X 7.5 mm, thimble, stay clamps, bow tightener, 7/ 4.00 mm dia G.I. stay wire and strain insulator etc in cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) foundation including excavation and refilling etc. as required.	Each	4,349.00
12.4	Supplying and erection of stay set complete (galvanised) with 19/20 mm dia X 1.8 metres long stay rod, anchor plate of size 45 cm X 45 cm X 7.5 mm, thimble, stay clamps, bow tightener, 7/ 3.15 mm dia G.I. stay wire and strain insulator etc in cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) foundation including excavation and refilling etc. as required.	Each	4,230.00
12.5	Supplying and erection of bow stay set complete (galvanised) with 19/20 mm dia X 1.8 metres long stay rod, anchor plate of size 45 cm X 45 cm X 7.5 mm, thimble, stay clamps, turn buckle (20 mm X 60 cm), 7/ 4.00 mm dia G.I. stay wire and strain insulator etc in cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) foundation including excavation and refilling and also with 0.6 m long brace of size 50 mm X 50 mm X 6 mm angle iron with 50 mm dia pulley fixed at one end of the brace as required.	Each	4,830.00
12.6	Supplying and erection of bow stay set complete (galvanised) with 19/20 mm dia X 1.8 metres long stay rod, anchor plate of size 45 cm X 45 cm X 7.5 mm, thimble, stay clamps, turn buckle (20 mm X 60 cm), 7/ 3.15 mm dia G.I. stay wire and strain insulator etc in cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) foundation including excavation and refilling and also with 0.6 m long brace of size 50 mm X 50 mm X 6 mm angle iron with 50 mm dia pulley fixed at one end of the brace as required.	Each	4,711.00
12.7	Supplying and erection of bow stay set complete (galvanised) with 19/20 mm dia X 1.8 metres long stay rod, anchor plate of size 45 cm X 45 cm X 7.5 mm, thimble, stay clamps, bow tightener), 7/ 4.00 mm dia G.I. stay wire and strain insulator etc in cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) foundation including excavation and refilling and also with 0.6 m long brace of size 50 mm X 50 mm X 6 mm angle iron with 50 mm dia pulley fixed at one end of the brace as required.	Each	4,665.00
12.8	Supplying and erection of bow stay set complete (galvanised) with 19/20 mm dia X 1.8 metres long stay rod, anchor plate of size 45 cm X 45 cm X 7.5 mm, thimble, stay clamps, bow tightener), 7/ 3.15mm dia G.I. stay wire and strain insulator etc in cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) foundation including excavation and refilling and also with 0.6 m long brace of size 50 mm X 50 mm X 6 mm angle iron with 50 mm dia pulley fixed at one end of the brace as required.	Each	4,546.00

Item Code	Description	Unit	Justified Rate
12.9	Erection of stay set complete (galvanised) in cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) foundation including excavation and refilling etc. as required.	Each	3,249.00
12.10	Supplying of channel iron 75 mm X 40 mm X 6 mm (7.14 kg per metre) cross arm for 2 wire over head line complete with clamps, bolts, nuts and washer etc including drilling of holes for insulator pins etc (as per drawing) and painting with primer and finished paint as required.	Set	626.00
12.11	Supplying of channel iron 75 mm X 40 mm X 6 mm (7.14 kg per metre) cross arm for 4 wire over head line complete with clamps, bolts, nuts and washer etc including drilling of holes for insulator pins etc (as per drawing) and painting with primer and finished paint as required.	Set	1,042.00
12.12	Erection of angle iron/ channel iron cross arm on wood/ RCC/ PCC/ steel tubular/ rail pole etc. as required.	Set	225.00
12.13	Supplying and erection of galvanised 'D' iron clamps complete with shackle insulator (75 mm X 90 mm),G. I. bolts, nuts and washers, coach screws etc. as required.	Set	215.00
12.14	Supplying and erection of galvanised 'D' iron clamps complete with shackle insulator (100 mm X 110 mm), GI bolts, nuts and washers, coach screws etc. as required.	Set	239.00
12.15	Erection of galvanised 'D' iron clamps and insulator on pole as required.	Set	58.00
12.16	Supplying and erection of 75 mm X 90 mm shackle insulator with G. I. Bolt, nuts and straps etc. as required .	Set	145.00
12.17	Supplying and erection of 100 mm X 110 mm shackle insulator with G. I. Bolt, nuts and straps etc. as required .	Set	170.00
12.18	Supplying and erection of 100 mm X 65 mm pin insulator complete with G. I. Spindle and nuts etc. as required .	Set	119.00
12.19	Supplying and erection of 100 mm X 80 mm pin insulator complete with G. I. Spindle and nuts etc. as required .	Set	119.00
12.20	Erection of LV/MV shackle/pin insulator etc. as required.	Set	61.00
12.21	Erection of ACSR conductor of 7/2.11 mm to 7/3.00 mm diameter including binding etc. as required.	Kg	145.00
12.22	Erection of ACSR conductor of 7/3.35 mm to 7/4.00 diameter and above including binding etc. as required.	Kg	193.00
12.23	Erection of all aluminium conductor of 7/1.96 mm to 7/3.10 mm diameter including binding etc. as required.	Kg	190.00
12.24	Erection of all aluminium conductor of 7/3.40 mm to 7/4.00 mm diameter and above including binding etc. as required.	Kg	147.00
12.25	Erection of G.I. Wire No. 8 SWG including binding etc. as required.	Kg	29.00
12.26	Erection of hexagonal type guard as required.	Each	159.00
12.27	Erection of ring type guard as required.	Each	53.00
12.28	Erection of cradle guard as required.	Each	106.00
12.29	Supplying and erection of 15 A aerial fuse complete as required.	Each	97.00
12.30	Supplying and erection of 30 A aerial fuse complete as required.	Each	105.00
12.31	Erection of aerial fuse as required.	Each	82.00
12.32	Supplying and fixing MV horn gap lightening arrestor as required.	Each	215.00
12.33	Fixing of MV lightning arrestor as required.	Each	123.00
12.34	Supplying and fixing of 32 mm dia X 2.00 metres long GI. pipe (medium class) bracket for mounting of fluorescent / HPMV / HPSV street light fitting on pole including bending the pipe to the required shape, 2 nos 40 mm X 3 mm flat iron clamps with nuts, bolts and washer, painting the flat iron with primer and finish paint etc. as required.	Each	1,228.00
12.35	Providing and fixing 50 mm dia X 3.2 metres G.I. pipe (including accessories) complete with 50 mm X 50 mm X 6 mm angle iron bracket on wall and 75 mm X 90 mm shackle insulator with straps for house service connection including painting the angle and flat iron with primer and finish paint etc. as required.	Each	2,528.00

Item Code	Description	Unit	Justified Rate
12.36	Providing and fixing 50 mm dia X 5.6 metres Cl. pipe (including accessories) complete with 50 mm X 50 mm X 6 mm angle iron cross arm and 40 mm X 3mm M.S. flat iron clamps bends for guard wire, 75 mm X 90 mm shackle insulator and straps, 7/ 3.15 mm G.I. wire stay set for house service connection including painting the angle and flat iron with primer and finish paint etc. as required.	Each	4,105.00
12.37	Supplying and fixing of light class G.I. pipe of 50 mm dia. (nominal) 3 metres length along the pole for protection of under ground cable as required.	Each	2,180.00
12.38	Supplying and fixing of light class G.I. pipe of 80 mm dia. (nominal) 3 metres length along the pole for protection of under ground cable as required.	Each	3,094.00
12.39	Supplying and fixing of light class G.I. pipe of 100 mm dia. (nominal) 3 metres length along the pole for protection of under ground cable as required.	Each	4,235.00
12.40	Dismantling of over head lines comprising of copper/ aluminium over head conductor, Cl. wire, cross arms, insulators etc. as required.	Kg	64.00
12.41	Dismantling of pole/ street light standard/ strut embedded in brick ballast foundation etc. as required.	Each	1,412.00
12.42	Dismantling of pole/ street light standard/ strut embedded in cement concrete foundation etc. as required.	Each	1,875.00
13	HV OVER HEAD LINE WORK		
13.1	Supplying and erection of galvanised stay set for 11 KV over head lines complete with 19/ 20 mm dia X 1.8 metres long stay rod, anchor plate of size 45 cm X 45 cm X 7.5 mm thick, thimble, stay clamps, turn buckle (20 mm X 600 mm), 7/ 4.00 mm dia G.I. stay wire and 11 KV strain insulator etc in cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) foundation including excavation and refilling etc. as required.	Set	4,386.00
13.2	Supplying of channel iron 75 mm X 40 mm X 6 mm (7.14 kg per metre) pole top bracket/ cross arm for single 11 KV over head line conductor complete with 50 mm X 6mm flat iron clamp, bolts, nuts and washers including drilling holes for insulator pins, bolts and nuts etc and painting with primer and finish paint as required.	Each	464.00
13.3	Supplying of 50 mm X 8 mm M.S. flat iron pole top bracket/ cross arm for single 11/22/33 KV over head line conductor complete with fixing clamps, bolts, nuts and washers drilling holes for insulator pins, bolts and nuts etc and painting with primer and finish paint as required.	Each	484.00
13.4	Supplying of channel iron 75 mm X 40 mm X 6 mm (7.14 kg per metre) cross arm for two 11 KV over head line conductors complete with 50 mm X 50 mm X 6 mm (angle iron bracket welded to the channel iron and complete with 50 mm X 6mm M.S. flat iron clamps, bolts and nuts including drilling holes for insulator pins, bolts, nuts and washers etc (as per drawing) and painting with primer and finish paint as required.	Each	1,924.00
13.5	Supplying of channel iron 75 mm X 40 mm X 6 mm (7.14 kg per metre) V shape cross arm for two 11 KV over head line conductors complete with 50 mm X 6mm M.S. flat iron clamps, bolts and nuts including drilling holes for insulator pins, bolts, nuts and washers etc (as per drawing) and painting with primer and finish paint as required.	Each	1,613.00
13.6	Erection of pole top/ straight two wire/ V shape two wire, angle iron/ channel iron, cross arm on steel tubular/ rail/ PCC pole for 11/22/33 KV as required.	Set	409.00
13.7	Supplying of two lengths of channel iron 75 mm X 40 mm X 6 mm (7.14 kg per metre) double pole cross arm for three wire 11KV over head line conductors complete with through bolts and nuts for clamping to the poles, 50 mm X 6 mm M.S. flats welded on one side to the channel iron and with bolts and nuts on the other side for tying the cross arms together, including drilling holes for insulator pins/ fittings, bolts, nuts and washers etc (as per drawing) and painting with primer and finish paint as required.	Set	4,158.00

Item Code	Description	Unit	Justified Rate
13.8	Supplying and erection of a set of cross bracing FRLSame work for 11 KV over head line double pole structure having four members fabricated out of 50 mm X 50 mm X 6 mm angle iron to form a rectangle of minimum size 1400 mm width X 2500 mm height , complete with 50 mm X 6mm M.S. flat iron clamps, bolts and nuts including drilling holes for insulator pins, bolts and nuts etc (as per drawing) and painting with primer and finish paint as required.	Set	6,178.00
13.9	Erection of double pole 3 wire cross arm for 11KV/ 22KV/ 33 KV over head lines as required.	Each	926.00
13.10	Supplying and erection of 11 KV pin insulator complete with large steel head G.I. pin, nuts, washers etc. as required.	Set	249.00
13.11	Supplying and erection of 11 KV disc insulator for 11 KV over head lines with galvanised insulator fittings, ball and socket type and complete with galvanised strain clamps, bolts, nuts, washers etc. as required.	Set	818.00
13.12	Erection of disc/ pin insulator for 11 KV over head lines as required.	Set	123.00
13.13	Supplying and erection of three piece nonlinear resistor type lightning arrester suitable for 3 wire, 11 KV overhead lines with rated voltage 9 KV (rms) with a nominal discharge current rating of 5 KA and complete with galvanised clamping arrangement, G.I. bolts, nuts, washers etc. as required.	Set	2,243.00
13.14	Supplying and erection of galvanised stay set for 33 KV over head lines complete with 19/ 20 mm dia X 1.8 metres long stay rod, anchor plate of size 45 cm X 45 cm X 7.5 mm thick, thimble, stay clamps, turn buckle (20 mm X 600 mm), 7/ 4.00 mm dia GI stay wire and 33 KV strain insulator etc in cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) foundation including excavation and refilling etc. as required.	Set	4,397.00
13.15	Supplying of channel iron 75 mm X 40 mm X 6 mm (7.14 kg per metre) pole top bracket/ cross arm for single 33 KV over head line conductor complete with 50 mm X 6mm flat iron clamps, bolts and nuts including drilling holes for insulator pins, bolts, nuts, washers etc and painting with primer and finish paint as required.	Each	488.00
13.16	Supplying of channel iron 75 mm X 40 mm X 6 mm (7.14 kg per metre) cross arm for two 33 KV over head line conductors complete with 50 mm X 50 mm X 6 mm angle iron bracket welded to the channel iron and complete with 50 mm X 6mm M.S. flat iron clamps, bolts and nuts including drilling holes for insulator pins, bolts, nuts, washers etc and painting with primer and finish paint as required.	Each	2,387.00
13.17	Supplying of channel iron 75 mm X 40 mm X 6 mm (7.14 kg per metre) V shape cross arm for two 33 KV over head line conductors complete with 50 mm X 6mm M.S. flat iron clamps, bolts and nuts including drilling holes for insulator pins, bolts and nuts etc and painting with primer and finish paint as required.	Each	1,826.00
13.18	Supplying of channel iron 100 mm X 50 mm X 6 mm (9.56 kg per metre), pole top bracket/ cross arm for single 33 KV over head line conductor complete with 50 mm X 6 mm M.S. flat iron clamps, bolts and nuts including drilling holes for insulator pins, bolts and nuts etc and painting with primer and finish paint as required.	Each	600.00
13.19	Supplying of channel iron 100 mm X 50 mm X 6 mm (9.56 kg per metre) cross arm for two wire 33 KV over head line conductors complete with 50 mm X 50 mm X 6 mm angle iron bracket welded to the channel iron and complete with 50 mm X 6mm M.S. flat iron clamps, bolts and nuts including drilling holes for insulator pins/ fittings, bolts, nuts, washers etc and painting with primer and finish paint as required .	Each	2,962.00
13.20	Supplying of channel iron 100 mm X 50 mm X 6 mm (9.56 kg per metre) V shape cross arm for two 33 KV over head line conductors complete with 50 mm X 6mm M.S. flat iron clamps, bolts and nuts including drilling holes for insulator pins, bolts, nuts, washers etc and painting with primer and finish paint as required .	Each	2,228.00

Item Code	Description	Unit	Justified Rate
13.21	Supplying of two lengths of channel iron 100 mm X 50 mm X 6 mm (9.56 kg per metre) double pole cross arm for three wire 33 KV over head line conductors complete with through bolts and nuts for clamping to the poles, 50 mm X 6 mm M.S. flats welded on one side to the channel iron and with bolts and nuts on the other side for tying the cross arms together, including drilling holes for insulator pins/ fittings, bolts, nuts, washers etc and painting with primer and finish paint as required	Set	5,728.00
13.22	Supplying and erection of a set of cross bracing FRLSame work for 33 KV over head line double pole structure having four members fabricated out of 65 mm X 65 mm X 6 mm angle iron to form a rectangle of minimum size 2400 mm width X 2800 mm height complete with 50 mm X 6mm M.S. flat iron clamps, bolts and nuts including drilling holes for insulator pins, bolts, nuts, washers etc and painting with primer and finish paint as required .	Set	8,839.00
13.23	Supplying and erection of 33 KV pin insulator complete with large steel head G.I. pin, nuts, washers etc. as required.	Set	687.00
13.24	Supplying and erection of a set of three 11 KV disc insulator for 33 KV over head lines with galvanised insulator fittings, ball and socket type and complete with galvanised strain clamps, bolts, nuts, washers etc. as required.	Set	2,370.00
13.25	Supplying and erection of single piece nonlinear resistor type lightning arrester suitable for 3 wire, 33 KV overhead lines with rated voltage 30 KV (rms) with a nominal discharge current rating of 10 KA (station class) and complete with galvanised clamping arrangement, G.I. bolts, nuts, washers etc. as required.	Set	15,068.00
14	MISC. CIVIL ITEMS		
14.1	Excavation for foundation in soft soil including dressing of sides and ramming of bottoms, lift upto 1.5 m including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 metres.	cum	275.00
14.2	Excavation for cable trenches of depth upto 1.2 m in soft soil including getting out the excavated soil and disposal of surplus excavated soil as directed within a lead of 50 metres.	cum	278.00
14.3	Filling available excavated earth (excluding rock) in trenches, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead UP to 50 metres.	cum	178.00
14.4	Excavation for cable trenches in soft soil, depth upto 1.2 m including dressing of sides lift upto 1.5 m, including getting out the excavated soil, refilling with sand and or good soil after laying of cable/ pipe etc in layers of 20 cm, ramming, watering and disposal of surplus excavated soil as directed, within a lead of 50 metres.	cum	456.00
14.5	Deduct for not consolidation by ramming and watering while re-filling with sand and or good soil in cable/ pipe laying.	cum	102.00
14.6	Excavation of the cable trenches in hard rock not exceeding 1.5 metres in width, and lift upto 1.5 metres, including getting out the excavated soil and disposal of excavated soil as directed within a lead of 50 metres.	cum	874.00
14.7	Providing and laying in position cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) in foundation of pump, DG set etc including form work etc as required.	cum	6,594.00
14.8	Providing and laying in position cement concrete 1:3:6 (1 cement: 2 coarse sand : 6 graded stone aggregate 20 mm nominal size) in foundation of pump, DG set etc including form work etc as required.	cum	6,014.00
14.9	Providing and laying in position cement concrete 1:3:6 (1 cement : 2 coarse sand : 6 graded stone aggregate 40 mm nominal size) in foundation of pump, DG set etc including form work etc as required.	cum	5,618.00
14.10	Providing and laying in position reinforced cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) in foundation of pump, DG set etc including form work etc as required (excluding reinforcement).	cum	6,993.00

Item Code	Description	Unit	Justified Rate
14.11	Providing brick work (in width 225 mm or more) with F.P.S. bricks of class designation 7.5 in cement mortar 1:4 (1 cement : 4 coarse sand) at all levels.	cum	5,596.00
14.12	Providing 15mm thick cement plaster of mix 1:4 (1 cement : 4 fine sand) at all levels.	sqm	258.00
14.13	Providing, laying and fixing following dia G.I. pipe (medium class) in ground complete with G.I. fittings including trenching (75 cm deep) and re-filling etc as required		
14.13.1	50 mm dia	Metre	727.00
14.13.2	80 mm dia	Metre	1,118.00
14.13.3	100 mm dia	Metre	1,573.00
14.13.4	150 mm dia	Metre	2,378.00
14.14	Providing, laying and fixing following dia RCC pipe NP2 class (light duty) in ground complete with RCC collars, jointing with cement mortar 1:2 (1 cement: 2 fine sand) including trenching (75 cm deep) and refilling etc as required.		
14.14.1	100 mm dia	Metre	520.00
14.14.2	150 mm dia	Metre	567.00
14.14.3	250 mm dia	Metre	781.00
14.14.4	300 mm dia	Metre	917.00
14.15	Supplying and laying of following size DWC HDPE pipe ISI marked along with all accessories like socket, bend, couplers etc. conforming to IS 14930, Part II complete with fitting and cutting, jointing etc. in the existing trench, complete as required.		
14.15.1	63 mm dia (00-63 mm & ID-51 mm nominal)	Metre	109.00
14.15.2	90 mm dia (OD-90 mm & ID-76 mm nominal)	Metre	147.00
14.15.3	120 mm dia (00-120 mm & ID-103 mm nominal)	Metre	214.00
14.15.4	160 mm dia (OD-160 mm & ID-135 mm nominal)	Metre	313.00
14.15.5	200 mm dia (00-200 mm & ID-175 mm nominal)	Metre	478.00
14.16	Supplying and laying of following size DWC HDPE pipe ISI marked along with all accessories like socket, bend, couplers etc. conforming to IS 14930, Part II complete with fitting and cutting, jointing etc. direct in ground (75 cm below ground level) including excavation and refilling the trench but excluding sand cushioning and protective covering etc., complete as required.		
14.16.1	63 mm dia (OD-63 mm & ID-51 mm nominal)	Metre	229.00
14.16.2	90 mm dia (OD-90 mm & ID-76 mm nominal)	Metre	267.00
14.16.3	120 mm dia (00-120 mm & ID-103 mm nominal)	Metre	334.00
14.16.4	160 mm dia (00-160 mm & ID-135 mm nominal)	Metre	433.00
14.16.5	200 mm dia (00-200 mm & ID-175 mm nominal)	Metre	598.00
15	LIGHTING CONTROLS		
15.1	Supplying, installation, testing and commissioning of Passive Infrared (PIR) technology based occupancy sensor having high performance, non regulating programmable type, suitable for connected load upto 10Annp, for mounting height up to 2.8 mtr and for 5 m diameter coverage area along with necessary fixing arrangements i/c programming at site etc. complete as required.	Each	3,986.00
15.2	Supplying, installation, testing and commissioning of Passive Infrared (PIR) technology based occupancy sensor with day light dimming (lighting level shall be regulated as per availability of natural day light in an area along with occupancy detection.) having high performance, regulating programmable type, suitable for connected load upto 10Annp, for mounting height up to 2.8 mtr and for 5 m diameter coverage area along with necessary fixing arrangements i/c programming at site etc. complete as required.	Each	7,992.00

Item Code	Description	Unit	Justified Rate
15.3	Supplying, installation, testing and commissioning of Microwave technology based occupancy sensor having high performance, non regulating programmable type, suitable for connected load upto 10Amp , for mounting height up to 2.6 mtr and for 5m X 20m coverage area along with necessary fixing arrangements i/c programming at site etc. complete as required.	Each	10,379.00
15.4	Supplying, installation, testing and commissioning of Astronomical time switch of following configuration to be mounted in feeder pillars / Lighting DBs for automatic switching On & OFF of street lights at sun set & sun rise or twilight(Auto ON, Auto OFF, Auto modes) with manual override facility with 12/24 hour display format with suitable battery and indication for relay status i/c programming at site complete as required.		
15.4.1	1 output per phase and suitable for single phase supply	Each	3,799.00
15.4.2	2 output per phase and suitable for single phase supply	Each	7,454.00
15.4.3	3output(1output per phase) and suitable for three phase supply	Each	9,243.00
16	HVAC (ONLY PLUMBING, DUCTING & AHU)		
16.1	Supplying, laying/ fixing, testing and commissioning of following nominal sizes of chilled water piping inside the building (with necessary clamps, vibration isolators and fittings but excluding valves, strainers, gauges etc.) duly insulated with 80 kg/cum density resin bonded fiber glass or 144 Kg/ cu m density mineral wool (non Combustible) pipe section insulation covered with a layer of 120 gm/sqm polythene sheet (vapour barrier) and finally applying 0.63mm aluminium sheet cladding complete with type3 , grade 1 roofing feltstrip(as per IS:1322 as amended up to date) at joints and repairing of damage to building etc. as per specifications and as required. Note: The Pipes of sizes 150mm & below shall be M.S. 'C' class as per IS : 1239 and pipes size above 150mm shall be welded black steel pipe heavy class as per IS: 3589, from minimum 6.35mm thick M.S. Sheet for pipes upto 350 mm dia. and from minimum 7mm thick MS sheet for pipes of 400 mm dia and above.		
16.1.1	400mm dia.(75 mm thick insulation)	Metre	18,585.00
16.1.2	350 mm dia.(75 mm thick insulation)	Metre	10,907.00
16.1.3	300 mm dia.(75 mm thick insulation)	Metre	9,533.00
16.1.4	250mm dia.(75 mm thick insulation)	Metre	8,061.00
16.1.5	200mm dia.(75 mm thick insulation)	Metre	6,708.00
16.1.6	150mm dia. (50mm thick insulation)	Metre	4,358.00
16.1.7	125mm dia.(50mm thick insulation)	Metre	3,699.00
16.1.8	100mm dia. (50mm thick insulation)	Metre	2,967.00
16.1.9	80mm dia. (50mm thick insulation)	Metre	2,418.00
16.1.10	65mm dia.(50mm thick insulation)	Metre	2,047.00
16.1.11	50mm dia.(50mm thick insulation)	Metre	1,697.00
16.1.12	40mm dia. (50mm thick insulation)	Metre	1,433.00
16.1.13	32 mm dia (50mm thick insulation)	Metre	1,257.00
16.1.14	25 mm dia (50mm thick insulation)	Metre	1,122.00

Item Code	Description	Unit	Justified Rate
16.2	Supplying, laying/ fixing, testing and commissioning of following nominal sizes of chilled water piping inside the building (with necessary clamps, vibration isolators and fittings but excluding valves, strainers, gauges etc.) duly insulated with following closed cell elastometric nitrile rubber of minimum 45 Kg / cu m density, thermal conductivity 0.037 W/MK or better at 20 deg mean temperature class 'O' insulation applied by suitable adhesive complete including repairing of damage to building etc. as per specifications and as required complete in all respect. Note:-The Pipes of sizes 150mm & below shall be M.S. 'C' class as per IS : 1239 and pipes size above 150mm shall be welded black steel pipe heavy class as per IS: 3589, from minimum 6.35mm thick M.S. Sheet for pipes upto 350 mm dia. and from minimum 7mm thick MS sheet for pipes of 400 mm dia and above.		
16.2.1	400mm dia.(32 mm thick insulation)	Metre	16,313.00
16.2.2	350mm dia.(32 mm thick insulation)	Metre	8,824.00
16.2.3	300mm dia. (32 mm thick insulation)	mtr	6,067.00
16.2.4	250mm dia.(32 mm thick insulation)	Metre	6,667.00
16.2.5	200mm dia.(32 mm thick insulation)	Metre	5,368.00
16.2.6	150mm dia. (32 mm thick insulation)	Metre	3,647.00
16.2.7	125mm dia.(32 mm thick insulation)	Metre	3,179.00
16.2.8	100mm dia. (32 mm thick insulation)	mtr	1,719.00
16.2.9	80mm dia.(32 mm thick insulation)	Metre	1,878.00
16.2.10	65mm dia(32 mm thick insulation)	Metre	1,514.00
16.2.11	50mm dia(32 mm thick insulation)	Metre	1,303.00
16.2.12	40mm dia. (32 mm thick insulation)	Metre	1,043.00
16.2.13	32 mm dia(19 mm thick insulation)	Metre	861.00
16.2.14	25 mm dia(19 mm thick insulation)	Metre	712.00
16.3	Supplying, laying/ fixing, testing and commissioning of following nominal sizes of chilled water piping plumbing inside the building (with necessary clamps, vibration isolators and fittings but excluding valves, strainers, gauges etc.) duly insulated with fire retardant quality expanded polystyrene moulded pipe section of density 20 kg/cu.m after a thick coat of cold setting adhesive (CPRX compound) wrapping with 500g polythene faced hessain and finally applying 0.63mm aluminium sheet cladding complete with type3 , grade 1 roofing feltstrip(as per IS:1322 as amended up to date) at joints repairing of damage to building etc. as per specifications and as required complete in all respect. Note:-The Pipes of sizes 150mm & below shall be M.S. 'C' class as per IS : 1239 and pipes size above 150mm shall be welded black steel pipe heavy class as per IS: 3589, from minimum 6.35mm thick M.S. Sheet for pipes upto 350 mm dia. and from minimum 7mm thick MS sheet for pipes of 400 mm dia and above.		
16.3.1	400mm dia.(75 mm thick insulation)	Metre	17,455.00
16.3.2	350 mm dia.(75 mm thick insulation)	Metre	9,967.00
16.3.3	300 mm dia.(75 mm thick insulation)	Metre	8,816.00
16.3.4	250mm dia.(75 mm thick insulation)	mtr	5,116.00
16.3.5	200mm dia (75 mm thick insulation)	Metre	6,200.00
16.3.6	150mm dia. (75 mm thick insulation)	Metre	4,116.00
16.3.7	125mm dia.(50mm thick insulation)	Metre	3,449.00
16.3.8	100mm dia.(50mm thick insulation)	Metre	2,940.00
16.3.9	80mm dia. (50mm thick insulation)	Metre	2,281.00
16.3.10	65mm dia.(50mm thick insulation)	Metre	1,931.00
16.3.11	50mm dia.(50mm thick insulation)	Metre	1,607.00
16.3.12	40mm dia. (50mm thick insulation)	Metre	1,357.00
16.3.13	32 mm dia (50mm thick insulation)	Metre	1,189.00

Item Code	Description	Unit	Justified Rate
16.3.14	25 mm dia (50mm thick insulation)	Metre	1,068.00
16.4	Supplying, laying/ fixing, testing and commissioning of following thickness resin bonded fiber glass pipe section insulation having density 80 kg/cum or mineral wool (non combustible) having density of 144 Kg/ cu m duly covered with a layer of 120 gm/sqm polythene sheet (vapour barrier) on existing pipe and finally applying 0.63mm aluminium sheet cladding complete with type3 , grade 1 roofing feltstrip(as per IS:1322 as amended up to date) at joints etc. as per specifications and as required.		
16.4.1	75mm	sqm	2,566.00
16.4.2	65 MM	per sqm	1,253.00
16.4.3	50mm	sqm	2,253.00
16.4.4	40mm	sqm	2,063.00
16.4.5	25mm	sqm	1,641.00
16.5	Supplying, laying, fixing, testing and commissioning of following thickness closed cell elastometric nitrile rubber of class 'O' applied by suitable adhesive, as per specifications and as required complete in all respect.		
16.5.1	32mm	sqm	964.00
16.5.2	19mm	sqm	567.00
16.6	Supplying, laying/ fixing of following thickness insulation with fire retardant quality expanded polystrene moulded pipe section of density 20 kg/cu.m after a thick coat of cold setting adhesive (CPRX compound) wrapping with 500g polythene faced hessain and finally applying 0.63mm aluminium sheet cladding complete with type3 , grade 1 roofing feltstrip(as per IS:1322 as amended up to date) at joints repairing etc. as per specifications and as required complete in all respect..		
16.6.1	75mm	sqm	1,108.00
16.6.2	50mm	per sqm	189.00
16.7	Supplying, fixing, testing and commissioning of following valves, strainers, gauges in the chilled water plumbing duly insulated to the same specifications as the connected piping and adequately supported as per specifications.		
16.7.1	BUTTERFLY VALVE (MANUAL) with C I body SS Disc, Nitrile Rubber Seal & O-Ring PN 16 pressure rating for chilled water/hot eater circulation as specified		
16.7.1.1	200 mm dia	Each	13,467.00
16.7.1.2	150mm dia.	Each	4,953.00
16.7.1.3	125mm dia	Each	6,411.00
16.7.1.4	100mm dia	Each	5,553.00
16.7.1.5	80mm dia	Each	4,078.00
16.7.1.6	65mnn dia	Each	3,803.00
16.7.1.7	50mm dia	Each	3,471.00
16.7.1.8	40mm dia	Each	2,952.00
16.7.2	BALANCING VALVE WITH BUILT IN MEASURING FACILITY with C I body flanged construction with EPDM coated disc with long pitch with protected out pipe insulation & PN 16 pressure rating for chilled / hot water circulation as specified.		
16.7.2.1	200 mm dia	Each	60,793.00
16.7.2.2	150mm dia.	Each	28,248.00
16.7.2.3	125mm dia.	Each	21,232.00
16.7.2.4	100mm dia.	Each	15,471.00
16.7.2.5	80mm dia.	Each	10,686.00
16.7.2.6	65 mm dia	Each	9,431.00
16.7.2.7	50mm dia.	Each	8,177.00
16.7.2.8	40 mm dia	Each	5,668.00

Item Code	Description	Unit	Justified Rate
16.7.3	NON - RETURN VALVE with dual plate of C I body SS plates vulcanized NBR seal flanged end & PN 16 pressure rating for chilled / hot water circulation including insulation as specified.		
16.7.3.1	200 mm dia	Each	10,261.00
16.7.3.2	150mm dia.	Each	5,794.00
16.7.3.3	125mm dia.	Each	4,732.00
16.7.3.4	100 mm dia	Each	3,273.00
16.7.3.5	80mm dia.	Each	2,256.00
16.7.3.6	65 mm dia	Each	3,142.00
16.7.4	Y - STRAINER of Ductile CI Body flanged ends with stainless steel strainer for chilled / hot water circulation including insulation as specified.		
16.7.4.1	200mm dia	Each	43,352.00
16.7.4.2	150mm dia.	Each	22,059.00
16.7.4.3	125mm dia.	Each	17,154.00
16.7.4.4	100 mm dia	Each	10,831.00
16.7.4.5	80 mm dia	Each	7,244.00
16.7.4.6	65mm dia.	Each	5,580.00
16.7.4.7	50mm dia	Each	5,024.00
16.7.4.8	40mm dia	Each	3,745.00
16.8	Providing and fixing in position the industrial type pressure gauges with gun metal / brass valves complete as required	Each	943.00
16.9	Providing & fixing in position the mercury in glass industrial type thermometers.	Each	744.00
16.10	Supplying, fixing, testing and commissioning of condenser water pipes of following sizes of MS 'C' class along with necessary clamps, vibration isolators and fittings such as bends,tees etc.but excluding valves, strainers, gauges etc. adequately supported on rigid supports duly painted/buried in ground excavation and refilling etc. as per specification and as required complete in all respect. Note:-The Pipes size 150mm & below shall be M.S. 'C' class as per IS : 1239 and pipes size above 150mm shall be welded black steel pipe heavy class as per IS: 3589, from minimum 6.35mm thick M.S. Sheet for pipes upto 350 mm dia. And from minimum 7mm thick MS sheet for pipes of 400 mm dia and above.		
16.10.1	300mm dia	Metre	6,810.00
16.10.2	250 mm dia	Metre	5,747.00
16.10.3	200mm dia	Metre	4,750.00
16.10.4	150mm dia	Metre	3,153.00
16.10.5	125mm dia	Metre	2,714.00
16.10.6	100mm dia	Metre	2,277.00
16.11	Supplying, fixing, testing and commissioning of following valves, gauges and strainers for condenser water circulation as per specifications.		
16.11.1	BUTTERFLY VALVE (MANUAL) with C I body SS disc nitrile sheet & O - ring & PN 16 pressure rating as specified.		
16.11.1.1	200mm dia.	Each	11,356.00
16.11.1.2	150mm dia.	Each	5,002.00
16.11.1.3	125mm dia.	Each	4,430.00
16.11.1.4	100mm dia.	Each	3,555.00
16.11.1.5	80mm dia.	Each	2,773.00
16.11.1.6	65mm dia.	Each	2,530.00
16.11.1.7	50mm dia.	Each	2,346.00
16.11.1.8	40mm dia.	Each	2,049.00

Item Code	Description	Unit	Justified Rate
16.11.2	NON - RETURN VALVE with dual plate of C I body SS plates vulcanized NBR seal flanged end & PN 16 pressure rating as specified.		
16.11.2.1	200mm dia.	Each	10,261.00
16.11.2.2	150mm dia.	Each	5,794.00
16.11.2.3	125mm dia.	Each	4,732.00
16.11.2.4	100mm dia.	Each	3,273.00
16.11.2.5	80mm dia.	Each	2,256.00
16.11.2.6	65mm dia.	Each	1,857.00
16.11.3	Supplying, fixing, testing and commissioning of following sizes Motorized Butterfly Valve with CI Body, SS Disc, O - ring and minimum PN-16 pressure rating , conforming to BS 5155, IS 13095, with IP-55 actuator, capable of accepting upto 10V DC , and upto 20mA electric signal and providing similar transduced feedback output to control system as required.		
16.11.3.1	350mm dia	Each	98,271.00
16.11.3.2	300mm dia	Each	88,063.00
16.11.3.3	250mm dia	Each	63,401.00
16.11.3.4	200mm dia	Each	48,494.00
16.11.3.5	150mm dia	Each	37,595.00
16.11.3.6	125mm dia	Each	37,271.00
16.11.3.7	100mm dia	Each	36,579.00
16.11.3.8	80mm dia	Each	15,641.00
16.11.3.9	65mm dia	Each	15,489.00
16.11.3.10	50mm dia	Each	15,173.00
16.11.4	Supply, Installation, Testing and Commissioning of following sizes electronic, self-balancing, pressure independent type dynamic balancing valve with integrated 2 way modulating control valve in a single body. The actuator shall be capable of accepting upto 10V DC and upto 20mA electric signal and shall provide similar transduced feedback output to control system. Maximum close of pressure shall not be less than 6 Bar for upto 50 mm valves and 7 Bar for 65 mm & above. Valves should have pressure rating of 25 Bar minimum.		
16.11.4.1	150mm dia.	Each	1,41,733.00
16.11.4.2	125mm dia.	Each	1,29,040.00
16.11.4.3	100mm dia.	Each	1,01,540.00
16.11.4.4	80mm dia.	Each	60,062.00
16.11.4.5	65mm dia.	Each	47,192.00
16.11.4.6	50mm dia.	Each	30,568.00
16.11.4.7	40mm dia.	Each	27,886.00
16.11.4.8	32mm dia.	Each	15,016.00
16.11.4.9	25mm dia.	Each	14,123.00
16.11.4.10	20mm dia.	Each	10,296.00
16.12.1	Supply, installation, balancing and commissioning of factory fabricated GSS sheet metal rectangular/round ducting complete with neoprene rubber gaskets, elbows, splitter dampers, vanes, hangers, supports etc. as per approved drawings and specifications of following sheet thickness complete as required.		
16.12.1.1	Thickness 0.63 mm sheet	sqm	702.00
16.12.1.2	Thickness 0.80 mm sheet	sqm	862.00
16.12.1.3	Thickness 1.00 mm sheet	sqm	1,038.00
16.12.1.4	Thickness 1.25 mm sheet	sqm	1,243.00

Item Code	Description	Unit	Justified Rate
16.12.2	Supply, installation, balancing and commissioning of fabricated at site GSS sheet metal rectangular/round ducting complete with neoprene rubber gaskets, elbows, splitter dampers, vanes, hangers, supports etc. as per approved drawings and specifications of following sheet thickness complete as required.		
16.12.2.1	Thickness 0.63 mm sheet	sqm	867.00
16.12.2.2	Thickness 0.80 mm sheet	sq. m	678.00
16.12.2.3	Thickness 1.00 mm sheet	sqm	1,344.00
16.12.2.4	Thickness 1.25 mm sheet	sq. m	1,026.00
16.13	Supply, installation, testing and commissioning of GI volume control duct damper complete with neoprene rubber gaskets, nuts, bolts, screws linkages, flanges etc. as per specifications.	sqm	5,333.00
16.14	Supply, installation, testing and commissioning of Motorized (ON-OFF Type) duct mounted GI volume control damper with enthalpy sensor and necessary control wire (minimum 1.5 sqmm) for integration within AHU room		
16.14.1	Damper	sq. m	5,280.00
16.14.2	Actuator	each	5,342.00
16.15	Supplying & fixing of powder coated extruded aluminium Supply Air Grills with aluminium volume control dampers as per specifications.	sqm	7,922.00
16.16	Supplying & fixing of powder coated extruded aluminium Return Air Grills with louvers but without volume control dampers complete as required.	sqm	5,121.00
16.17	Supplying, fixing testing commissioning of supply air diffusers of powder coated aluminium with aluminium volume control dampers with anti smudge ring & removable core.	sqm	10,622.00
16.18	Supplying, fixing testing commissioning of Return air diffusers of powder coated aluminium without volume control dampers with anti smudge ring & removable core.	sqm	7,060.00
16.19	Supply, installation, testing & commissioning of thermal insulated flexible duct of following sizes duly supported at regular interval as per site requirement etc. complete as required as per specifications.		
16.19.1	200 mm dia.	Metre	501.00
16.20	Supplying, Fixing,testing and commissioning of fire dampers in supply air duct/main branch and return air path as and where required of required sizes i/c control wiring,the damper shall be motorized and spring return so as to close the damper in the event of power failure automatically and open the same in case of power being restored. The spring return action shall be inbuilt mechanism and not externally mounted. The damper shall also be closed in the event of fire signal complete as required and as per specifications.		
16.20.1	Fire damper	sqm	8,501.00
16.20.2	Actuator	Each	7,822.00
16.21	Supply and fixing of acoustic lining of supply air duct and plenum with 25 mm thick resin bonded glass wool having density of 32 kg/m ³ , with 25 mm X 25 mm GI section of 1.25 mm thick, at 600 mm centre to centre covered with Reinforced Plastic tissue paper and 0.5 mm thick perforated aluminum sheet fixed to inside surface of ducts with cadmium plated nuts, bolts, stick pins, CPRX compound etc. complete as required and as per specifications.	sqmtr	562.00
16.22	Supplying, fixing acoustic lining on wall and ceiling of AHU rooms with 50mm thick, density 32 kg/cu.m resin bonded glass fiber insulation friction fixed in 610mm x 610 mm frame work made of 25X50X50X50X25 mm made out of 0.6mm thick GI sheet U shaped channel and covered with reinforced fiber glass tissue and finished with 0.80 mm perforated aluminium sheet etc. complete as required and as per specifications.	sqmtr	764.00

Item Code	Description	Unit	Justified Rate
16.23	Supplying and fixing of following thickness duly laminated aluminum foil of mat finish closed cell Nitrile rubber (Class "0") insulation on existing duct after applying suitable adhesive for Nitrile rubber. The joints shall be sealed with 50 mm wide and 3 mm thick self adhesive nitrile rubber tape insulation complete as per specifications and as required. above. Valves should have pressure rating of 25 Bar minimum.		
16.23.1	19mm	sqm	577.00
16.23.2	25mm	sqm	836.00
16.24	Supplying and fixing 50 mm thick aluminium foil faced resin bonded fibre glass insulation (on duct) of density 24 kg/cu.m or mineral wool insulation(non combustible) of density 44 kg/cu m after applying two coats of cold setting adhesive (CPRX compound) sealing all joints with self adhesive aluminium tape & covering with 0.63mmx19mm GI wire mesh netting butting all joints and laced with CI wire complete as per specifications and as required. (for indoor applications).	sqm	399.00
16.25	Supplying and fixing 50mm thick aluminium foil faced resin bonded fibre glass insulation (on duct) of density 24 kg/cu.m or mineral wool insulation(non combustible) of density 44 kg/cu m after applying two coats of cold setting adhesive (CPRX compound) sealing all joints with self adhesive aluminium tape & covering with 0.63mmx19mmn GI wire mesh netting & butting all joints and laced with GI wire complete and finally covered with one layer of tar felt stuck with hot bitumen as per specifications and as required. (for outdoor applications)	sqm	467.00
16.26	Supply, Installation, Testing and commissioning of factory built floor mounted chilled water double skin type horizontal/vertical air handling units made of 25mm thick panels consisting of pre plasticized G.I. casing of thickness 0.8mm outside layer and 0.8 mm inside layer with polyurethane foam (PUF) insulation factory injected between them by injection moulding machine, complete with blower section with blower suitable for static pressure as required, minimum 2 bend GSS/PVC eliminators,cooling coil section with aluminium finned copper tubes (tubes thickness not less than 0.5mm) cooling coil of 6 row deep, filter section with 50mm thick metal viscous/ washable synthetic type air prefilters, belt drive package with TEFC drive motor of efficiency class 1E3 suitable for 415 ± 10% volts, 50Hz, 3 Phase AC supply suitably designed for variable frequency drive applications, drain connections, stainless steel (18G) drain pan with PUF insulation, 150 mm dia. dial type pressure gauges (2 nos.)and industrial type thermometers (2 nos.) at the inlet and outlet of coil, auto purge valve wherever required, necessary vibration isolation arrangement etc. complete as per specification and of following capacities.		
16.26.1	4300 CMH	Set	92,601.00
16.26.2	5100 CMH	Set	1,08,942.00
16.26.3	6800 CMH	Set	1,22,421.00
16.26.4	8500 CMH	Set	1,51,659.00
16.26.5	10200 CMH	Set	1,74,902.00
16.26.6	11900 CMH	Set	1,98,777.00
16.26.7	13600 CMH	Set	2,13,501.00
16.26.8	15300 CMH	Set	2,42,003.00
16.26.9	17000 CMH	Set	2,56,096.00
16.26.10	18700 CMH	Set	2,83,020.00
16.26.11	20400 CMH	Set	3,04,055.00
16.26.12	23800 CMH	Set	3,33,410.00
16.26.13	28900 CMH	Set	3,52,106.00
16.26.14	34000 CMH	Set	3,90,253.00
16.26.15	39100 CMH	Set	5,41,126.00

Item Code	Description	Unit	Justified Rate
16.27	Supply, Installation, Testing and commissioning of factory built floor mounted chilled water double skin type horizontal/vertical air handling units made of 25mm thick panels consisting of pre plasticized G.I. casing of thickness 0.8mm outside layer and 0.8 mm inside layer with polyurethane foam (PUF) insulation factory injected between them by injection moulding machine, complete with blower section with blower suitable for static pressure as required, minimum 2 bend GSS/PVC eliminators, cooling coil section with aluminium finned copper tubes (tubes thickness not less than 0.5mm) cooling coil of 4 row deep, filter section with 50mm thick metal viscous/ washable synthetic type air prefilters, belt drive package with TEFC drive motor of efficiency class 1E3 suitable for 415 ± 10% volts, 50Hz, 3 Phase AC supply suitably designed for variable frequency drive applications, drain connections, stainless steel (18G) drain pan with PUF insulation, 150 mm dia. dial type pressure gauges (2 nos.) and industrial type thermometers (2 nos.) at the inlet and outlet of coil, auto purge valve wherever required, necessary vibration isolation arrangement etc. complete as per specification and of following capacities.		
16.27.1	4300 CMH*	Set	81,601.00
16.27.2	5100 CMH*	Set	95,780.00
16.27.3	6800 CMH*	Set	1,06,873.00
16.27.4	8500 CMH*	Set	1,32,241.00
16.27.5	10200 CMH*	Set	1,54,709.00
16.27.6	11900 CMH*	Set	1,73,186.00
16.27.7	13600 CMH*	Set	1,87,208.00
16.27.8	15300 CMH*	Set	2,12,765.00
16.27.9	17000 CMH*	Set	2,23,913.00
16.27.10	18700 CMH*	Set	2,44,996.00
16.27.11	20400 CMH*	Set	2,65,667.00
16.27.12	23800 CMH*	Set	2,52,599.00
16.27.13	28900 CMH*	Set	3,22,367.00
16.27.14	34000 CMH*	Set	3,57,251.00
16.27.15	39100 CMH*	Set	4,09,326.00
17	FIRE DETECTION AND ALARM SYSTEM		
17.1.1	Supplying, installation, testing & commissioning of heat detector operating at 54°C/57°C with rate of rise cum fixed temperature (dual thermistor) type with mounting base complete with all connection etc. as required.	Each	935.00
17.1.2	Supplying, installation, testing & commissioning of smoke detector with builtin LED and mounting base complete with all connections etc. as required.	Each	944.00
17.1.3	Supplying, installation, testing & commissioning of manual call boxes of MS construction in surface/recess with stainless steel chain & hammer assembly complete with glass and push button etc. as required.	Each	412.00
17.1.4	Supplying, installation, testing & commissioning of manual call box of ABS type in surface/recess with stainless steel chain & hammer assembly complete with glass and push button etc. as required.	Each	290.00
17.1.5	Supplying, installation, testing & commissioning response indicator on surface/recess MS box having two LEDs metallic cover complete with all connections etc. as required.	Each	168.00
17.1.6	Supplying, installation, testing & commissioning fire alarm sounder with facility to make announcement, mounted in M.S. box (16 SWG) with hinged cover plate & suitable for operation with amplifier i/c line matching transformer etc. complete as required.	Each	421.00
17.1.7	Supplying, installation, testing & commissioning fire alarm sounder with facility to make announcement, mounted in A.B.S. box with hinged cover plate & suitable for operation with amplifier i/c line matching transformer etc. complete as required.	Each	427.00

Item Code	Description	Unit	Justified Rate
17.1.8	Supplying, installation, testing & commissioning talk back slave station in surface/recess suitable for operation on simplex mode complete with P.T.T. knob & speaker/microphone enclosed in a M.S.(16 SWG)/ ABS box with break glass in front etc. complete as required.	Each	726.00
17.1.9	Supplying, installation, testing & commissioning sector panel suitable for following zones, complete with visual indications for short circuit fault, open circuit fault, fire condition and all other standard facilities as per IS:2189 with mimic diagram for all area/zone covered, complete with all connections, interconnections as required.		
17.1.9.1	4 Zone	Each	5,662.00
17.1.9.2	6 Zone	Each	10,556.00
17.1.9.3	10 Zone	Each	14,110.00
17.1.10	Supplying, installation, testing & commissioning of main control and indicating panel made out of 16 SWG MS sheet to accommodate the following items duly powder coated in approved colour with louvers for ventilation, locking arrangement, audio and visual indication for fire alarm and public address system, monitoring system including connections, interconnections etc complete as required. 10 Zone panel for fire alarm system 250 Watt amplifier racks suitable for operation on 230V AC/24V DC supply conforming to IEC-268-3 complete with all accessories as required - 2 Nos.(one to act as standby) Talk back master station with LED PTT (press to talk) push button for operation on 230V AC/24 V DC supply conforming to IEC-268 for simplex mode of operation/communication suitable for 20 Nos.talk back unit -1 set. Annoucement control desk suitable for selection of different zones selectively and ON ALL CALL switch with visual indication etc. complete as required - 1 set. Amplifier change over switch for inter changing amplifier -1 No. Monitor panel for loudspeaker complete with output selector, ON/OFF switch, fuse, visual indications etc. complete as required- 1 No. Gooseneck microphone with stand and ON/OFF switch- 1 No. Main ON/OFF switch, fuse indication lamps, DC and AC voltmeters & ammeters, terminal blocks etc. complete as required - 1 set. Battery charger trickle cum boost to take complete load of fire alarm & PA system complete with all accessories including providing & fixing of 2 nos.12 volt, 60 AH each sealed maintenance free batteries -1 set.	Each	54,796.00
17.1.11	Supplying, installation, testing & commissioning of main control and indicating panel made out of 16 SWG MS sheet to accommodate the following items duly powder coated in approved colour with louvers for ventilation, locking arrangement, audio and visual indication for fire alarm and public address system, monitoring system including connections, interconnections etc complete as reau i red . 6 zone panel for fire alarm system 100 watt amplifier racks suitable for operation on 230V AC/24V DC supply conforming to IEC-268-3 complete with all accessories as required- 2 Nos.(one to act as standby) Talk back master station with LED PTT (press to talk) push button for operation on 230V AC/24 V DC supply conforming to IEC-268 for simplex mode of operation/communication suitable for 20 Nos.talk back unit -1 set. Annoucement control desk suitable for selection of different zones selectively and ON ALL CALL switch with visual indication etc., complete as required 1 set. Amplifier change over switch for inter changing amplifier- 1 No. Monitor panel for loudspeaker complete output selector ON/OFF switch, fuse visual indications etc. complete as required- 1 No. Gooseneck microphone with stand and ON/OFF switch -1 No. Mains ON/OFF switch, fuse indication lamps, DC and AC voltmeters & ammeters terminal blocks etc. complete as required -1 set. Battery charger trickle cum boost to take complete load of fire alarm & PA system complete with all accessories including providing & fixing of 2 nos. 12 volt, 30 AH each sealed maintenance free batteries -1 set.	Each	42,650.00

Item Code	Description	Unit	Justified Rate
17.2.1	Supplying, installation, testing and commissioning of micro processor based intelligent addressable main fire alarm panel, central processing unit with the following loop modules and capable of supporting not less than 240 devices (including detectors) and minimum 120 detectors per loop and loop length up to 2 km, network communication card, minimum 320 character graphics/ LCD display with touch screen or other keypad and minimum 4000 events history log in the non volatile memory (EPROM), power supply unit (230 ± 5 % V, 50 hz), 48 hrs back-up with 24 volt sealed maintenance free batteries with automatic charger. The panel shall have facility to connect printer to printout log and facility to have seamless integration with analog/digital voice evacuation system (which is part of the schedule of work under SH: PA System) and shall be complete with all accessories . The panel shall be compatible for IBMS system with open protocol BACnet/ Modbus over IP complete as per specifications.		
17.2.1.1	Ten Loop Panel.	Each	3,99,220.00
17.2.1.2	Two Loop Panel.	Each	2,09,657.00
17.2.2	Supplying, installation, testing & commissioning of central graphical fire alarm management system to centrally monitor and operate the fire alarm system <u>complete as required.</u>	Each	1,71,031.00
17.2.3	Supplying, installation, testing & commissioning of repeater panel with 320 character/ Touch screen LCD display with inbuilt reset, acknowledge and silence switches <u>complete as required.</u>	Each	95,233.00
17.2.4	Supplying, installation, testing & commissioning of intelligent analog addressable photothermal detector complete with mounting base <u>complete as required.</u>	Each	2,502.00
17.2.5	Supplying, installation, testing & commissioning of response indicator on surface/recessed MS Box having two LED, metallic cover <u>complete with all connections etc as required.</u>	Each	238.00
17.2.6	Supplying, installation, testing & commissioning of intelligent <u>addressable programmable sounder complete as required.</u>	Each	2,320.00
17.2.7	Supplying, installation, testing & commissioning of fault isolator complete with base as required.	Each	2,863.00
17.2.8	Supplying, installation, testing & commissioning of intelligent aspiration detector for area coverage of minimum 5000 sq. ft. <u>complete as required.</u>	Each	2,58,847.00
17.2.9	Supplying, installation, testing & commissioning of intelligent addressable thermal detector with rate of rise cum fixed temperature thermistor complete with base as required.	Each	2,386.00
17.2.10	Supplying, installation, testing & commissioning of addressable fire control <u>module complete as required.</u>	Each	2,629.00
17.2.11	Supplying, installation, testing & commissioning of addressable phone control module <u>complete as required.</u>	Each	2,861.00
17.2.12	Supplying, installation, testing & commissioning of addressable beam detector with short circuit isolator (inbuilt or separate) complete with emitter and receiver including connections with remote test features etc <u>complete as required.</u>	Each	65,657.00
17.2.13	Supplying, installation, testing & commissioning of intelligent addressable duct detector including suitable Photo detector <u>complete with base as required.</u>	Each	6,848.00
17.2.14	Supplying, installation, testing & commissioning of addressable manual call point <u>complete as required.</u>	Each	3,391.00
17.2.15	Supplying, installation, testing & commissioning of addressable horn cum strobe <u>complete as required.</u>	Each	3,071.00
17.2.16	Supplying, installation, testing & commissioning of addressable strobe <u>complete as required.</u>	Each	2,948.00
17.2.17	Supplying, installation, testing & commissioning of fire fighter telephone handset <u>complete as required.</u>	Each	5,029.00
17.2.18	Supplying, installation, testing & commissioning of intelligent interface unit BACnet/ Modbus protocol i.e. supplying communication links between building management system and fire alarm control panel <u>complete as required.</u>	Each	1,64,612.00

Item Code	Description	Unit	Justified Rate
17.2.19	Supplying, installation, testing & commissioning of fire fighter phone jack complete as required.	Each	1,399.00
17.3.1	Supplying, installation, testing & commissioning of 6 zone, voice alarm controller with USB, MP3 player (including 6 zone button paging station) with seamless integration facility with main fire alarm panel for voice evacuation complete as required.	Each	1,10,835.00
17.3.2	Supplying, installation, testing & commissioning of 1.5/3/6W ceiling speaker complete as required.	Each	842.00
17.3.3	Supplying, installation, testing & commissioning of 1.5/3/6W metal box ceiling/wall speakers complete as required.	Each	1,568.00
17.3.4	Supplying, installation, testing & commissioning of ceiling/wall mounted loud speaker, 3/1.5 Watt in ABS enclosure complete as required.	Each	2,125.00
17.3.5	Supplying, installation, testing & commissioning of 6 inches dia, 2 watts, 70/100 volts ceiling speaker complete as required.	Each	1,746.00
17.3.6	Supplying, installation, testing & commissioning of digital audio amplifier 50 Watt, 25V rms operating at 240 volt AC supply complete as required.	Each	84,853.00
17.3.7	Supplying, installation, testing & commissioning of digital audio amplifier 75 Watt, 25V rns operating at 240 Volt AC Supply complete as required.	Each	1,27,829.00
17.3.8	Supplying, installation, testing & commissioning of exit point directional sound speaker with voice and integral audio amplifier with selectable sound pulse patterns complete as required.	Each	8,891.00
17.3.9	Supplying, installation, testing & commissioning of Voice command keypad 6 zone, with microphone assembly complete as required.	Each	43,226.00
17.4.1	Supply, installation, testing and commissioning of 25 mm Outer dia CPVC PIPE with end caps including making air sampling opening of appropriate dia on appropriate interval and all accessories as required,(rate for area protected in sqm).	sqm	44.00
17.5.1	Supplying & laying of 2x1.5 sqmm fire survival armoured cable, 600/1000V rated with annealed copper conductor having glass mica fire barrier tape covered by an extruded layer of Cross Linkable Ethylene Propylene Rubber (EPR) insulation and LSZH inner bedding, steel wire armouring & LSZH outer sheath complete as required.	Metre	308.00
17.5.2	Supplying & laying of 2x1.5 sqmm fire alarm armoured cable, 600/1000V rated with annealed copper conductor having XLPE insulation, steel wire armouring & FRLS outer sheath complete as required.	Metre	144.00
17.5.3	Supplying and drawing of cable Fire Retardant PVC insulated copper conductor cable in the existing surface / recessed steel conduit of following pairs, cores and size including connections and interconnections etc. as required.		
17.5.3.1	speaker cable Single pair, 2-core, 1.5 sqmm	Metre	45.00
17.5.3.2	speaker cable Two pair, 2-core, 1.5 sqmm	Metre	75.00
17.5.3.3	speaker cable Three pair, 2-core, 1.5 sqmm	Metre	106.00
17.5.3.4	speaker cable Four pair, 2-core, 1.5 sqmm	Metre	136.00
17.5.4	Supplying and fixing 25 mm dia MS flexible pipe with PVC coating along with all ancillaries and accessories like coupler etc. as required.	Metre	44.00
18	WET RISER AND SPRINKLER SYSTEM		

Item Code	Description	Unit	Justified Rate
18.1	(A) Supplying, installation, testing and commissioning of Electric driven Main Fire Pump suitable for automatic operation and consisting of following, complete in all respects, as required: (B) Horizontal type, multistage, centrifugal, split casing pump of cast iron body & bronze impeller with stainless steel shaft, mechanical seal conforming to IS 1520. (C) Suitable HP Squirrel cage induction motor, TEFC, synchronous speed 1500 RPM, suitable for operation on 415 volts, 3 phase 50 Hz, AC supply with IP 55 protection for enclosure, horizontal foot mounted type with Class-'F' insulation, conforming to IS-325. (D) M.S. fabricated Common base plate, coupling, coupling guard, foundation bolts etc. as required. (E) Suitable cement concrete foundation duly plastered with anti vibration pads.		
18.1.1	2850 Ipn at 88 m Head	Set	3,95,439.00
18.1.2	2850 Ipm at 70 m Head	Set	3,53,625.00
18.1.3	2850 Ipm at 56 m Head	Set	3,52,463.00
18.1.4	2280 Ipn at 88 m Head	Set	3,52,463.00
18.1.5	2280 Ipm at 70 m Head	Set	3,22,264.00
18.1.6	2280 Ipm at 56 m Head	Set	38,858.00
18.1.7	1620 Ipm at 88 m Head	Set	3,22,264.00
18.1.8	1620 Ipn at 70 m Head	Set	2,89,742.00
18.1.9	1620 Ipm at 56 m Head	Set	2,47,928.00
18.2	(a) Supplying, installation, testing and commissioning of diesel engine driven main fire pump suitable for automatic operation and consisting of following, complete in all respects, as required : (Diesel Driven Pump) (b) Horizontal type, multistage, centrifugal pump of cast of iron body and bronze impeller with stainless steel shaft, mechanical seal conforming to IS 1520. (c) Suitable HP, 1500 RPM water cooled with radiator, diesel engine conforming to relevant IS standard complete with auto starting mechanism, 12 /24 volts electric starting equipment, diesel tank, exhaust pipe extended upto 10 m outside pump house duly insulated with 50 mm thick glass wool with 1.0 mm thick aluminium sheet cladding, residential silencer, instruments and protection as per standard specification, stop solenoid for auto stop in the event of fault with audio indications, painted with post office red colour etc. as required. (d) M.S fabricated, common base plate, coupling, coupling guard, foundation bolts etc. as required. (e) Suitable cement concrete foundation duly plastered and with anti vibration pads.		
18.2.1	2850 Ipm at 88 m Head	Set	5,99,212.00
18.2.2	2850 Ipm at 70 m Head	Set	5,39,627.00
18.2.3	2850 Ipm at 56 m Head	Set	5,28,018.00
18.2.4	2280 Ipm at 88 m Head	Set	5,56,237.00
18.2.5	2280 Ipm at 70 m Head	Set	5,35,330.00
18.2.6	2280 Ipm at 56 m Head	Set	5,33,007.00
18.2.7	1620 Ipm at 88 m Head	Set	5,50,545.00
18.2.8	1620 Ipm at 70 m Head	Set	5,17,907.00
18.2.9	1620 Ipm at 56 m Head	Set	4,48,217.00

Item Code	Description	Unit	Justified Rate
18.3	(A) Supplying, installation, testing and commissioning of electric driven pressurisation pump suitable for automatic operation and consisting of following, complete in all respects, as required : (Jockey Pump) (B) Horizontal type, multistage, centrifugal pump of cast iron body and bronze impeller with stainless steel shaft, mechanical seal conforming to IS : 1520. (C) Suitable HP squirrel cage induction motor TEFC type suitable for operation on 415 volts, 3 phase 50 Hz AC supply with IP 55 class of protection for enclosure, horizontal foot mounted type with Class-'F' insulation, conforming to IS : 325. (D) M.S.fabricated Common base plate, coupling, coupling guard, foundation bolts etc. as required. (E) Suitable cement concrete foundation duly plastered and with anti vibration pads.		
18.3.1	180 Ipm at 88 m Head	Set	1,10,971.00
18.3.2	180 Ipm at 70 m Head	Set	90,064.00
18.3.3	180 Ipm at 56 m Head	Set	71,480.00
18.3.4	300 Ipm at 88 m Head	Set	1,45,816.00
18.3.5	300 Ipm at 70 m Head	Set	1,11,203.00
18.3.6	300 Ipm at 56 m Head	Set	1,00,517.00
18.4	(A) Supplying, installation, testing and commissioning of electric driven terrace pump suitable for automatic operation and consisting of following, complete in all respects, as required: (Terrace Pump) (B) Horizontal type, multistage, centrifugal, split casing pump of cast iron body & bronze impeller with stainless steel shaft, mechanical confirming to IS: 1520 (C) Suitable HP squirrel cage induction motor TEFC type suitable for operation on 415 volts, 3 phase, 50 Hz, AC supply with IP55 class of protection for enclosure, horizontal foot mounted type with Class-'F' insulation, conforming to IS-325. (D) M.S. fabricated common base plate, coupling, coupling guard, foundation bolts etc. as required. (E) Suitable cement concrete foundation duly plastered and with anti vibration pads.		
18.4.1	900 Ipm at 35 m Head	Set	88,796.00
18.4.2	450 Ipm at 35 m Head	Set	75,070.00
18.5	Fabrication, supply, Installation testing & commissioning of Electrical control panel of cubical construction, floor mounted type, fabricated out of 2mm thick CRCA sheet, compartmentalised with hinged lockable doors, dust and vermin proof, powder coated of approved shade after 7 tank treatment process, cable alley, inter-connection with suitable size copper conductor cable/solid copper strip, having switchgears and accessories, mountings and internal wiring, earth terminals, numbering etc. complete in all respect, suitable for main fire pump, pressurisation pump & diesel pump set complete as per CPWD specification with following in coming and Outgoings, suitable for operation on 415V, 3 phase, 50Hz Ac Supply with enclosure protection class 1P42 as required:		

Item Code	Description	Unit	Justified Rate
18.5.1	<p>INCOMING 250A, 50kA 4 Pole MCCB, Ics=100% lcu rating Digital Voltmeter 0-500V with selector switch Digital Ammeter (0-250 A) with selector switch & CTs etc. LED type RYB phase indicating lamps, ON, OFF, trip indicating lamps Set of Copper Bus Bar 300A OUTGOING (Note : All outgoing feeders for pumps should have digital Ammeter with selector switches, and LED type ON, OFF, trip indicating lamps) MAIN FIRE PUMP 125 A, 50kA TPN MCCB, Ics=100% lcu, with fully automatic Star/Delta starter suitable for 60 HP pump with overload protection, current sensing type single phase preventor complete with all accessories and internal wiring required for automatic operation, selector switch for local/remote, auto/manual/OFF operation. JOCKEY PUMP 63 A, 50kA TPN MCCB, Ics=100`)/0 lcu, with suitable HP fully automatic Star/Delta starter with overload protection, current sensing type single phase preventor complete with all accessories and internal wiring required for automatic operation, selector switch for local/remote, auto/manual/OFF operation. DIESEL ENGINE CONTROL Control for diesel engine comprising - Automatic/Manual selector switch & 3 attempts starting device, timers and relays as required, push buttons, start/stop in manual mode Indicating lamp for high/ Low Lub. Oil pressure, High Water Temp and Engine on indication Battery charger suitable for 12V/24 V DC with boost and trickle selector switch, 0-30 V DC volt meter, and 0-20 A DC Ammeter All standard relays and accessories for automatic operation of diesel engine SYSTEM CONTROLLER Designing, Supply, Installation, Testing and commissioning of system controller to control operation of main electric fire pump, diesel pump, Pressurization pump, Terrace pump in sequence as per specification consisting of relays, timers. Sensors, annunciation window for fault indication, complete as per specification</p>	Set	2,15,458.00
18.5.2	<p>INCOMING 400A, 50kA 4 Pole MCCB, Ics=100`)/0 lcu rating Digital Voltmeter 0-500V with selector switch Ammeter (0-400 A) with selector switch & CTs etc. LED type RYB phase indicating lamps, ON, OFF, trip indicating lamps Set of Copper Bus Bar 500A OUTGOING (Note : All outgoing feeders for pumps should have digital Ammeter with selector switches, and LED type ON, OFF, trip indicating lamps) MAIN FIRE PUMP 200 A, 50kA TPN MCCB, Ics=100°/0 lcu, with fully automatic Star/Delta starter suitable for 75 hp pump with overload protection, current sensing type single phase preventor complete with all accessories and internal wiring required for automatic operation, selector switch for local/remote, auto/manual/OFF operation. JOCKEY PUMP 100 A, 50kA TPN MCCB, Ics=100% lcu, with suitable HP fully automatic Star/Delta starter with overload protection, current sensing type single phase preventor complete with all accessories and internal wiring required for automatic operation, selector switch for local/remote, auto/manual/OFF operation. DIESEL ENGINE CONTROL Control for diesel engine comprising - Automatic/Manual selector switch & 3 attempt starting device, timers and relays as required, push buttons, start/stop in manual mode Indicating lamp for high/ Low Lub. Oil pressure, High Water Temp and Engine on indication Battery charger suitable for 12V/24 V DC with boost and trickle selector switch, 0-30 V DC volt meter, and 0-20 A DC Ammeter All standard relays and accessories for automatic operation of diesel engine SYSTEM CONTROLLER Designing, Supply, Installation, Testing and commissioning of system controller to control operation of main electric fire pump, diesel pump, Pressurization pump, Terrace pump in sequence as per specification consisting of relays, timers. Sensors, annunciation window for fault indication, complete as per specifications.</p>	Set	2,52,394.00

Item Code	Description	Unit	Justified Rate
18.5.3	<p>INCOMING 630A, 50kA 4 Pole MCCB, Ics=100% Icu rating Digital Voltmeter 0-500V with selector switch Ammeter (0-630 A) with selector switch & CTs etc. LED type RYB phase indicating lamps, ON, OFF, trip indicating lamps Set of Copper Bus Bar 800Amps OUTGOING (Note : All outgoing feeders for pumps should have digital Ammeter with selector switches, and LED type ON, OFF, trip indicating lamps) MAIN FIRE PUMP 250 A, 50kA TPN MCCB, Ics=100% Icu, with fully automatic Star/Delta starter suitable for 100 hp pump with overload protection, current sensing type single phase preventor complete with all accessories and internal wiring required for automatic operation, selector switch for local/remote, auto/manual/OFF operation. JOCKEY PUMP 125 A, 50kA TPN MCCB, Ics=100% Icu, with Suitable HP fully automatic Star/Delta starter with overload protection, current sensing type single phase preventor complete with all accessories and internal wiring required for automatic operation, selector switch for local/remote, auto/manual/OFF operation. DIESEL ENGINE CONTROL Control for diesel engine comprising - Automatic/Manual selector switch & 3 attempts starting device, timers and relays as required, push buttons, start/stop in manual mode Indicating lamp for high/ Low Lub. Oil pressure, High Water Temp and Engine on indication Battery charger suitable for 12V/24 V DC with boost and trickle selector switch, 0-30 V DC volt meter, and 0-20 A DC Ammeter All standard relays and accessories for automatic operation of diesel engine SYSTEM CONTROLLER Designing, Supply, Installation, Testing and commissioning of system controller to control operation of main electric fire pump, diesel pump, Pressurization pump, Terrace pump in sequence as per specification consisting of relays, timers. Sensors, annunciation window for fault indication, complete as per specification</p>	Set	2,83,174.00
18.5.4	<p>INCOMING 400A, 50kA 4 Pole MCCB, Ics=100% Icu Rating Digital Voltmeter 0-500V with selector switch Ammeter (0-400 A) with selector switch & CTs etc. LED type RYB phase indicating lamps, ON, OFF, trip indicating lamps Set of Copper Bus Bar 500Amps OUTGOING (Note : All outgoing feeders for pumps should have digital Ammeter with selector switches, and LED type ON, OFF, trip indicating lamps) MAIN FIRE PUMP 125 Amp, 50kA TPN MCCB, Ics=100% Icu, with fully automatic Star/Delta starter suitable for 60 hp pump with overload protection, current sensing type single phase preventor complete with all accessories and internal wiring required for automatic operation, selector switch for local/remote, auto/manual/OFF operation. 2 sets JOCKEY PUMP 63 Amp, 50kA TPN MCCB, Ics=100% Icu, with Suitable HP fully automatic Star/Delta starter with overload protection, current sensing type single phase preventor complete with all accessories and internal wiring required for automatic operation, selector switch for local/remote, auto/manual/OFF operation. - 2 sets DIESEL ENGINE CONTROL Control for diesel engine comprising - Automatic/Manual selector switch & 3 attempts starting device, timers and relays as required, push buttons, start/stop in manual mode Indicating lamp for high/ Low Lub. Oil pressure, High Water Temp and Engine on indication Battery charger suitable for 12V/24 V DC with boost and trickle selector switch, 0-30 V DC volt meter, and 0-20 A DC Ammeter All standard relays and accessories for automatic operation of diesel engine SYSTEM CONTROLLER Designing, Supply, Installation, Testing and commissioning of system controller to control operation of main electric fire pump, diesel pump, Pressurization pump, Terrace pump in sequence as per specification consisting of relays, timers. Sensors, annunciation window for fault indication, complete as per specification</p>	Set	3,26,265.00

Item Code	Description	Unit	Justified Rate
18.5.5	INCOMING 630A, 50kA 4 Pole MCCB, Ics=100` /)0 lcu Rating Digital Voltmeter 0-500V with selector switch Ammeter (0-630 A) with selector swtich & CTs etc. LED type RYB phase indicating lamps, ON, OFF, trip indicating lamps Set of Copper Bus Bar 800Amps OUTGOING (Note : All outgoing feeders for pumps should have digital Ammeter with selector switches, and LED type ON, OFF, trip indicating lamps) MAIN FIRE PUMP 200 Amp, 50kA TPN MCCB, Ics=100% lcu, with fully automatic Star/Delta starter suitable for 75 hp pump with overload protection, current sensing type single phase preventor complete with all accessories and internal wiring required for automatic operation, selector switch for local/remote, auto/manual/OFF operation. 2 sets JOCKEY PUMP 100 Amp, 50kA TPN MCCB, Ics=100% lcu, with Suitable HP fully automatic Star/Delta starter with overload protection, current sensing type single phase preventor complete with all accessories and internal wiring required for automatic operation, selector switch for local/remote, auto/manual/OFF operation. - 2 sets DIESEL ENGINE CONTROL Control for diesel engine comprising - Automatic/Manual selctor switch & 3 attempts starting device, timers and relays as required, push buttons, start/stop in manual mode Indicating lamp for high/ Low Lub. Oil pressure, High Water Temp and Engine on indication Battery charger suitbale for 12V/24 V DC with boost and trickle selector switch, 0-30 V DC volt meter, and 0-20 A DC Ammeter All standard relays and accessories for automatic operation of diesel engine SYSTEM CONTROLLER Designing, Supply, Installation, Testing and commissioning of system controller to control operation of main electric fire pump, diesel pump, Pressurization pump, Terrace pump in sequence as per specification consisting of relays, timers. Sensors, annunciation window for fault indication, complete as per specification	Set	3,93,981.00
18.5.6	INCOMING 800A, 50kA 4 Pole MCCB, Ics=100% lcu Rating Digital Voltmeter 0-500V with selector switch Ammeter (0-800 A) with selector swtich & CTs etc. LED type RYB phase indicating lamps, ON, OFF, trip indicating lamps Set of Copper Bus Bar 1000Amps OUTGOING (Note : All outgoing feeders for pumps should have digital Ammeter with selector switches, and LED type ON, OFF, trip indicating lamps) MAIN FIRE PUMP 250 Amp, 50kA TPN MCCB, Ics=100°/0 lcu, with fully automatic Star/Delta starter suitable for 100 hp pump with overload protection, current sensing type single phase preventor complete with all accessories and internal wiring required for automatic operation, selector switch for local/remote, auto/manual/OFF operation. 2 sets JOCKEY PUMP 125 Amp, 50kA TPN MCCB, Ics=100% lcu, with Suitable HP fully automatic Star/Delta starter with overload protection, current sensing type single phase preventor complete with all accessories and internal wiring required for automatic operation, selector switch for local/remote, auto/manual/OFF operation. 2 sets DIESEL ENGINE CONTROL Control for diesel engine comprising - Automatic/Manual selctor switch & 3 attempts starting device, timers and relays as required, push buttons, start/stop in manual mode Indicating lamp for high/ Low Lub. Oil pressure, High Water Temp and Engine on indication Battery charger suitbale for 12V/24 V DC with boost and trickle selector switch, 0-30 V DC volt meter, and 0-20 A DC Ammeter	set	5,04,788.00
18.6	Providing laying, testing & commissioning of 'C' class heavy duty MS Pipe conforming to IS 1239/3589 i/c fittings like elbows, tees, flanges, tapers, nuts bolts, gaskets etc. in ground including welding, excavation & providing cement concrete blocks as supports, anticorrosive treatment with coaltar/asphalt tape as per IS 10221, refilling the trench etc. of following sizes complete as required.		
18.6.1	200 mm. dia (wall thickness = 6.3 mm)	m	4,119.00
18.6.2	150 mm. Dia	m	31,148.00

Item Code	Description	Unit	Justified Rate
18.7	Providing, laying, testing & commissioning of 'C' class heavy duty MS pipe conforming to IS 3589/IS 1239 including Welding, fittings like elbows, tees, flanges, tapers, nuts bolts, gaskets etc. and fixing the pipe on the wall/ceiling with suitable clamp/support frame and painting with two or more coats of synthetic enamel paint of required shade complete as required :		
18.7.1	25 mm dia	Metre	611.00
18.7.2	32 mm dia	m	458.00
18.7.3	40 mm dia	Metre	857.00
18.7.4	50 mm dia	Metre	1,074.00
18.7.5	65 mm dia	Metre	1,353.00
18.7.6	80 mm dia	Metre	1,591.00
18.7.7	100 mm dia	Metre	2,177.00
18.7.8	150 mm dia	Metre	3,060.00
18.7.9	200 mm dia (wall thickness 6.3 mm)	Metre	4,704.00
18.7.10	250 mm dia (wall thickness 6.3 mm)	Metre	5,752.00
18.7.11	300 mm dia (wall thickness 7.1 mm)	Metre	3,644.00
18.8	Providing, laying, testing & commissioning of 'B' class medium duty G.I. pipe conforming to IS 1239 including welding, fittings like elbows, tees, flanges, tapers, nuts, bolts, gaskets etc. and fixing the pipe on the wall/ceiling with suitable clamp/support frame and painting with two or more coats of synthetic enamel paint of required shade complete as required		
18.8.1	25 mm	Metre	492.00
18.8.2	32 mm	Metre	554.00
18.8.3	40 mm	Metre	679.00
18.8.4	50 mm	Metre	764.00
18.8.5	65 mm	Metre	955.00
18.8.6	80 mm	Metre	1,109.00
18.8.7	100 mm	Metre	1,442.00
18.8.8	150 mm	Metre	2,008.00
18.9	Supplying and fixing single headed internal hydrant valve with instantaneous Gunmetal/Stainless Steel coupling of 63 mm dia with cast iron wheel ISI marked conforming to IS 5290 (Type -A) with blank Gunmetal/Stainless Steel cap and chain as required :		
18.9.1	Single headed Gunmetal	Set	6,619.00
18.9.2	Single headed Stainless steel	Set	5,297.00
18.10	Supplying and fixing Single headed external yard hydrant valve with 1 No. 63 mm dia instantaneous FM Gunmetal/Stainless Steel coupling and cast iron wheel, ISI marked, conforming to IS 5290 (type A) with blank Gunmetal/Stainless Steel cap and chain as required :		
18.10.1	Single headed Gunmetal	Set	6,619.00
18.10.2	Single headed Stainless steel	Set	5,297.00
18.11	Supplying, fixing, testing and commissioning of butterfly valve of PN 1.6 rating with bronze/gunmetal seat duly ISI marked complete with nuts, bolts, washers, gaskets conforming to IS 13095 of following sizes as required :		
18.11.1	40 mm dia	Set	3,100.00
18.11.2	50mm dia	Set	3,249.00
18.11.3	65 mm dia	Set	3,679.00
18.11.4	80 mm dia	Set	4,279.00
18.11.5	100 mm dia	Set	5,704.00
18.11.6	150mm dia	Set	7,735.00
18.11.7	200mm dia	Set	13,227.00

Item Code	Description	Unit	Justified Rate
18.11.8	250mm dia	Set	17,787.00
18.11.9	300mm dia	Set	21,496.00
18.12	Supplying, fixing, testing & commissioning of double flanged sluice valve of rating PN 1.6 with non rising spindle, bronze/gun metal seat, ISI marked complete with nuts, bolts, washers, gaskets and conforming to IS 780 of following sizes as required :		
18.12.1	40mm dia	Set	4,949.00
18.12.2	50 mm dia	Set	6,250.00
18.12.3	65mm dia	Set	8,005.00
18.12.4	80mnn dia	Set	9,291.00
18.12.5	100mm dia	Set	11,654.00
18.12.6	150mm dia	Set	19,817.00
18.12.7	200mm dia	Set	34,361.00
18.12.8	250mm dia	Set	40,661.00
18.12.9	300mm dia	Set	57,498.00
18.13	Supplying and fixing orifice plate made out of 6 mm thick stainless steel (Grade 304) with orifice of required size to be fitted between flange & landing valve of external and internal hydrants to reduce pressure at the outlet to the level of 3.5 kg/cm2 complete as required.	Each	1,134.00
18.14	Providing, installation, testing and commissioning of non-return valve of following sizes confirming to IS: 5312 complete with rubber gasket, GI bolts, nuts, washers etc.as required :		
18.14.1	40mm dia	Set	4,982.00
18.14.2	50mm dia	Set	4,982.00
18.14.3	65mnn dia	Set	5,533.00
18.14.4	80mm dia	Set	6,652.00
18.14.5	100mm dia	Set	9,545.00
18.14.6	125mm dia	Set	13,811.00
18.14.7	150mm dia	Set	15,458.00
18.14.8	200mm dia	Set	25,539.00
18.14.9	250mm dia	Set	39,574.00
18.14.10	300mm dia	Set	52,868.00
18.15	Providing, installation, testing and commissioning of stainless steel Y-strainer fabricated out of 1.6 mm thick stainless steel, Grade 304, sheet with 3 mm dia holes with stainless steel flange.		
18.15.1	80 mm dia	Each	4,049.00
18.15.2	100mm dia	Each	5,699.00
18.15.3	150mm dia	Each	8,318.00
18.15.4	200mm dia	Each	19,380.00
18.15.5	250mm dia	Each	23,923.00
18.15.6	300mm dia	Each	31,956.00
18.16	Supplying and fixing 63 mm dia, 15 m long RRL hose pipe with 63 mm dia male and female couplings duly bound with GI wire, rivets etc. conforming to IS 636 (type-A) as required :		
18.16.1	Gun Metal	Set	4,545.00
18.16.2	Stainless Steel (Grade 304)	Set	3,884.00
18.17	Supplying and fixing first-aid Hose Reel with MS construction spray painted in post office red, conforming to IS 884 complete with the following as required. 20 mm nominal internal dia water hose thermoplastic (Textile reinforced) type -2 as per IS: 12585 20 mm nominal internal dia gun metal globe valve & nozzle. Drum and brackets for fixing the equipments on wall. Connections from riser with 25 mm dia stop gun metal valve & M.S. Pipe and socket.		
18.17.1	30m	Set	7,419.00

Item Code	Description	Unit	Justified Rate
18.17.2	40m	Set	10,398.00
18.18	Supplying & fixing 63 mm dia gun metal short branch pipe with 20 mm nominal internal diameter size nozzle conforming to IS 903 suitable for instantaneous connection to interconnect hose pipe coupling as required:		
18.18.1	Gun metal	Nos.	2,102.00
18.18.2	Stainless Steel (Grade 304)	Nos.	1,441.00
18.19	Supplying and fixing of fire brigade connection of cast iron body with gun metal male instantaneous inlet couplings complete with cap and chain as reqd. for suitable dia MS pipe connection conforming to IS 904 as required:		
18.19.1	2 way-100 mm dia M.S. Pipe	Set	5,825.00
18.19.2	4 way - 150 mm dia M.S. Pipe	Set	12,167.00
18.19.3	3 way- 150 mm dia M.S. Pipe	Set	8,204.00
18.20	Supplying and fixing air vessel made of 250 mm dia, 8 mm thick MS sheet, 1200 mm in height with air release valve on top and flanged connection to riser, drain arrangement with 25 mm dia gun metal wheel valve with required accessories, pressure gauge and painting with synthetic enamel paint of approved shade as required.	Set	15,906.00
18.21	Providing, fixing, testing & commissioning of 15nm dia quartzoid bulb type sprinklers of rating 68 degree centigrade with required accessories:		
18.21.1	Pendent Sprinkler	Each	436.00
18.21.2	Upright Sprinkler	Each	436.00
18.21.3	Horizontal side wall sprinkler	Each	520.00
18.21.4	Concealed sprinkler	Each	1,237.00
18.22	Providing & fixing of pressure switch in M.S. pipe line including connection etc. as required.	Each	1,334.00
18.23	Providing & fixing flow switch in following sizes M.S. pipe including connection etc as required.		
18.23.1	100mm dia	Each	6,503.00
18.23.2	150mm dia	Each	7,824.00
18.24	Providing, fixing, testing & commissioning of installation control valve of cast iron body, brass/bronze working parts comprising of water motor alarm, bronze seat clapper, clapper arm and hydraulically driven mechanical gong bell to sound continuous alarm when the wet riser/sprinkler system activates, pressure gauges, emergency releases, strainer, pressure switch, cock valve complete with drain valve and bypass, test control box, ball valves, MS pipe of required size, flanges, orifice plate, gasket etc of follwing sizes as required		
18.24.1	80mnn dia	Set	37,265.00
18.24.2	100mm dia	Set	39,287.00
18.24.3	150mm dia	Set	42,093.00
18.25	Supplying, installation, testing & commissioning of sprinkler flexible pipe (UL Listed) of stainless steel complete with 15 NPT on reducer thread with maximum working pressure of 175 PSI test pressure of 875 PSI (Burst) with branch line (Inlet) 25mm NPT male thread to sprinkler head (Outlet) 15mm NPT female thread with reducer, nipple, 2 side brackets, center bracket, stockbar of following sizes complete as required.		
18.25.1	700mm	Set	1,188.00
18.25.2	1000mm	Set	1,362.00
18.25.3	1200mm	Set	1,443.00
18.25.4	1500mm	Set	1,586.00
18.26	Supplying, installation, testing & commissioning of deluge valve (to be used for water curtains) UL listed with wet pilot basic trim assembly for DVA with test and alarm, drip and drain valve with water motor gong complete as required.		

Item Code	Description	Unit	Justified Rate
18.26.1	50 mm dia	Set	72,451.00
18.26.2	80 mm dia	Set	72,976.00
18.26.3	100mm dia	Set	81,694.00
18.26.4	150mm dia	Set	1,01,033.00
18.27	Providing, installation, testing & commissioning of water curtain nozzle 15mm dia nickel chrome plated brass, BSPT, K-factor as per design consideration complete as required.	Each	593.00
18.28	Providing, installation, testing & commissioning of electric release trim assembly for deluge wall with two way solenoid valve, weather proof operation on 24 volts DC supply complete as required.	Set	6,440.00
18.29	Providing, installation, testing & commissioning of adjustable rosette plate for 15mm dia in white finish UL Listed or FM approved complete as required.	Each	182.00
19	BLDC		
19.1	Supply, Installation, Testing and Commissioning of 1200 mm sweep, BEE 5 star rated, ceiling fan with Brush Less Direct Current (BLOC) Motor, class of insulation: B, 3 nos. blades, 30 cm long down rod, 2 nos. canopies, shackle kit, safety rope, copper winding, Power Factor not less than 0.9, Service Value (CM/M/W) minimum 6.00, Air delivery minimum 210 Cum/Min , 350 RPM (tolerance as per IS : 374-2019), THD less than 10%, remote or electronic regulator unit for speed control and all remaining accessories including safety pin, nut bolts, washers, temperature rise=75 degree C (max.), insulation resistance more than 2 mega ohm, suitable for 230 V, 50 Hz, single phase AC Supply, earthing etc. complete as required.	Each	2,369.00

Item Code	Description	Unit	Justified Rate
SOR for Road and Bridge works			
All Areas except Ranchi			
CHAPTER-1			
CARRIAGE OF MATERIALS			
Item Code	Description	Unit	Justified Rate
1.1	Loading and unloading of stone boulder / stone aggregates / sand / kanker /Earth/ moorum. (Placing tipper at loading point, loading with front end loader, dumping, turning for return trip, excluding time for haulage and return trip)	cum	153.00
1.2	Loading and Unloading of Boulders by Manual Means	cum	282.00
1.3	Loading and Unloading of Cement, Steel ,Bitumen,Hume Pipe (NP4) by Manual Means and stacking.	tonne	375.00
1.4	Cost of Haulage Excluding Loading and Unloading		
(i)	Surfaced Road	tonne.km	9.20
(ii)	Unsurfaced Gravelled Road	tonne.km	11.00
(iii)	Katcha Track and Track in river bed / nallah bed and choe bed.	tonne.km	22.20
1.5	Hand Broken Stone Aggregates 63 mm nominal size (Supply of quarried stone, hand breaking into coarse aggregate 63 mm nominal size (passing 80 mm and retained on 50 mm sieve) and stacking as directed)	cum	2,070.00
1.6	Crushing of stone aggregates 13.2 mm nominal size. (Crushing of stone boulders of 150 mm size in an integrated stone crushing unit of 200 tonnes per hour capacity comprising of primary and secondary crushing units, belt conveyor and vibrating screens to obtain stone aggregates of 13.2 mm nominal size.)	cum	1,510.00
1.7	Crushing of stone aggregates 20 mm nominal size (Crushing of stone boulders of 150 mm size in an integrated stone crushing unit of 200 tonnes per hour capacity comprising of primary and secondary crushing units, belt conveyor and vibrating screens to obtain stone aggregates of 20 mm nominal size.)	cum	1,281.00
1.8	Crushing of stone aggregates 40 mm nominal size (Crushing of stone boulders of 150 mm size in an integrated stone crushing unit of 200 tonnes per hour capacity comprising of primary and secondary crushing units, belt conveyor and vibrating screens to obtain stone aggregates of 40 mm nominal size.)	cum	1,081.00
CHAPTER-2			
SITE CLEARANCE			
Item Code	Description	Unit	Justified Rate
2.1	Cutting of Trees, including Cutting of Trunks, Branches and Removal (Cutting of trees, including cutting of trunks, branches and removal of stumps, roots, stacking of serviceable material with all lifts and up to a lead of 1000 mtrs and earth filling in the depression/pit.)		
(i)	Girth from 300 mm to 600 mm	each	417.00
(ii)	Girth from 600 mm to 900 mm	each	669.00
(iii)	Girth from 900 mm to 1800 mm	each	1,417.00
(iv)	Girth above 1800 mm	each	2,786.00
2.2	Clearing Grass and Removal of Rubbish	hectare	33,057.00
2.3	Clearing and Grubbing Road Land .(Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.)		

Item Code	Description	Unit	Justified Rate
(i)	By Manual Means:-		
A	In area of light jungle	hectare	99,408.00
B	In area of thorny jungle	hectare	1,32,701.00
(ii)	By Mechanical Means		
A	In area of light jungle	hectare	21,031.00
B	In area of thorny jungle	hectare	26,101.00
2.4	Dismantling of Structures (Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts and lead of 1000 metres)		
(i)	Lime /Cement Concrete		
I	By Manual Means		
A	Lime Concrete, cement concrete grade M-10 and below	cum	580.00
B	Cement Concrete Grade M-15 & M-20	cum	712.00
C	Prestressed / Reinforced cement concrete grade M-20 & above	cum	2,086.00
II	By Mechanical Means for items No. 202(b) & (c)		
A	Cement Concrete Grade M-15 & M-20	cum	445.00
B	Prestressed / Reinforced cement concrete grade M-20 & above	cum	912.00
(ii)	Dismantling Brick / Tile work		
A	In lime mortar	cum	315.00
B	In cement mortar	cum	448.00
C	In mud mortar	cum	263.00
D	Dry brick pitching or brick soling	cum	236.00
(iii)	Dismantling Stone Masonry		
A	Rubble stone masonry in lime mortar	cum	368.00
B	Rubble stone masonry in cement mortar.	cum	448.00
C	Rubble Stone Masonry in mud mortar.	cum	315.00
D	Dry rubble masonry	cum	289.00
E	Dismantling stone pitching/ dry stone spalls.	cum	263.00
F	Dismantling boulders laid in wire crates including opening of crates and stacking dismantled materials.	cum	315.00
(iv)	Wood work wrought framed and fixed in frames of trusses upto a height of 5 m above plinth level	cum	947.00
(v)	Steel work in all types of sections upto a height of 5 m above plinth level excluding cutting of rivet.		
A	Including dismembering	tonne	2,675.00
B	Excluding dismembering.	tonne	1,957.00
C	Extra over item No(V) A and(V) B for cutting rivets.	tonne	20.50
(vi)	Scraping of bricks dismantled from brick work including stacking.		
A	In lime/Cement mortar	1000 numbers	2,314.00
B	In mud mortar	1000 numbers	826.00
(vii)	Scraping of Stone from dismantled stone masonry		
A	In cement and lime mortar	cum	929.00
B	In Mud mortar	cum	197.00
(viii)	Scarping plaster in lime or cement mortar from brick/ stone masonry	sqm	27.20
(ix)	Removing all type of hume pipes and stacking within a lead of 1000 metres including earthwork and dismantling of masonry works.		
A	Up to 600 mm dia	metre	343.00
B	Above 600 mm to 900 mm dia	metre	464.00

Item Code	Description	Unit	Justified Rate
C	Above 900 mm	metre	795.00
2.5	Dismantling of Flexible Pavements (Dismantling of flexible pavements and disposal of dismantled materials up to a lead of 1000 metres, stacking serviceable and unserviceable materials separately)		
I	By Manual Means		
A	Bituminous courses	cum	1,081.00
B	Granular courses	cum	739.00
II	By Mechanical Means		
A	Bituminous course	cum	293.00
2.6	Dismantling of Cement Concrete Pavement (Dismantling of cement concrete pavement by mechanical means using pneumatic tools, breaking to pieces not exceeding 0.02 cum in volume and stock piling at designated locations and disposal of dismantled materials up to a lead of 1000 metres, stacking serviceable and unserviceable materials separately)	cum	1,111.00
2.7	Dismantling Guard Rails (Dismantling guard rails by manual means and disposal of dismantled material with all lifts and up to a lead of 1000 metres, stacking serviceable materials and unserviceable materials separately.)	metre	111.00
2.8	Dismantling Kerb Stone (Dismantling kerb stone by manual means and disposal of dismantled material with all lifts and up to a lead of 1000 metre)	metre	15.00
2.9	Dismantling Kerb Stone channel (Dismantling kerb stone channel by manual means and disposal of dismantled material with all lifts and up to a lead of 1000 metre)	metre	22.00
2.10	Dismantling Kilometre Stone (Dismantling of kilometre stone including cutting of earth, foundation and disposal of dismantled material with all lifts and lead upto 1000 m and back filling of pit.)		
A	5th KM stone	each	605.00
B	Ordinary KM Stone	each	354.00
C	Hectometre Stone	each	70.80
2.11	Dismantling of Fencing (Dismantling of barbed wire fencing/ wire mesh fencing including posts, foundation concrete, back filling of pit by manual means including disposal of dismantled material with all lifts and up to a lead of 1000 metres, stacking serviceable material and unserviceable material separately.)	metre	90.20
2.12	Dismantling of CI Water Pipe Line (Dismantling of CI water pipe line 600 mm dia including disposal with all lifts and lead upto 1000 metres and stacking of serviceable material and unserviceable material separately under supervision of concerned department)	metre	223.00
2.13	Removal of Cement Concrete Pipe of Sewer Gutter (Removal of cement concrete pipe of sewer gutter 1500 mm dia under the supervision of concerned department including disposal with all lifts and up to a lead of 1000 metres and stacking of serviceable and unserviceable material separately but excluding earth excavation and dismantling of masonry works.)	metre	311.00
2.14	Removal of Telephone / Electric Poles and Lines (Removal of telephone / Electric poles including excavation and dismantling of foundation concrete and lines under the supervision of concerned department, disposal with all lifts and up to a lead of 1000 metres and stacking the serviceable and unserviceable material separately)	each	293.00
CHAPTER-3			
EARTH WORK, EROSION CONTROL AND DRAINAGE			
Item Code	Description	Unit	Justified Rate
3.1	Excavation in Soil by Manual Means. (Excavation for roadway in soil using manual means including loading in truck for carrying of cut earth to embankment site with all lifts and lead upto 1000 metres.)		

Item Code	Description	Unit	Justified Rate
(i)	excluding Royalty but excluding the cost of watering, rolling & compaction	cum	349.00
(ii)	excluding Royalty but including, cost of watering, rolling & compaction	cum	388.00
Note	In case there is a situation where the cross-section is of cut and fill and cut earth is required to be used in embankment in the immediate vicinity, the item of carriage in the truck shall be omitted. including Royalty @ Rs. 24.00 per cum.	cum	272.00
3.2 (i)	Excavation in ordinary rock by manual means (Excavation in ordinary rock using manual means including loading in a truck and carrying of excavated material to embankment site with in all lifts and leads upto 1000 metres) including Royalty @ Rs. 24.00 per cum but excluding cost of watering , rolling & compaction	cum	487.00
(ii)	Excavation in ordinary rock using manual means including loading in a truck and carrying of excavated material to embankment site with in all lifts and leads upto 1000 metres excluding Royalty, cost of watering , rolling & compaction	cum	526.00
Note	In case there is a situation where the cross-section is of cut and fill and cut earth is required to be used in embankment in the immediate vicinity, the item of carriage in the truck shall be omitted -excluding Royalty.	cum	410.00
3.3	Excavation in Soil with Dozer with lead upto 100 metres (Excavation for road way in soil by mechanical means including cutting and pushing the earth to site of embankment upto a distance of 100 metres (average lead50 metres), including trimming bottom and side slopes in accordance with requirements of lines, grades and cross sections.)	cum	68.00
3.4	Excavation in Ordinary Rock with Dozer with lead upto 100 metres (Excavation for roadway in ordinary rock by deploying a dozer, 80 HP including cutting and pushing the cut earth to site of embankment upto a distance of 100 metres (average lead 50 metres), trimming bottom and side slopes in accordance with the requirements of lines, grades and cross sections.)	cum	119.00
3.5	Excavation in Hard Rock (requiring blasting) with disposal upto 1000 metres (Excavation for roadway in hard rock (requiring blasting) by drilling, blasting and breaking, trimming of bottom and side slopes in accordance with requirements of lines, grades and cross sections, loading and disposal of cut road with in all lifts and leads upto 1000 metres)	cum	98.00
3.6	Excavation in Soil using Hydraulic Excavator CK 90 and Tippers with disposal upto 1000 metres. (Excavation for roadwork in soil with hydraulic excavator of 0.9 cum bucket capacity including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transporting to the embankment location within all lifts and lead upto 1000m)		
(i)	excluding Royalty but excluding the cost of watering, rolling & compaction	cum	79.00
(ii)	excluding Royalty but including, cost of watering, rolling & compaction	cum	94.00
3.7	Excavation in Ordinary Rock using Hydraulic Excavator CK-90 and Tippers with disposal upto 1000 metres. (Excavation for roadway in ordinary rock with hydraulic excavator of 0.9 cum bucket capacity including cutting and loading in tippers, transporting to embankment site within all lifts and lead upto 1000 m, trimming bottom and side slopes in accordance with requirements of lines, grades and cross sections.)		
(i)	excluding Royalty but excluding the cost of watering, rolling & compaction	cum	91.00
(ii)	excluding Royalty but including, cost of watering, rolling & compaction	cum	129.00
3.8	Excavation in Hard Rock (blasting prohibited) (Excavation for roadway in hard rock (blasting prohibited) with rock breakers including breaking rock, loading in tippers and disposal within all lifts and lead upto 1000 metres, trimming bottom and side slopes in accordance with requirements of lines, grades and cross sections.)		

Item Code	Description	Unit	Justified Rate
A	Mechanised	cum	405.00
B	Manual Method	cum	1,771.00
3.9	Excavation in Hard Rock (controlled blasting) with disposal upto 1000 metres (Excavation for roadway in hard rock with controlled blasting by drilling, blasting and breaking, trimming of bottom and side slopes in accordance with requirements of lines, grades and cross sections, loading and disposal of cut road with in all lifts and leads upto 1000 metres)	cum	113.00
3.10	Excavation in Marshy Soil (Excavation for roadway in marshy soil with hydraulic excavator 0.9 cum bucket capacity including cutting and loading in tippers and disposal with in all lifts and lead upto 1000 metres, trimming of bottom and side slopes in accordance with requirements of lines, grades and cross sections.)		
(i)	excluding Royalty but excluding the cost of watering, rolling & compaction	cum	84.00
(ii)	excluding Royalty but including, cost of watering, rolling & compaction	cum	123.00
3.11	Removal of Unserviceable Soil with Disposal upto 1000 metres (Removal of unserviceable soil including excavation, loading and disposal upto 1000 metres lead but excluding replacement by suitable soil which shall be paid separately as per clause 305.)	cum	80.00
3.12	Pre-splitting of Rock Excavation Slopes (Carrying out excavation in hard rock to achieve a specified slope of the rock face by controlled use of explosives and blasting accessories in properly aligned and spaced drill holes, collection of the excavated rock by a 80 HP dozer, loading in tipper by a front end loader and disposing of the material with all lifts and lead upto 1000 m, all as specified in clause No. 303)	sqm	103.00
3.13	Excavation for Structures (Earth work in excavation of foundation of structures as per drawing and technical specification, including setting out, construction of shoring and bracing, removal of stumps and other deleterious matter, dressing of sides and bottom, backfilling the excavation earth to the extent required and utilising the remaining earth locally for road work.)		
(i)	Ordinary soil		
A	Manual Means (Depth upto 3 m)	cum	529.00
B	Mechanical Means (Depth upto 3 m)	cum	37.00
(ii)	Ordinary rock (not requiring blasting)		
A	Manual Means (Depth upto 3 m)	cum	661.00
B	Mechanical Means	cum	45.00
(iii)	Hard rock (requiring blasting)		
A	Manual Means	cum	982.00
(iv)	Hard rock (blasting prohibited)		
A	Mechanical Means	cum	573.00
(v)	Marshy soil		
A	Manual means (upto 3 m depth)	cum	741.00
B	Mechanical Means	cum	226.00
3.14	Scarifying Existing Granular Surface to a Depth of 50 mm by Manual Means (Scarifying the existing granular road surface to a depth of 50 mm and disposal of scarified material within all lifts and leads upto 1000 metres.)	sqm	37.00
3.15	Scarifying existing bituminous surface to a depth of 50 mm by mechanical means (Scarifying the existing bituminous road surface to a depth of 50 mm and disposal of scarified material with in all lifts and lead upto 1000 metres.)	sqm	7.50
3.16	Embankment Construction with Material Obtained from Borrow Pits (Construction of embankment with approved material obtained from borrow pits with all lifts and leads, transporting to site, spreading, grading to required slope and compacting to meet requirement of table 300-2)		
(i)	Rolling with vibratory roller	cum	139.00

Item Code	Description	Unit	Justified Rate
(ii)	Rolling with smooth wheeled roller	cum	143.00
3.17	Construction of Embankment with Material Deposited from Roadway Cutting (Construction of embankment with approved materials deposited at site from roadway cutting and excavation from drain and foundation of other structures graded and compacted to meet requirement of table 300-2)		
(i)	Rolling with vibratory roller	cum	78.00
(ii)	Rolling with smooth wheeled roller	cum	82.00
3.18	Construction of Subgrade and Earthen Shoulders (Construction of subgrade and earthen shoulders with approved material obtained from borrow pits with all lifts & leads, transporting to site, spreading, grading to required slope and compacted to meet requirement of table No. 300-2)		
(i)	Rolling with vibratory roller	cum	171.00
(ii)	Rolling with smooth wheeled roller	cum	176.00
3.19	Compacting Original Ground		
Case-I	Compacting original ground supporting subgrade (Loosening of the ground upto a level of 500 mm below the subgrade level, watered, graded and compacted in layers to meet requirement of table 300-2 for subgrade construction.)		
(i)	Rolling with vibratory roller	cum	52.00
(ii)	Rolling with smooth wheeled roller	cum	57.00
Case-II	Compacting original ground supporting embankment		
(i)	Rolling with vibratory roller	cum	20.00
(ii)	Rolling with smooth wheeled roller	cum	25.00
3.20	Stripping and Storing Top Soil (Stripping, storing of top soil by road side at 15 m internal and re-application on embankment slopes, cut slopes and other areas in localities where the available embankment material is not conducive to plant growth)	cum	349.00
3.21	Stripping, storing and re-laying top soil from borrow areas in agriculture fields. (Stripping of top soil from borrow areas located in agriculture fields, storing at a suitable place, spreading and re-laying after taking the borrow earth to maintain fertility of the agricultural field, finishing it to the required levels and satisfaction of the farmer.)	cum	41.00
3.22	Turfing with Sodds (Furnishing and laying of the live sods of perennial turf forming grass on embankment slope, verges or other locations shown on the drawing or as directed by the engineer including preparation of ground, fetching of rods and watering)	sqm	38.00
3.23	Seeding and Mulching (Preparation of seed bed on previously laid top soil, furnishing and placing of seeds, fertilizer, mulching material, applying bituminous emulsion at the rate of 0.23 litres per sqm and laying and fixing jute netting, including watering for 3 months all as per clause 308)	sqm	145.00
3.24	Surface Drains in Soil (Construction of unlined surface drains of average cross sectional area 0.40 sqm in soil to specified lines, grades, levels and dimensions to the requirement of clause 301 and 309. Excavated material to be used in embankment within a lead of 50 metres (average lead 25 metres))		
A	Mechanical means	metre	48.00
B	Manual Means	metre	132.00
3.25	Surface Drains in Ordinary Rock (Construction of unlined surface drain of average cross sectional area 0.4 sqm in ordinary rock to specified lines, grades, levels and dimensions as per approved design and to the requirement of clause 301 to 309. Excavated material to be used in embankment at site.)		
A	Mechanical Means	metre	98.00
B	Manual Means	metre	198.00
3.26	Surface Drains in Hard Rock (Rate per metre may be worked out based on quantity of hard rock as per design.)	metre	VALUE

Item Code	Description	Unit	Justified Rate
3.27	Sub Surface Drains with Perforated Pipe (Construction of subsurface drain with perforated pipe of 100 mm internal diameter of metal/ asbestos cement/ cement concrete/PVC, closely jointed, perforations ranging from 3 mm to 6 mm depending upon size of material surrounding the pipe, with 150 mm bedding below the pipe and 300 mm cushion above the pipe, cross section of excavation 450 x 550 mm. Excavated material to be utilised in roadway at site)	metre	549.00
3.28	Aggregate Sub- Surface Drains (Construction of aggregate sub surface drain 300 mm x 450 mm with aggregates conforming to table 300-4, excavated material to be utilised in roadway)	metre	250.00
3.29	Underground Drain at Edge of Pavement (Construction of an underground drain 1 m x 1 m (inside dimensions) lined with RCC-20 cm thick and covered with RCC slab 10 cm in thickness on urban roads)	metre	3,317.00
3.30	Preparation and Surface Treatment of formation. (Preparation and surface treatment of formation by removing mud and slurry, watering to the extent needed to maintain the desired moisture content, trimming to the required line, grade, profile and rolling with 8-10 tonne smooth wheeled roller, complete as per clause 310.)	sqm	3.00
3.31	Construction of Rock fill Embankment (Construction of rock fill embankment with broken hard rock fragments of size not exceeding 300 mm laid in layers not exceeding 500 mm thick including filling of surface voids with stone spalls, blinding top layer with granular material, rolled with vibratory road roller, all complete as per clause 313)	cum	41.00
3.32	Excavation in Hill Area in Soil by Mechanical Means (Excavation in soil in hilly area by mechanical means including cutting and trimming of side slopes and disposing of excavated earth with all lifts and lead upto 1000 metres)	cum	147.00
3.33	Excavation in Hilly Area in Ordinary Rock by Mechanical Means not Requiring Blasting. (Excavation in hilly area in ordinary rock not requiring ballasting by mechanical means including cutting and trimming of slopes and disposal of cut material with all lift and lead upto 1000 metres)	cum	200.00
3.34	Excavation in Hilly Areas in Hard Rock Requiring Blasting (Excavation in hilly areas in hard rock requiring blasting, by mechanical means including trimming of slopes and disposal of cut material with all lifts and lead upto 1000 metres.)	cum	264.00
3.35	Work in Urban Roads (The cost of earth work in urban roads inhabited area will be comparatively higher due to following reasons:)		VALUE
3.36	Embankment Construction with Fly ash/Pond ash available from coal or lignite burning Thermal Plants as waste material. (Construction of embankment with fly ash conforming to table 1 of IRC: SP: 58 - 2001 obtained from coal or lignite burning thermal power stations as waste material, spread and compacted in layer of 200mm thickness each at OMC, all as specified in IRC: SP: 58-2001 and as per approved plans.)	cum	99.00
CHAPTER-4			
SUB-BASES, BASES (NON- BITUMINOUS) AND SHOULDERS			
Item Code	Description	Unit	Justified Rate
4.1	Granular Sub-base with Close Graded Material (Table:- 400-1)		
A	Plant Mix Method (Construction of granular sub-base by providing close graded Material, mixing in a mechanical mix plant at OMC, carriage of mixed Material to work site, spreading in uniform layers with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per clause 401)		
(i)	for grading- I Material	cum	2,303.00
(ii)	for grading- II Material	cum	2,432.00

Item Code	Description	Unit	Justified Rate
(iii)	for grading-III Material	cum	2,064.00
B	By Mix in Place Method (Construction of granular sub-base by providing close graded material, spreading in uniform layers with motor grader on prepared surface, mixing by mix in place method with rotavator at OMC, and compacting with vibratory roller to achieve the desired density, complete as per clause 401)		
(i)	for grading- I Material	cum	2,112.00
(ii)	for grading- II Material	cum	2,242.00
(iii)	for grading-III Material	cum	1,874.00
4.2	Granular Sub-Base with Coarse Graded Material (Table:- 400- 2) (Construction of granular sub-base by providing coarse graded material, spreading in uniform layers with motor grader on prepared surface, mixing by mix in place method with rotavator at OMC, and compacting with vibratory roller to achieve the desired density, complete as per clause 401)		
(i)	for grading- I Material	cum	2,329.00
(ii)	for grading- II Material	cum	2,445.00
(iii)	for grading-III Material	cum	2,319.00
4.3	Lime Stabilisation for Improving Subgrade (Laying and spreading available soil in the subgrade on a prepared surface, pulverising, mixing the spread soil in place with rotavator with 3 % slaked lime having minimum content of 70% of CaO, grading with motor grader and compacting with the road roller at OMC to the desired density to form a layer of improved sub grade)		
A	By Mechanical Means	cum	324.00
B	By Manual Means	cum	395.00
4.4	Lime Treated Soil for Sub- Base (Providing, laying and spreading soil on a prepared sub grade, pulverising, mixing the spread soil in place with rotavator with 3 % slaked lime with minimum content of 70% of CaO, grading with motor grader and compacting with the road roller at OMC to achieve at least 98%of the max dry density to form a layer of sub base.)	cum	359.00
4.5	Cement Treated Soil Sub Base/ Base (Providing, laying and spreading soil on a prepared sub grade, pulverising, adding the designed quantity of cement to the spread soil, mixing in place with rotavator, grading with the motor grader and compacting with the road roller at OMC to achieve the desired unconfined compressive strength and to form a layer of sub-base/base.)	cum	677.00
4.6	Cement Treated Crushed Rock or combination as per clause 403.2 and table 400.4 in Sub base/ Base (Providing, laying and spreading Material on a prepared sub grade, adding the designed quantity of cement to the spread Material, mixing in place with rotavator, grading with the motor grader and compacting with the road roller at OMC to achieve the desired unconfined compressive strength and to form a layer of sub-base/base.)		
(i)	For Sub-Base course	cum	3,060.00
(ii)	For Base course	cum	2,509.00
4.7	Making 50 mm x 50 mm Furrows (Making 50 mm x 50 mm furrows, 25mm deep, 450 to the center line of the road and at one metre interval in the existing thin bituminous wearing coarse including sweeping and disposal of excavated material within 1000 metres lead)		
	i) 25 mm deep furrow cutting	sqm	6.50
	ii) 50 mm deep furrow cutting	sqm	13.00
4.8	Inverted Choke (Construction of inverted choke by providing, laying, spreading and compacting screening B type/ coarse sand of specified grade in uniform layer on a prepared surface with motor grader and compacting with power roller etc)	cum	1,246.00

Item Code	Description	Unit	Justified Rate
4.9	Water Bound Macadam (Providing, laying, spreading and compacting stone aggregates of specific sizes to water bound macadam specification including spreading in uniform thickness, hand packing, rolling with vibratory roller 8-10 tonnes / Smooth 3 wheeled Steel Roller in stages to proper grade and camber, applying and brooming requisite type of screening/ binding Materials to fill up the interstices of coarse aggregate, watering and compacting to the required density.)		
A	By Manual Means		
(i)	Grading- I (Using Screening Crushable type such as Moorum or Gravel)		
(a)	Using Screening Crushable type such as Moorum or Gravel (with Vibratory Roller)	cum	3,283.00
	With Smooth 3 wheeled Steel Roller	cum	3,297.00
(b)	Using Screening Type-A (13.2mm Agg.) (with Vibratory Roller)	cum	3,722.00
	With Smooth 3 wheeled Steel Roller	cum	3,736.00
(ii)	Grading- II (Using Screening Crushable type such as Moorum or Gravel)		
(a)	Using Screening Crushable type such as Moorum or Gravel (with Vibratory Roller)	cum	2,752.00
	With Smooth 3 wheeled Steel Roller	cum	2,766.00
(b)	Using Screening Type-A (13.2mm Agg.) (with Vibratory Roller)	cum	2,962.00
	With Smooth 3 wheeled Steel Roller	cum	2,976.00
(c)	Using Screening Type-B (11.2mm Agg.) (with Vibratory Roller)	cum	3,188.00
	With Smooth 3 wheeled Steel Roller	cum	3,145.00
(iii)	Grading- III (Using Screening Crushable type such as Moorum or Gravel)		
(a)	Using Screening Crushable type such as Moorum or Gravel (with Vibratory Roller)	cum	2,752.00
	With Smooth 3 wheeled Steel Roller	cum	2,766.00
(b)	Using Screening Type-B (11.2mm Agg.) (with Vibratory Roller)	cum	3,131.00
	With Smooth 3 wheeled Steel Roller	cum	3,145.00
B	By Mechanical Means:		
(i)	Grading- I (Using Screening Crushable type such as Moorum or Gravel)		
(a)	Using Screening Crushable type such as Moorum or Gravel (with Vibratory Roller)	cum	2,910.00
	With Smooth 3 wheeled Steel Roller	cum	2,924.00
(b)	Using Screening Type-A (13.2mm Agg.) (with Vibratory Roller)	cum	3,348.00
	With Smooth 3 wheeled Steel Roller	cum	3,362.00
(ii)	Grading- II (Using Screening Crushable type such as Moorum or Gravel)		
(a)	Using Screening Crushable type such as Moorum or Gravel (with Vibratory Roller)	cum	2,378.00
	With Smooth 3 wheeled Steel Roller	cum	2,393.00
(b)	Using Screening Type-A (13.2mm Agg.) (with Vibratory Roller)	cum	2,588.00
	With Smooth 3 wheeled Steel Roller	cum	2,602.00
(c)	Using Screening Type-B (11.2mm Agg.) (with Vibratory Roller)	cum	2,814.00
	With Smooth 3 wheeled Steel Roller	cum	2,772.00
(iii)	Grading- III (Using Screening Crushable type such as Moorum or Gravel)		
(a)	Using Screening Crushable type such as Moorum or Gravel (with Vibratory Roller)	cum	2,378.00
	With Smooth 3 wheeled Steel Roller	cum	2,393.00
(b)	Using Screening Type-B (11.2mm Agg.) (with Vibratory Roller)	cum	2,758.00
	With Smooth 3 wheeled Steel Roller	cum	2,772.00

Item Code	Description	Unit	Justified Rate
4.10	Crushed Cement Concrete Sub-base / Base (Breaking and crushing of material obtained by breaking damaged cement concrete slabs to size range not exceeding 75 mm as specified in table 400.7 transporting the aggregates obtained from breaking of cement concrete slabs at a lead of L km., laying and compacting the same as sub base/ base course, constructed as WBM to clause 404 except the use of screening or binding Material.)		
	With Vibratory Roller	cum	306.00
	With Smooth 3 wheeled Steel Roller	cum	320.00
4.11	Penetration Coat Over Top Layer of Crushed Cement Concrete Base (Spraying of bitumen over cleaned dry surface of crushed cement concrete base at the rate of 25 kg per 10 sqm by a bitumen pressure distributor, spreading of key aggregates at the rate of 0.13 cum per 10 sqm by a mechanical gritter and rolling the surface as per clause 506.3.8)	sqm	36.50
4.12	Wet Mix Macadam (Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the Material with water at OMC in mechanical mix plant carriage of mixed Material by tipper to site, laying in uniform layers with paver in sub- base / base course on well prepared surface and compacting with vibratory roller to achieve the desired density.)		
	With Vibratory Roller	cum	2,572.00
	With Smooth 3 wheeled Steel Roller	cum	2,601.00
4.13	Construction of Median and Island with Soil Taken from Roadway Cutting (Construction of Median and Island above road level with approved material deposited at site from roadway cutting and excavation for drain and foundation of other structures, spread, graded and compacted as per clause 407)	cum	279.00
4.14	Construction of Median and Island with Soil Taken from Borrow Areas (Construction of median and Island above road level with approved material brought from borrow pits, spread, sloped and compacted as per clause 407)	cum	250.00
4.15	Construction of Shoulders (A. Earthen Shoulders)		
	B.) Hard Shoulders		VALUE
	C.) Paved Shoulders		VALUE
4.16	Footpaths and Separators (Construction of footpath/separator by providing a 150 mm compacted granular sub base as per clause 401 and 25 mm thick cement concrete grade M15, over laid with precast concrete tiles in cement mortar 1:3 including provision of all drainage arrangements but excluding kerb channel.)	sqm	975.00
4.17	Crusher Run Macadam Base (Providing crushed stone aggregate, depositing on a prepared surface by hauling vehicles, spreading and mixing with a motor grader, watering and compacting with a vibratory roller to clause 410 to form a layer of sub-base/Base)		
A	By Mix in Place Method		
(i)	For 53 mm maximum size	cum	2,744.00
(ii)	For 45 mm maximum size	cum	2,933.00
B	By Mixing Plant :		
(i)	For 53 mm maximum size	cum	2,934.00
(ii)	For 45 mm maximum size	cum	3,123.00
4.18	Lime, Fly ash stabilised soil sub-base (Construction of Sub-base using lime - fly ash admixture with granular soil, free from organic matter/ deleterious material or clayey silts and low plasticity clays having PI between 5 and 20 and liquid limit less than 25 and commercial dry lime, slaked at site or pre-slaked with CaO content not less than 50%, fly ash to conform to gradation as per clause 4.3 of IRC: 88-1984, lime + fly ash content ranging between 10 to 30%, the minimum un-confined compressive strength and CBR value after 28 days curing and 4 days soaking to be 7.5 kg/sq, cm and 25% respectively, all as specified in IRC: 88-1984)	cum	371.00

Item Code	Description	Unit	Justified Rate
CHAPTER-5			
BASES AND SURFACE COURSES (BITUMINOUS)			
Item Code	Description	Unit	Justified Rate
5.1	Prime coat (Providing and applying primer coat with bitumen emulsion on prepared surface of granular Base including clearing of road surface and spraying primer at the rate of 0.60 kg/sqm using mechanical means.)	sqm	73.00
5.2	Tack coat		
	Providing and applying tack coat with bitumen emulsion using emulsion pressure distributor at the rate of 0.20 kg per sqm on the prepared bituminous/granular surface cleaned with mechanical broom.	sqm	25.00
5.3	Bituminous Macadam (Providing and laying bituminous macadam with 100-120 TPH hot mix plant producing an average output of 75 tonnes per hour using crushed aggregates of specified grading premixed with bituminous binder, transported to site, laid over a previously prepared surface with paver finisher to the required grade, level and alignment and rolled as per clauses 501.6 and 501.7 to achieve the desired compaction)		
(i)	for Grading I (40 mm nominal size)	cum	8,863.00
(ii)	for GradingII(19 mm nominal size)	cum	8,867.00
5.3 A	Bituminous Macadam (Providing and laying bituminous macadam with 100-120 TPH hot mix plant producing an average output of 75 tonnes per hour using crushed aggregates of specified grading premixed with bituminous binder, transported to site, laid over a previously prepared surface with paver finisher to the required grade, level and alignment and rolled as per clauses 501.6 and 501.7 to achieve the desired compaction)with modified graded bitumen.		
(i)	for Grading I (40 mm nominal size)	cum	8,675.00
(ii)	for GradingII(19 mm nominal size)	cum	8,679.00
5.3 B	Bituminous Macadam (Providing and laying bituminous macadam with 100-120 TPH hot mix plant producing an average output of 75 tonnes per hour using crushed aggregates of specified grading premixed with bituminous binder, transported to site, laid over a previously prepared surface with paver finisher to the required grade, level and alignment and rolled as per clauses 501.6 and 501.7 to achieve the desired compaction)with VG-30 Bulk bitumen.		
(i)	for Grading I (40 mm nominal size)	cum	6,739.00
(ii)	for GradingII(19 mm nominal size)	cum	6,744.00
5.4	Bituminous Penetration Macadam (Construction of penetration macadam over prepared Base by providing a layer of compacted crushed coarse aggregate using chips spreader with alternate applications of bituminous binder and key aggregates and rolling with a smooth wheeled steel roller 8-10 tonne capacity to achieve the desired degree of compaction)		
A	50 mm thick	sqm	505.00
B	75 mm thick	sqm	663.00
5.5	Built-Up-Spray Grout (Providing, laying and rolling of built-up-spray grout layer over prepared base consisting of a two layer composite construction of compacted crushed coarse aggregates using motor grader for aggregates. key stone chips spreader may be used with application of bituminous binder after each layer, and with key aggregates placed on top of the second layer to serve as a Base conforming to the line, grades and cross-section specified, the compacted layer thickness being 75 mm)	sqm	417.00

Item Code	Description	Unit	Justified Rate
5.6	Dense Graded Bituminous Macadam (Providing and laying dense bituminous macadam 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 @ 4.0 to 4.5% 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.)		
(i)	for Grading I (40 mm nominal size)	cum	10,891.00
(ii)	for GradingII(19 mm nominal size)	cum	10,887.00
5.6 A	Dense Graded Bituminous Macadam (Providing and laying dense bituminous macadam 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 @ 4.0 to 4.5% 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.) with Modified Graded Bitumen.		
(i)	for Grading I (40 mm nominal size)	cum	10,636.00
(ii)	for GradingII(19 mm nominal size)	cum	10,632.00
5.6 B	Dense Graded Bituminous Macadam (Providing and laying dense bituminous macadam 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 @ 4.0 to 4.5% 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.) with VG-30 Grade Bulk Bitumen.		
(i)	for Grading I (40 mm nominal size)	cum	8,015.00
(ii)	for GradingII(19 mm nominal size)	cum	8,011.00
5.7	Semi - Dense Bituminous Concrete (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 @ 4.5 to 5 % 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. 508 complete in all respects)		
(i)	for Grading I (13 mm nominal size)	cum	11,269.00
(ii)	for GradingII(10 mm nominal size)	cum	12,037.00
5.7 A	Semi - Dense Bituminous Concrete (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 @ 4.5 to 5 % 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. 508 complete in all respects) with Modified Graded Bitumen.		
(i)	for Grading I (13 mm nominal size)	cum	10,999.00
(ii)	for GradingII(10 mm nominal size)	cum	11,737.00

Item Code	Description	Unit	Justified Rate
5.8	Bituminous Concrete (Providing and laying bituminous concrete with 100-120 TPH batch type hot mix plant producing an average output of 75 tonnes per hour using crushed aggregates of specified grading, premixed with bituminous binder @ 5.4 to 5.6 % 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. 509 complete in all respects)		
(i)	for Grading-I (13 mm nominal size)	cum	12,288.00
(ii)	for Grading-II(10 mm nominal size)	cum	12,291.00
5.9	Surface Dressing (Providing and laying surface dressing as wearing course in single coat using crushed stone aggregates of specified size on a layer of bituminous binder laid on prepared surface and rolling with 8-10 tonne smooth wheeled steel roller)		
Case - I	19 mm nominal chipping size	sqm	120.00
Case - II	13 mm nominal size chipping	sqm	95.00
5.10	Open - Graded Premix Surfacing (Providing, laying and rolling of open - graded premix surfacing of 20 mm thickness composed of 13.2 mm to 5.6 mm aggregates either using penetration grade bitumen or cut-back or emulsion to required line, grade and level to serve as wearing course on a previously prepared base, including mixing in a suitable plant, laying and rolling with a smooth wheeled roller 8-10 tonne capacity, finished to required level and grades.)		
(i)	Case - I: Mechanical method using Penetration grade Bitumen and HMP of appropriate capacity not less than 75 tonnes/hour .	sqm	175.00
(ii)	Case - II: Open-Graded Premix Surfacing using cationic Bitumen Emulsion	sqm	215.00
5.11	Close Graded Premix Surfacing/Mixed Seal Surfacing (Mechanical means using HMP of appropriate capacity not less than 75 tonnes/hour. Providing, laying and rolling of close-graded premix surfacing material of 20 mm thickness composed of 11.2 mm to 0.09 mm (Type-a) or 13.2 mm to 0.09 mm (Type-b) aggregates using penetration grade bitumen to the required line, grade and level to serve as wearing course on a previously prepared base, including mixing in a suitable plant, laying and rolling with a Smooth wheeled roller 8-10 tonne capacity, and finishing to required level and grade.)		
	i) For Type A	sqm	224.00
	i) For Type B	sqm	204.00
5.12	Seal Coat (Providing and laying seal coat sealing the voids in a bituminous surface laid to the specified levels, grade and cross fall using Type A and B seal coats)		
(i)	Case - I : Type A	sqm	91.00
(ii)	Case - II : Type B (Providing and laying of premix sand seal coat with HMP of appropriate capacity not less than 75 tonnes/ hours using crushed stone chipping 6.7 mm size and penetration bitumen of suitable grade.)	sqm	67.00
5.13	Supply of Stone Aggregates for Pavement Courses (Supply of stone aggregates from approved sources confirming to the physical requirement, specified in the respective specified clauses, including royalties, fees rents, collection, transportation, stacking and testing and measured in cum as per clause 514.5 Competitive market rates to be ascertained. Alternatively, rates for stone crushing given in chapter 1 may be adopted, if found economical. In case for supply of aggregates at site are not available, nearest crusher site may be ascertained. Loading and un-loading charges and cost of carriage may be added to these rates to arrive at the cost at site.)	cum	VALUE

Item Code	Description	Unit	Justified Rate
5.14	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 fine-grained 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 not less than 100°C, protruding 1 mm to 4 mm over mastic surface, all complete as per clause 515.)	sqm	1,325.00
5.15	Slurry Seal 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)	sqm	
(i)	5 mm thickness	sqm	161.00
(ii)	3 mm thickness	sqm	107.00
(iii)	1.5 mm thickness	sqm	66.00
5.16	Recycling of Bituminous Pavement with Central Recycling Plant (Recycling pavement by cold milling of existing bituminous layers, planning the surface after cold milling, reclaiming excavated material to the extent of 30 % of the required quantity, hauling and stock piling the reclaimed material near the central recycling plant after carrying out necessary checks and evaluation, adding fresh material including rejuvenators as required, mixing in a hot mix plant, transporting and laying at site and compacting to the required grade, level and thickness, all as specified in clause 517.)	cum	9,075.00
5.17	Fog Spray	sqm	
added	1. In case it is decided by the engineer to blind the fog spray, the following may be added	sqm	11.60
5.18	Bituminous Cold Mix (Including Gravel Emulsion) (Providing, laying and rolling of bituminous cold mix on prepared base consisting of a mixture of unheated mineral aggregate and emulsified or cutback bitumen, including mixing in a plant of suitable type and capacity, transporting, laying, compacting and finishing to specified grades and levels.)		
(i)	Using bitumen emulsion and 9.5 mm or 13.2 mm nominal size aggregate	cum	24,147.00
(ii)	Using bitumen emulsion and 19 mm or 26.5 mm nominal size aggregate	cum	24,146.00
(iii)	Using cutback bitumen and 9.5 mm or 13.2 mm nominal size aggregate	cum	3,457.00
(iv)	Using cutback bitumen and 19 mm or 26.5 mm nominal size aggregate	cum	3,459.00
5.19	Sand Asphalt Base Course (Providing, laying and rolling sand-asphalt base course composed of sand, mineral filler and bituminous binder on a prepared sub-grade or sub-base to the lines, levels, grades and cross sections as per the drawings including mixing in a plant of suitable type and capacity, transporting, laying, compacting and finishing.)	cum	9,761.00
5.20	Modified Binder (Supply of modified binder produced by mixing bitumen with modifier such as natural rubber or crumb rubber or any other polymer found compatible with bitumen and which allows properties given in clause 521.3 and IRC: SP: 53 blending of modifier with bitumen to be done either at the refinery or at the site plant capable of producing the modified binder to be delivered in drums which shall be agitated in melted condition using suitable device before use to ensure uniform dispersion.)	tonne	VALUE
5.21	Crack Prevention Courses		

Item Code	Description	Unit	Justified Rate
(i)	Stress Absorbing Membrane (SAM) crack width less than 6 mm (Providing and laying of a stress absorbing membrane over a cracked road surface, with crack width below 6 mm after cleaning with a mechanical broom, using modified binder complying with clause 521, sprayed at the rate of 9 kg per 10 sqm and spreading 5.6 mm crushed stone aggregates @ 0.11 cum per 10 sqm with hydraulic chip spreader, sweeping the surface for uniform spread of aggregates and surface finished to conform to clause 902.)	sqm	84.00
(ii)	Stress Absorbing Membrane (SAM) with crack width 6 mm to 9 mm (Providing and laying of a stress absorbing membrane over a cracked road surface, with crack width 6 to 9 mm after cleaning with a mechanical broom, using modified binder complying with clause 521, sprayed at the rate of 11 kg per 10 sqm and spreading 11.2 mm crushed stone aggregates @ 0.12 cum per 10 sqm, sweeping the surface for uniform spread of aggregates and surface finished to conform to clause 902.)	sqm	96.00
(iii)	Stress Absorbing Membrane (SAM) crack width above 9 mm and cracked area above 50 % (Providing and laying a single coat of a stress absorbing membrane over a cracked road surface, with crack width above 9 mm and cracked area above 50 % after cleaning with a mechanical broom, using modified binder complying with clause 521, sprayed at the rate of 15 kg per 10 sqm and spreading 11.2 mm crushed stone aggregates @ 0.12 cum per 10 sqm, sweeping the surface for uniform spread of aggregates and surface finished to conform to clause 902.)	sqm	127.00
(iv)	Case - IV : Bitumen Impregnated Geotextile (Providing and laying a bitumen impregnated geotextile layer after cleaning the road surface, geotextile conforming to requirements of clause 704.3, laid over a tack coat with 1.05 kg per sqm of paving grade bitumen 80 - 100 penetration and constructed to the requirement of clause 704.4.5)	sqm	149.00
5.22	Recipe Cold Mix (Providing and laying of premix of crushed stone aggregates and emulsion binder, mixed in a batch type cold mixing plant, laid over prepared surface, by paver finisher, rolled with a pneumatic tyred roller initially and finished with a smooth steel wheel roller, all as per clause 519.3)		
(i)	75 mm thickness	cum	15,080.00
(ii)	40 mm thickness	cum	21,559.00
(iii)	25 mm thickness	cum	25,360.00
5.8 A	Bituminous Concrete (Providing and laying bituminous concrete with 100-120 TPH batch type hot mix plant producing an average output of 75 tonnes per hour using crushed aggregates of specified grading, premixed with bituminous binder @ 5.4 to 5.6 % 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. 509 complete in all respects) with Modified Graded Bitumen. (i) for Grading-I (13 mm nominal size)		11,982.00
	(ii) for Grading-II(10 mm nominal size)		11,984.00
5.8 B	Bituminous Concrete (Providing and laying bituminous concrete with 100-120 TPH batch type hot mix plant producing an average output of 75 tonnes per hour using crushed aggregates of specified grading, premixed with bituminous binder @ 5.4 to 5.6 % 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. 509 complete in all respects) with Bulk VG30 Bitumen. (i) for Grading-I (13 mm nominal size)	cum	8,834.00
	(ii) for Grading-II(10 mm nominal size)	cum	8,837.00

Item Code	Description	Unit	Justified Rate
CHAPTER-6			
Item Code	Description	Unit	Justified Rate
6.1	Dry Lean Cement Concrete Sub- base (Construction of dry lean cement concrete Sub- base over a prepared sub-grade with coarse and fine aggregate conforming to IS: 383, the size of coarse aggregate not exceeding 25 mm, aggregate cement ratio not to exceed 15:1, aggregate gradation after blending to be as per table 600-1, cement content not to be less than 150 kg/ cum, optimum moisture content to be determined during trial length construction, concrete strength not to be less than 10 Mpa at 7 days, mixed in a batching plant, transported to site, laid with a paver with electronic sensor, compacting with 8-10 tonnes vibratory roller, finishing and curing.)	cum	3,632.00
6.2	Cement Concrete Pavement (Construction of un-reinforced, dowel jointed, plain cement concrete pavement over a prepared sub base with 43 grade cement @ 400 kg per cum, coarse and fine aggregate conforming to IS 383, maximum size of coarse aggregate not exceeding 25 mm, mixed in a batching and mixing plant as per approved mix design, transported to site, laid with a fixed form or slip form paver, spread, compacted and finished in a continuous operation including provision of contraction, expansion, construction and longitudinal joints, joint filler, separation membrane, sealant primer, joint sealant, debonding strip, dowel bar, tie rod, admixtures as approved, curing compound, finishing to lines and grades as per drawing)	cum	6,338.00
6.3	Rolled Cement Concrete Base (Construction of rolled cement concrete base course with coarse and fine aggregate conforming to IS:383, the size of coarse aggregate not exceeding 25 mm with minimum, aggregate cement ratio15:1 and minimum cement content of 200 kg/cum, aggregate gradation to be as per table 600-4 after blending, mixing in batching plant at optimum moisture content, transporting to site, laying with a paver with electronic sensor, compacting with 8-10 tonnes smooth wheeled vibratory roller to achieve, the designed flexural strength, finishing and curing.)	cum	3,999.00
6.4	Transition section between rigid and flexible pavement (Due to change in the properties of materials and type of construction, a gradual changeover from rigid pavement to flexible pavement is desirable to avoid any damage at the butting joint. After provision of an expansion joint in the cement concrete slab, the thickness of slab should be tapered to 10 cm over a length of 3 m towards the flexible pavement. The deficiency of thickness caused due to tapering of the slab should be made up by the asphaltic layers.)		VALUE
6.5	Construction of Base/Sub-base of pavement with lean concrete - fly ash. (Construction of Base/sub-base using cement, sand, fly ash and coarse aggregates proportioned as per table 4 of IRC: 74/1979 and with water content ratio, slump and compressive strength as defined in the said table, mix prepared in a batching and mixing plant and compacted with a vibratory roller 8-10 tonnes capacity within the time limit laid down vide clause 7.6.3 of IRC: 74-1979, construction joints properly formed at the end of day's work, cured for 14 days, all as specified in IRC: 74-1979 and as per approved plans.)	cum	3,383.00

Item Code	Description	Unit	Justified Rate
6.6	Cement - Fly ash concrete pavement. (Construction reinforced-reinforced, dowel jointed, plain cement concrete pavement over a prepared sub base with 43 grade cement, coarse and fine aggregate conforming to IS 383, maximum size of coarse aggregate not exceeding 25 mm, replacing cement by fly ash to the extent of 15% and sand by 10%, mixed in a batching and mixing plant as per approved mix design, transported to site, laid with a fixed form or slip form paver, spread, compacted and finished in a continuous operation including provision of contraction, expansion, construction and longitudinal joints, joint filler, separation membrane, sealant primer, joint sealant, debonding strip, dowel bar, tie rod, admixtures as approved, curing compound, finishing to lines and grades as per drawing)	cum	5,897.00
CHAPTER-7			
GEOSYNTHETICS AND REINFORCED EARTH			
Item Code	Description	Unit	Justified Rate
7.1	Sub- Surface Drain with Geotextiles (Construction of sub surface drain 200 mm dia using geotextiles treated with carbon black with physical properties as given in clause 702.2.3 formed in to a stable network and a planar geocomposite structure, joints wrapped with geotextile to prevent ingress of soil, all as per clause 702 and approved drawings including excavation and backfilling)	metre	923.00
7.2	Narrow Filter Sub- Surface Drain (Construction of a narrow filter sub- surface drain consisting of porous or perforated pipe laid in narrow trench surrounded by a geotextile filter fabric, with a minimum of 450 mm overlap of fabric and installed as per clause 702.3 and 309.3.5 including excavation and backfilling)	metre	650.00
7.3	Laying Paving Fabric Beneath a Pavement Overlay (Providing and laying paving fabric with physical requirements as per table 704-2 over a tack coat of paving grade Bitumen 80-100 penetration, laid at the rate of 1 kg per sqm over thoroughly cleaned and repaired surface to provide a water resistant membrane and crack retarding layer. Paving fabric to be free of wrinkling and folding and to be laid before cooling of tack coat, brooming and rolling of surface with pneumatic roller to maximise paving fabric contact with pavement surface)	sqm	175.00
7.4	Laying Boulder Apron in Crates of Synthetic Geogrids (Providing, preparing and laying of geogrid crated apron 1 m x 5 m, 600 mm thick including excavation and backfilling with baffles at 1 metre interval, made with geogrids having characteristics as per clause 704.2, joining sides with connectors/ring staples, top corners to be tie tensioned, placing of suitable cross interval ties in layers of 300 mm connecting opposite side with lateral braces and tied with polymer braids to avoid bulging, constructed as per clause 704.3. filled with stone with minimum size of 200 mm and specific gravity not less than 2.65, packed with stone spalls, keyed to the foundation recess in case of sloping ground and laid over a layer of geotextile to prevent migration of fines, all as per clause 704 and laid as per clause 2503.3 and approved design.)	cum	637.00
7.5	Reinforced Earth Retaining Wall (Reinforced earth retaining walls have four main components as under: a) Excavation for foundation, foundation concrete and cement concrete grooved seating in the foundation for facing elements (facia material). b) Facia material and its placement. c) Assembling, joining with facing elements and laying of the reinforcing elements. d) Earthfill with granular material which is to be retained by the wall.)		
(i)	Assembling, joining and laying of reinforcing elements.		
A	With reinforcing element of steel / Aluminium strips / polymeric strips.		
Type 1	1.Galvanised carbon steel strips	metre	785.00
Type 2	2.Copper Strips	metre	785.00
Type 3	3.Aluminium Strips	metre	364.00

Item Code	Description	Unit	Justified Rate
Type 4	4.Stainless steel strips	metre	394.00
Type 5	5.Glass reinforced polymer/fibre reinforced polymer/polymeric strips	metre	785.00
B	With reinforcing elements of synthetic geogrids	sqm	167.00
(ii)	Facing elements of RCC	sqm	1,715.00
CHAPTER-8			
TRAFFIC SIGNS, MARKINGS & OTHER ROAD APPURTENANCES			
Item Code	Description	Unit	Justified Rate
8.1	Cast in Situ Cement Concrete M20 kerb (Construction of cement concrete kerb with top and bottom width 115 and 165 mm respectively, 250 mm high in M 20 grade PCC on M-10 grade foundation 150 mm thick, foundation having 50 mm projection beyond kerb stone, kerb stone laid with kerb laying machine, foundation concrete laid manually, all complete as per clause 408)		
A	Using Concrete Mixer	metre	345.00
B	Using Concrete Batching and Mixing Plant	metre	331.00
8.2	Cast in Situ Cement Concrete M 20 Kerb with Channel (Construction of cement concrete kerb with channel with top and bottom width 115 and 165 mm respectively, 250 mm high in M 20 grade PCC on M10 grade foundation 150 mm thick, kerb channel 300 mm wide, 50 mm thick in PCC M20 grade, sloped towards the kerb, kerb stone with channel laid with kerb laying machine, foundation concrete laid manually, all complete as per clause 408)		
A	Using Concrete Mixer	metre	636.00
B	Using Concrete Batching and Mixing Plant	metre	620.00
8.3	Printing new letter and figures of any shade (Printing new letter and figures of any shade with synthetic enamel paint black or any other approved colour to give an even shade)		
(i)	Hindi (Matras commas and the like not to be measured and paid for Half letter shall be counted as half)	cm height per letter	1.60
(ii)	English and Roman	cm height per letter	1.00
8.4	Retro- reflectorised Traffic signs (Providing and fixing of retro- reflectorised cautionary, mandatory and informatory sign as per IRC :67 made of encapsulated lens type reflective sheeting vide clause 801.3, fixed over aluminium sheeting, 1.5 mm thick supported on a mild steel angle iron post 75 mm x 75 mm x 6 mm firmly fixed to the ground by means of properly designed foundation with M15 grade cement concrete 45 cm x 45 cm x 60 cm, 60 cm below ground level as per approved drawing)		
(i)	90 cm equilateral triangle	each	6,128.00
(ii)	60 cm equilateral triangle	each	4,016.00
(iii)	60 cm circular	each	5,398.00
(iv)	80 mm x 60 mm rectangular	each	7,543.00
(v)	60 cm x 45 cm rectangular	each	5,257.00
(vi)	60 cm x 60 cm square	each	6,236.00
(vii)	90 cm high octagon	each	9,632.00
8.5	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 encapsulated lens type reflective sheeting vide clause 801.3, fixed over aluminium sheeting, 2 mm thick with area not exceeding 0.9 sqm supported on a mild steel single angle iron post 75 x 75 x 6 mm firmly fixed to the ground by means of properly designed foundation with M15 grade cement concrete 45 x 45 x 60 cm, 60 cm below ground level as per approved drawing)	sqm	13,645.00

Item Code	Description	Unit	Justified Rate
8.6	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 encapsulated lens type reflective sheeting vide clause 801.3, fixed over aluminium sheeting, 2 mm thick with area exceeding 0.9 sqm supported on a mild steel angle iron post 75 mm x 75 mm x 6 mm, 2 Nos. firmly fixed to the ground by means of properly designed foundation with M 15 grade cement concrete 45 cm x 45 cm x 60 cm, 60 cm below ground level as per approved drawing)	sqm	14,103.00
8.7	Overhead Signs (Providing and erecting overhead signs with a corrosion resistant aluminium alloy sheet reflectorised with high intensity retro-reflective sheeting of encapsulated lense type with vertical and lateral clearance given in clause 802.2 and 802.3 and installed as per clause 802.7 over a designed support system of aluminium alloy or galvanised steel trestles and trusses of sections and type as per structural design requirements and approved plans)		
A	Truss and Vertical Support	tonne	93,752.00
B	Aluminium alloy plate for over head sign	tonne	11,090.00
8.8	Painting Two Coats on New Concrete Surfaces (Painting two coats after filling the surface with synthetic enamel paint in all shades on new plastered concrete surfaces)	sqm	84.00
8.9	Painting on Steel Surfaces (Providing and applying two coats of ready mix paint of approved brand on steel surface after through cleaning of surface to give an even shade)	sqm	80.00
8.10	Painting on Wood Surfaces (Providing and applying two coats of ready mix paint of approved brand on wood surface after through cleaning of surface to give an even shade)	sqm	86.00
8.11	Painting Lines, Dashes, Arrows etc on Roads in Two Coats on New Work (Painting lines, dashes, arrows etc on roads in two coats on new work with ready mixed road marking paint conforming to IS:164 on bituminous surface, including cleaning the surface of all dirt, dust and other foreign matter, demarcation at site and traffic control)		
(i)	Over 10 cm in width	sqm	174.00
(ii)	Up to 10 cm in width	sqm	142.00
8.12	Painting Lines, Dashes, Arrows etc on Roads in Two Coats on Old Work (Painting lines, dashes, arrows etc on roads in two coats on old work with ready mixed road marking paint confirming to IS: 164 on bituminous surface, including cleaning the surface of all dirt, dust and other foreign matter, demarcation at site and traffic control)		
(i)	Over 10 cm in width	sqm	123.00
(ii)	Up to 10 cm in width	sqm	134.00
8.13	Road Marking with Hot Applied Thermoplastic Compound with Reflectorising Glass Beads on Bituminous Surface (Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads @ 250 gms per sqm area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35 .The finished surface to be level, uniform and free from streaks and holes.)	sqm	765.00
8.14	Kilo Metre Stone (Reinforced cement concrete M15grade kilometre stone of standard design as per IRC:8-1980, fixing in position including painting and printing etc)		
(i)	5th kilometre stone (precast)	each	4,720.00
(ii)	Ordinary Kilometer stone (Precast)	each	2,883.00
(iii)	Hectometer stone (Precast)	each	826.00
8.15	Road Delineators (Supplying and installation of delineators (road way indicators, hazard markers, object markers), 80-100 cm high above ground level, painted black and white in 15 cm wide stripes, fitted with 80 x 100 mm rectangular or 75 mm dia circular reflectorised panels at the top, buried or pressed into the ground and conforming to IRC-79 and the drawings.)	each	821.00

Item Code	Description	Unit	Justified Rate
8.16	Boundary pillar (Reinforced cement concrete M15 grade boundary pillars of standard design as per IRC:25-1967, fixed in position including finishing and lettering but excluding painting)	each	843.00
8.17	G.I Barbed wire Fencing 1.2 metre high (Providing and fixing 1.2 metres high GI barbed wire fencing with 1.8 m angle iron posts 40 mm x 40 mm x 6 mm placed every 3 metres center to center founded in M15 grade cement concrete, 0.6 metre below ground level, every 15th post, last but one end post and corner post shall be strutted on both sides and end post on one side only and provided with 9 horizontal lines and 2 diagonals interwoven with horizontal wires, fixed with GI staples, turn buckles etc complete as per clause 807)	metre	292.00
8.18	G.I Barbed wire Fencing 1.8 metre high (Providing and fixing 1.8 metres high GI barbed wire fencing with 2.4 m angle iron posts 50 mm x 50 mm x 6 mm placed every 3 metres center to center founded in M15 grade cement concrete, 0.6 metre below ground level, every 15th post, last but one end post and corner post shall be strutted on both sides and end post on one side only and provided with 12 horizontal lines and 2 diagonals interwoven with horizontal wires, fixed with GI staples, turn buckles etc complete as per clause 807)	metre	478.00
8.19	Fencing with welded steel wire Fabric 75 mm x 50 mm (Suggestive) (Providing 1.20 metre high fencing with angle iron posts 50 mm x 50 mm x 6 mm at 3 metre center to center with 0.40 metre embedded in M15 grade cement concrete, corner, end and every 10th post to be strutted, provided with welded steel wire fabric of 75 mm x 50 mm mesh or 75 mm x 25 mm mesh and fixed to iron posts by flat iron 50 x 5 mm and bolts etc. complete in all respects.)	metre	873.00
8.20	Tubular Steel Railing on Medium Weight steel channel (ISMC series) 100 mm x 50 mm (Providing, fixing and erecting 50 mm dia steel pipe railing in 3 rows duly painted on medium weight steel channels (ISMC series) 100 mm x 50 mm, 1.2 metres high above ground, 2 m centre to centre, complete as per approved drawings)	metre	2,072.00
8.21	Tubular Steel Railing on Precast RCC posts, 1.2 m high above ground level (Providing, fencing and erecting 50 mm dia painted steel pipe railing in 3 rows on precast M20 grade RCC vertical posts 1.8 metres high (1.2 m above GL) with 3 holes 50 mm dia for pipe, fixed 2 metres centre to, complete as per approved drawing)	metre	1,615.00
8.22	Reinforced Cement Concrete Crash Barrier (Provision of an Reinforced cement concrete crash barrier at the edges of the road, approaches to bridge structures and medians, constructed with M-20 grade concrete with HYSD reinforcement conforming to IRC:21 and dowel bars 25 mm dia, 450 mm long at expansion joints filled with pre-moulded asphalt filler board, keyed to the structure on which it is built and installed as per design given in the enclosure to MOST circular No. RW/NH - 33022/1/94-DO III dated 24 June 1994 as per dimensions in the approved drawing and at locations directed by the Engineer, all as specified)		
(i)	M 20 grade concrete	metre	4,583.00
8.23	Metal Beam Crash Barrier		
A	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 fittings 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)	metre	3,050.00

Item Code	Description	Unit	Justified Rate
B	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 fittings 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)	metre	3,882.00
8.24	Road Traffic Signals electrically operated (Since it is a ready made item commercially produced and erected by specialised firm in the electrical and electronic field, rate may be taken based on market enquiry from firms specialised in this field and ISI certified for the approved design and drawing.)		VALUE
8.25	Flexible Crash Barrier, Wire Rope Safety Barrier (Providing and erecting a wire rope safety barrier with vertical posts of medium weight RS Joist (ISMB series) 100 mm x 75 mm (11.50 kg/m), 1.50 m long 0.85 m above ground and 0.65 m below ground level, split at the bottom for better grip, embedded in M 15 grade cement concrete 450 x 450 x 450 mm, 1.50 m center to center and with 4 horizontal steel wire rope 40 mm dia and anchored at terminal posts 15 m apart. Terminal post to be embedded in M 15 grade cement concrete foundation 2400 x 450 x 900 mm (depth), strengthened by a strut of RS joist 100 x 75 mm, 2 m long at 450 inclination and a tie 100 x 8 mm, 1.50 m long at the bottom, all embedded in foundation concrete as per approved design and drawing, rate excluding excavation and cement concrete.)	metre	2,371.00
8.26	Anti - Glare Devices in Median		
A	Plantation (Plantation of shrubs and plants of approved species in the median. apart from cutting off glare from vehicle coming from opposite direction, these plants provide a pleasant environment and are eco-friendly. The rate for this item is available in the chapter 11 on horticulture.)		Value
B	Anti - Glare Screen with 25 mm steel pipe framework fixed with circular and rectangular vans (Providing and erecting an anti - glare screen with 25 mm dia vertical pipes fabricated and framed in the form of panels of one metre length and 1.75 mtr height fixed with circular vane 250 mm dia at top and rectangular vane 600 x 300 mm at the middle, made out of steel sheet of 3 mm thickness, end vertical pipes of the panel made larger for embedding in foundation concrete, applying 2 coats of paint on all exposed surfaces, all as per approved design and drawings.)	metre	3,266.00
C	Anti - Glare Screen with Rectangular Vane of MS sheet (Providing and erecting anti - glare screen with rectangular vanes of size 750 x 500 mm made from MS sheet, 3 mm thick and fixed on MS angle 50 x 50 x 6 mm at an angle of 450 to the direction of flow of traffic, 1.5 m center to center, top edge of the screen 1.75 m above ground level, vertical post firmly embedded in cement concrete foundation 0.60 m below ground level, applying 2 coats of paint on exposed faces, all complete as per approved design and drawings)	metre	926.00
8.27	Street Lighting (Providing and erecting street light mounted on a steel circular hollow pole of standard specifications for street lighting, 9 m high spaced 40 m apart, 1.8 m overhang on both sides if fixed in the median and on one side if fixed on the footpath, fitted with sodium vapour lamp and fixed firmly in concrete foundation.)		
(i)	For Fixing in Median	each	14,818.00
(ii)	For fixing in Footpath	each	14,728.00
8.28	Lighting on Bridges (Providing and fixing lighting on bridges, mounted on steel hollow circular poles of standard specifications, 5 m high fixed on parapets with cement concrete, 20 m apart and fitted with sodium vapour lamp)	each	8,144.00

Item Code	Description	Unit	Justified Rate
8.29	Cable Duct Across the Road (Providing and laying of a reinforced cement concrete pipe duct, 300 mm dia, across the road (new construction), extending from drain to drain in cuts and toe of slope to toe of slope in fills, constructing head walls at both ends, providing a minimum fill of granular material over top and sides of RCC pipe as per IRC:98-1997, bedded on a 0.3 m thick layer of granular material free of rock pieces, outer to outer distance of pipe at least half dia of pipe subject to minimum 450 mm in case of double and triple row ducts, joints to be made leak proof, invert level of duct to be above higher than ground level to prevent entry of water and dirt, all as per IRC: 98 - 1997 and approved drawings.)		
(i)	Single Row for one utility service	metre	2,292.00
(ii)	Double Row for two utility services	metre	4,166.00
(iii)	Triple Row for three utility services	metre	6,087.00
8.30	Highway Patrolling and Traffic Aid Post (It is proposed to locate one Traffic Aid Post every 50-60 km of the highway.)		VALUE
8.31	Items related to under pass/ subway/ overhead bridge/ overhead foot bridge (The items involved for underpass/ subway/ overhead bridge/ overhead foot bridge are earthwork, plain cement concrete, plastering, painting, information sign etc. The rates for these items are available in respective chapters which can be adopted for the quantities derived from the approved designs and drawings)		VALUE
8.32	Traffic Control System and Communication system (Providing a traffic control centre and communication system including telecommunication facilities and related accessories, CCTV, radar, vehicle detection camera, central computer system These are specialised item of telecommunication system and are the commercial products. The designer is required to contact the manufacturers to ascertain market prices. In case of civil works required to be executed for these installations, pricing may be done as per rates in relevant chapters for quantities derived approved design and drawing.)		VALUE
8.33	Gantry Mounted Variable Message Sign board (Providing and erecting gantry mounted variable message sign board electronically operated capable of flashing the desired message over a designed support system of aluminium alloy or galvanised steel, erected as per approved design and drawings and with lateral clearance as per clause 802.3)		
(i)	Gantry Support System	tonne	89,758.00
(ii)	Message Display (Message display board 6 sqm electronically operated with complete electronic fittings for flashing the pre-determined messages.)		VALUE
8.34	Traffic Impact Attenuators at Abutments and Piers		
A	With Scrap Tyres (Provision and installation of traffic attenuators at abutment/pier of flyovers bridges using scrap tyres of size 100 x 20 retrieved from trucks laid in 2 rows and 4 tiers, one above the other and tied with 20 mm wire rope as per approved design and drawings.)	sqm	1,015.00
B	Using Plastic/Steel Barrel, Filled with Sand (Provision and installation of traffic impact attenuator at abutment/pier of flyovers bridges using plastic/steel barrels 0.60 m dia and 1.0 m in height, filled with sand in three rows and tied with 20 mm steel wire rope as per approved design and drawings)	sqm	971.00
C	With HI - DRO cell Sandwich (Patented) ((In this patented HI - DRO cell system, water gets discharged from plastic tubes on impact over a pre-determined time, thus absorbing the energy))	sqm	1,109.00
8.35	Road Markers/Road Stud with plastic body of RPM/ASA/HIPS as per clause 804.2.1 of MORTH, fitted with lense reflectors, installed in concrete or asphaltic surface by drilling hole 30 mm upto a depth of 60 mm and bedded in a suitable bituminous grout or epoxy mortar, all as per BS 873 part 4:1973)	each	246.00

Item Code	Description	Unit	Justified Rate
8.36	Traffic Cone (Provision of red fluorescent with white reflective sleeve traffic cone made of low density polyethylene (LDPE) material with a square base of 390 x 390 x 35 mm and a height of 770 mm, 4 kg in weight, placed at 1.5 m interval, all as per BS 873)	each	584.00
8.37	Roadside Amenities		
A	Rest Areas (Providing plainly furnished accommodation for rest rooms, dormitories, restaurants, stalls, shops, petrol pump, telephone booth, first aid room, traffic aid post, police assistance booth, including electricity, toilet and sewerage system Pricing may be done based on current plinth area rates approved by PWD/CPWD/MES for a particular zone. Area is required to be assessed for specific location as per actual site conditions)		VALUE
B	Parking areas and Bus Laybys for Trucks, Buses and Light vehicles (Pricing of parking areas may be done for the quantities of various items based on the approved dimensions and pavement design for a particular terrain and soil. Rates for items may be from respective chapters.)		VALUE
C	Lawn (Providing a lawn planted with grass and its maintenance)		VALUE
8.38	Rumble Strips (Provision of 15 nos rumble strips covered with premix bituminous carpet, 15-20 mm high at center, 250 mm wide placed at 1 m center to center at approved locations to control speed, marked with white strips of road marking paint.)	sqm	VALUE
8.39	Policeman Umbrella (Provision of a 2 m high (floor to roof) umbrella for traffic policeman at road crossings, where necessary, installed on a raised platform, built on a central support of a steel pipe 100 mm dia, roof made of 25 mm dia steel pipe to provide covered area of 3 sqm, roofed with CGI sheets, all steel parts to be given 2 coats of paint)	each	VALUE
8.40	High Mast Pole Lighting at Interchanges and Flyovers (Providing and erecting a high mast pole lighting with 30 m high hot dip galvanised mast designed to withstand forces exerted with wind speeds of 180 km per hour with 3 seconds gust, as per IS:875 (Part 3) - 1978, fitted with a base flange, door at the base of mast with heavy duty internal lock, lantern carriage, suitable winching arrangement for safe working load of 750 kg and high powered electrically driven power tools for raising and lowering of lantern carriage, flexible 8 core electric cable, lightning conductor, earthing terminal, and fixing 2 nos aviation obstruction lights on top of the mast, all complete as per approved design and drawings This is a specialised work and is generally done by firms who specialise in such jobs. The detailed designs and estimates are submitted by the firms alongwith their tender for checks by the Department. The cost of this work is required to be worked out based on approved design, drawings and estimate of the lowest tender. A separate contract for this work is concluded as the contractors for road and bridge works generally donot undertake such jobs.)		VALUE
8.41	Toll Plaza (The construction, operation and maintenance of Toll Plaza can be broken into separate items of work as under based on the approved design and drawings:-)		
8.42	Safety Devices and signs in Construction Zones (Provision and fixing of traffic signs for limited period at suitable locations in construction zone comprising of warning zone, approach transition zone, working zone and terminal transition zone with a minimum distance of 60 cm from the edge of the kerb in case of kerbed roads and 2 to 3 m from the edge of the carriageway in case of unkerbed roads, the bottom edge of the lowest sign plate to be not less than 2 m above the road level, fixed on 60 mm x 60 mm x 6 mm angle iron post, founded and installed as per approved design and drawings, removed and disposed of after completion of construction work, all as per IRC:SP:55-2001)		VALUE

Item Code	Description	Unit	Justified Rate
8.43	Portable Barricade in Construction Zone (Installation of a steel portable barricade with horizontal rail 300 mm wide, 2.5 m in length fitted on a 'A' frame made with 45 x 45 x 5 mm angle iron section, 1.5 m in height, horizontal rail painted (2 coats) with yellow and white stripes, 150 mm in width at an angle of 450, 'A' frame painted with 2 coats of yellow paint, complete as per IRC: SP : 55-2001)	each	3,371.00
8.44	Permanent Type Barricade in Construction Zone		
A	With Steel Components (Construction of a permanent type barricade made of steel components, 1.5 m high from road level, fitted with 3 horizontal rails 200 mm wide and 4 m long on 50 x 50 x 5 mm angle iron vertical support, painted with yellow and white strips, 150 mm in width at an angle of 450, complete as per IRC:SP:55-2001)	each	5,136.00
B	With Wooden Components (Construction of a permanent type barricade made of wooden components, 1.5 m high from road level, fitted with 3 horizontal planks 200 mm wide and 3.66 m long on 100 x 100mm wooden vertical post, painted with yellow and white strips, 150 mm in width at an angle of 450, complete as per IRC:SP:55-2001)	each	8,892.00
C	With Bricks (Construction of a permanent type barricade made with brick work in mud mortar, 1.5 m high, 4 m long, 600 mm thick, plastered with cement mortar 1:6, painted with yellow and white strips)	each	21,541.00
8.45	Drum Delineator in Construction Zone (Provision of metal drum/empty bitumen drum delineator, 300 mm in diameter, 800 mm high, filled with earth for stability, painted in circumferential strips of alternate black and white 100 mm wide fitted with reflectors 3 Nos of 7.5 cm dia, all as per IRC:SP:55-2001)	each	641.00
8.46	Flagman (Positioning of a smart flagman with a yellow vest and a yellow cap and a red flag 600 x 600 mm securely fastened to a staff 1 m in length for guiding the traffic)	each	746.00
CHAPTER-9			
PIPE CULVERTS			
Item Code	Description	Unit	Justified Rate
9.1	PCC 1:3:6 in Foundation (Plain cement concrete 1:3:6 mix with crushed stone aggregate 40 mm nominal size mechanically mixed, placed in foundation and compacted by vibration including curing for 14 days.)	cum	5,318.00
9.2	Laying Reinforced Cement Concrete Pipe NP4/prestrssed concrete pipe on first class bedding in single row . (Laying Reinforced cement concrete pipe NP4/prestrssed concrete pipe for culverts on first class bedding of granular material in single row including fixing collar with cement mortar 1:2 but excluding excavation, protection works, backfilling, concrete and masonry works in head walls and parapets .)		
A	1000 mm dia	metre	8,910.00
B	1200 mm dia	metre	8,557.00
9.3	Laying Reinforced Cement Concrete Pipe NP 4 /prestrssed concrete pipe on first class bedding in double row . (Laying Reinforced cement concrete pipe NP4 /prestrssed concrete pipe for culverts on first class bedding of granular material in double row including fixing collar with cement mortar 1:2 but excluding excavation, protection works, backfilling, concrete and masonry works in head walls and parapets .)		
A	1000 mm dia	metre	17,989.00
B	1200 mm dia	metre	17,296.00
CHAPTER-10			
MAINTENANCE OF ROADS			

Item Code	Description	Unit	Justified Rate
Item Code	Description	Unit	Justified Rate
10.1	Restoration of Rain Cuts (Restoration of rain cuts with soil, moorum, gravel or a mixture of these, clearing the loose soil, benching for 300 mm width, laying fresh material in layers not exceeding 250 mm and compacting with plate compactor or power rammers to restore the original alignment, levels and slopes)	cum	160.00
10.2	Maintenance of Earthen Shoulder (filling with fresh soil) (Making up loss of material/ irregularities on shoulder to the design level by adding fresh approved soil and compacting it with appropriate equipment.)	sqm	56.00
10.3	Maintenance of Earth Shoulder (stripping excess soil) (Stripping excess soil from the shoulder surface to achieve the approved level and compacting with plate compactor)	sqm	24.00
10.4	Filling Pot- holes and Patch Repairs with open - graded Premix surfacing, 20mm. (Removal of all failed material, trimming of completed excavation to provide firm vertical faces, cleaning of surface, painting of tack coat on the sides and base of excavation as per clause 503, back filling the pot holes with hot bituminous material as per clause 511, compacting, trimming and finishing the surface to form a smooth continuous surface, all as per clause 3004.2)	sqm	206.00
10.5	Filling Pot- holes and Patch Repairs with - Bituminous concrete, 40mm. (Removal of all failed material, trimming of completed excavation to provide firm vertical faces, cleaning of surface, painting of tack coat on the sides and base of excavation as per clause 503, back filling the pot holes with hot bituminous material as per clause 504, compacting, trimming and finishing the surface to form a smooth continuous surface, all as per clause 3004.2)		
(i)	for grading I Material	sqm	509.00
(ii)	for grading II Material	sqm	509.00
10.6	Crack Filling (Filling of crack using slow - curing bitumen emulsion and applying crusher dust in case crack are wider than 3mm.)	metre	9.20
10.7	Dusting (Applying crusher dust to areas of road where bleeding of excess bitumen has occurred.)	sqm	3.60
10.8 A	Fog Seal (ref item 5.17)	sqm	90.00
B	Crack Prevention courses. (ref item 5.21)		
(i)	Stress Absorbing Membrane (SAM) crack width less than 6 mm	sqm	84.00
(ii)	Stress Absorbing Membrane (SAM) with crack width 6 mm to 9 mm	sqm	96.00
(iii)	Stress Absorbing Membrane (SAM) crack width above 9 mm and cracked area above 50 %	sqm	127.00
(iv)	Bitumen Impregnated Geotextile	sqm	149.00
C	Slurry Seal (ref item 5.15)		
(i)	5 mm thickness	sqm	161.00
(ii)	3 mm thickness	sqm	107.00
(iii)	1.5 mm thickness	sqm	66.00
D	Surface Dressing for maintenance works. (ref item 5.9)		
(i)	19 mm nominal chipping size	sqm	120.00
(ii)	13 mm nominal size chipping	sqm	95.00
10.9	Repair of joint Grooves with Epoxy Mortar Repair of spalled joint grooves of contraction joints, longitudinal joints and expansion joints in concrete pavements using epoxy mortar or epoxy concrete)	metre	576.00
10.10	Repair of old Joints Sealant (Removal of existing sealant and re sealing of contraction, longitudinal or expansion joints in concrete pavement with fresh sealant material)	metre	41.70
10.11	Hill Side Drain Clearance (Removal of earth from the choked hill side drain and disposing it on the valley side manually)	metre	69.10
10.12	Land Slide Clearance in soil (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)	cum	37.00

Item Code	Description	Unit	Justified Rate
10.13	Land slide Clearance in Hard Rock Requiring Blasting (Clearing of land slide in hard rock requiring blasting for 50% of the boulders and disposal of the same on the valley side.)	cum	85.00
10.14	Snow Clearance on Roads with Dozer (Snow clearance from road surface by a bull- dozer 165 Hp and disposing it on the valley side)	cum	2.40
10.15	Snow Clearance on Roads with Snow Blowers (Snow clearance from road surface by a snow blower and disposing on the valley side.)	cum	-
CHAPTER-11			
HORTICULTURE			
Item Code	Description	Unit	Justified Rate
11.1	Spreading of Sludge Farm Yard Manure or/and good Earth (Spreading of sludge farm yard manure or/ and good earth in required thickness (cost of sludge, farm- yard manure or/and good earth to be paid for separately))	cum	44.10
11.2	Grassing with ' Doobs' Grass (Grassing with 'Doobs' grass including watering and maintenance of the lawn for 30 days or more till the grass forms a thick lawn free from weeds and fit for moving including supplying good earth if needed)		
(i)	In rows 15 cm apart in either direction	sqm	22.00
(ii)	In rows 7.5 cm apart in either direction	sqm	33.50
11.3	Making Lawns including Ploughing and Dragging with 'Swagha' Breaking of Clod (Making lawns including ploughing and breaking of clod, removal of rubbish, dressing and supplying doobs grass roots and planting at 15 cm apart, including supplying and spreading of farm yard manure at rate of 0.18 cum per 100 sqm)	sqm	22.80
11.4	Maintenance of Lawns or Turfing of Slopes (Maintenance of lawns or Turfing of slopes (rough grassing) for a period of one year including watering etc)	sqm	185.00
11.5	Turfing Lawns with Fine Grassing including Ploughing, Dressing (Turfing lawns with fine grassing including ploughing, dressing including breaking of clods, removal of rubbish, dressing and supplying doobs grass roots at 10 cm apart, including supplying and spreading of farm yard manure at rate of 0.6 cum per 100 sqm)	sqm	33.70
11.6	Maintenance of Lawns with Fine Grassing for the First Year	sqm	221.00
11.7	a) Planting Permanent Hedges including Digging of Trenches (Planting permanent hedges including digging of trenches, 60 cm wide and 45 cm deep, refilling the excavated earth mixed with farmyard manure, supplied at the rate of 4.65 cum per 100 metres and supplying and planting hedge plants at 30 cm apart)	metre	369.00
(b)	Maintenance of Hedge for one year	metre	288.00
11.8	a) Planting Flowering Plants and Shrubs in Central Verge	km	72,100.00
(b)	Maintenance of Flowering Plants and Shrubs in Central Verge for one Year	km	3,32,458.00
11.9	Planting of Trees and their Maintenance for one Year (Planting of trees by the road side (Avenue trees) in 0.60 m dia holes, 1 m deep dug in the ground, mixing the soil with decayed farm yard/sludge manure, planting the saplings, backfilling the trench, watering, fixing the tree guard and maintaining the plants for one year)	each	1,453.00
11.10	Renovation Lawns including, Weeding, Forking the Ground, Top Dressing with Forked Soil (Renovation lawns including, weeding, forking the ground, top dressing with forked soil, watering and maintenance the lawns, for 30 days or more, till the grass forms a thick lawn, free from weeds, and fit for moving and disposal of rubbish as directed, including supplying good earth, if needed but excluding the cost of well decayed farm yard manure)	sqm	23.50
11.11	Supply at Site Well Decayed Farm Yard Manure (Supply at site of work well decayed farm yard manure, from any available source, approved by the engineer in charge including screening and stacking)	cum	782.00

Item Code	Description	Unit	Justified Rate
11.12	Supply at Site of Work/ Store - Deoiled Neem Cake (Supply at site of work/ store- deoiled neem cake duly packed in used gunny bags)	quintal	VALUE
11.13	Supplying Sludge (Supplying sludge duly stacked at site/ store)	cum	VALUE
11.14	Half Brick Circular Tree Guard, in 2nd class Brick, internal diametre 1.25 metres, and height 1.2 metres, above ground and 0.20 metre below ground (Half brick circular tree guard, in 2nd class brick, internal diametre 1.25 metres, and height 1.2 metres, above ground and 0.20 metre below ground, bottom two courses laid dry, and top three courses in cement mortar 1:6 (1 cement 6 sand) and the intermediate courses being in dry honey comb masonry, as per design complete)	each	2,604.00
11.15	Edging with 2nd class Bricks, laid dry lengthwise (Edging with 2nd class bricks, laid dry lengthwise, including excavation, refilling, consolidation, with a hand packing and spreading nearly surplus earth within a lead of 50 metres)	metre	53.10
11.16	Making Tree Guard 53 cm dia and 1.3 m high as per design from empty bitumen drum (Making tree guard 53 cm dia and 1.3 m high as per design from empty bitumen drum, slit suitably to permit sun and air, (supplied by the department at stock issue rate) including providing and fixing 2 nos MS sheet rings 50 x 0.5 mm with rivets, complete in all respect)	each	570.00
11.17	Making Tree Guard 53 cm dia and 2 metres high as per design from empty bitumen drums (Making tree guard 53 cm dia and 2 metres high as per design from empty bitumen drums, slit suitably to permit sun and air, (supplied by the department at stock issue rate) including providing and fixing four legs 40 cm long of 30 x 3 mm MS riveted to tree guard and providing and fixing 2 nos MS sheet rings 50 x 0.5 mm with rivets complete in all respects)	each	1,100.00
11.18	Wrought Iron and Mild Steel Welded Work (Wrought iron and mild steel welded work) (using angles, square bars, tees and channel grills, grating frames, gates and tree guards of any size and design etc. including cost of screens and welding rods or bolts and nuts complete fixed in position but without the cost of excavation and concrete for fixing which will be paid separately)	quintal	10,186.00
11.19	Tree Guard with MS Iron (Providing and fixing MS iron tree guard 60 cm dia and 2 metre high above ground level formed of 4 Nos (25 x 6 mm) and 8 Nos (25 x 3 mm) vertical MS riveted to 3 Nos (25 x 6 mm) iron rings in two halves, bolted together with 8 mm dia and 30 mm long bolts including painting two coats with paint of approved brand over a coat of priming, complete in all respects.)	each tree guard	2,293.00
11.20	Tree Guard with MS Angle Iron and Steel Wire (Providing and fixing tree guard 0.60 metre square, 2.00 metre high fabricated with MS angle iron 30 x 30 x 3 mm, MS iron 25 x 3 mm and steel wire 3 mm dia welded and fabricated as per design in two halves bolted together)	each tree guard	3,367.00
11.21	Compensatory Afforestation (Planting trees as compensatory afforestation at the rate of 290 trees per hectare at a spacing of 6 m by grubbing and leveling the ground upto a depth of 150 mm, digging holes 0.9 m dia, 1 m deep, mixing farm yard/sludge manure with soil, planting of sapling 2 m high with 25 cm dia stem, backfilling the hole and watering)	hectare	1,49,653.00
CHAPTER-12			
FOUNDATIONS			
Item Code	Description	Unit	Justified Rate
12.1	Excavation for Structures (Earth work in excavation of foundation of structures as per drawing and technical specification, including setting out, construction of shoring and bracing, removal of stumps and other deleterious matter, dressing of sides and bottom and backfilling with approved material.)		
I	Ordinary soil		
A	Manual Means		

Item Code	Description	Unit	Justified Rate
(i)	upto 3 m depth	cum	263.00
(ii)	3 m to 6 m depth	cum	338.00
(iii)	Above 6 m depth	cum	451.00
B	Mechanical Means		
(i)	Depth upto 3 m	cum	53.00
(ii)	Depth 3 m to 6 m	cum	60.00
(iii)	Depth above 6m	cum	78.00
II	Ordinary rock (not requiring blasting)		
A	Manual Means		
(i)	Depth upto 3 m	cum	376.00
B	Mechanical Means	cum	62.00
III	Hard rock (requiring blasting)		
A	Manual Means	cum	776.00
IV	Hard rock (blasting prohibited)		
A	Mechanical Means	cum	541.00
V	Marshy soil		
(i)	upto 3 m depth		
A	Manual means	cum	823.00
B	Mechanical Means	cum	237.00
VI	Back Filling in Marshy Foundation Pits	cum	465.00
12.2	Filling Annular Space Around Footing in Rock (Lean cement concrete 1:3:6 nominal mix. Rate may be taken as per items 13.4.)		
12.3	Sand Filling in Foundation Trenches as per Drawing & Technical Specification	cum	1,544.00
12.4	PCC 1:3:6 in Foundation (Plain cement concrete 1:3:6 nominal mix in foundation with crushed stone aggregate 40 mm nominal size mechanically mixed, placed in foundation and compacted by vibration including curing for 14 days.)	cum	6,012.00
12.5	Brick masonry work in cement mortar in foundation complete excluding pointing and plastering, as per drawing and technical specifications		
(i)	Rate for Brick Work in C. M. 1:2 in foundation	cum	8,933.00
(ii)	Rate for Brick Work in C. M. 1:3 in foundation	cum	8,643.00
(iii)	Rate for Brick Work in C. M. 1:4 in foundation	cum	8,443.00
(iv)	Rate for Brick Work in C. M. 1:6 in foundation	cum	8,279.00
12.6 A	Cement mortar1:3 (1cement :3 sand)	cum	4,394.00
B	Cement mortar1:2 (1cement :2 sand)	cum	5,273.00
C	Cement mortar1:4 (1cement :4 sand)	cum	3,790.00
D	Cement mortar1:6 (1cement :6 sand)	cum	3,292.00
12.7	Stone masonry work in cement mortar 1:3 in foundation complete as drawing and Technical Specification		
(a)	Square Rubble Coursed rubble masonry(first sort)	cum	5,773.00
(b)	Random Rubble Masonry	cum	5,523.00
12.8	Plain/Reinforced cement concrete in open foundation complete as per drawing and technical specifications		
A	PCC Grade M15	cum	7,010.00
B	PCC Grade M20	cum	7,475.00
C	RCC Grade M20		
Case I	Using concrete mixer	cum	7,542.00
Case II	With Batching Plant, Transit Mixer and Concrete Pump	cum	6,592.00
D	PCC Grade M25		
Case I	Using concrete Mixer	cum	7,931.00
Case II	With Batching Plant, Transit Mixer and Concrete Pump	cum	6,986.00

Item Code	Description	Unit	Justified Rate
E	RCC Grade M25		
Case I	Using concrete Mixer	cum	8,004.00
Case II	With Batching Plant, Transit Mixer and Concrete Pump	cum	7,056.00
F	PCC Grade M30		
Case I	Using Concrete Mixer	cum	7,963.00
Case II	Using Batching Plant, Transit Mixer and Concrete Pump	cum	7,016.00
G	RCC Grade M30		
Case I	Using Concrete Mixer	cum	8,013.00
Case II	Using Batching Plant, Transit Mixer and Concrete Pump	cum	7,069.00
H	RCC Grade M35		
Case I	Using Concrete Mixer	cum	8,104.00
Case II	Using Batching Plant, Transit Mixer and Concrete Pump	cum	7,165.00
12.9	Providing and constructing temporary island 16 m diameter for construction of well foundation for 8m dia. Well.		
A	Assuming depth of water 1.0 m and height of island to be 1.25m including Royalty for earth @ Rs. 3768.00 for each Island.	each	50,491.00
B	Assuming depth of water 4.0 m and height of island 4.5 m including Royalty for earth @ Rs. 13565.00 for each Island.	each	2,50,947.00
C	Providing and constructing one span service road to reach island location from one pier location to another pier location including Royalty for earth @ Rs. 225.00 per m for service Road.	metre	3,453.00
12.10	Providing and laying cutting edge of mild steel weighing 40 kg per metre for well foundation complete as per drawing and technical specification.	tonne	1,09,863.00
12.11	Plain/Reinforced cement concrete, in well foundation complete as per drawing and technical specification		
A	Well curb		
(i)	RCC M20 Grade		
Case I	Using concrete mixer	cum	8,704.00
Case II	With Batching Plant, Transit Mixer and Concrete Pump	cum	7,602.00
(ii)	RCC M25 Grade		
Case I	Using concrete mixer	cum	9,258.00
Case II	With Batching Plant, Transit Mixer and Concrete Pump	cum	8,161.00
(iii)	RCC M35 Grade		
Case I	Using concrete mixer	cum	9,443.00
Case II	With Batching Plant, Transit Mixer and Concrete Pump	cum	8,428.00
B	Well steining		
(I)	PCC M15 Grade	cum	7,414.00
(ii)	PCC M20 Grade	cum	7,907.00
(iii)	RCC M20 Grade		
Case I	Using concrete mixer	cum	7,978.00
Case II	With Batching Plant, Transit Mixer and Concrete Pump	cum	6,968.00
(iv)	PCC M25 Grade		
Case I	Using concrete mixer	cum	8,410.00
Case II	With Batching Plant, Transit Mixer and Concrete Pump	cum	7,404.00
(v)	RCC M25 Grade		
Case I	Using concrete mixer	cum	8,487.00
Case II	With Batching Plant, Transit Mixer and Concrete Pump	cum	7,481.00
(vi)	PCC M30 Grade		
Case I	Using concrete mixer	cum	8,464.00
Case II	With Batching Plant, Transit Mixer and Concrete Pump	cum	7,452.00
(vii)	RCC M30 Grade		
Case I	Using concrete mixer	cum	8,517.00

Item Code	Description	Unit	Justified Rate
Case II	With Batching Plant, Transit Mixer and Concrete Pump	cum	7,513.00
(viii)	RCC M35 Grade		
Case I	Using concrete mixer	cum	8,656.00
Case II	With Batching Plant, Transit Mixer and Concrete Pump	cum	7,726.00
(ix)	RCC M40 Grade		7,800.00
C	Bottom Plug		
(i)	PCC Grade M20		
Case I	Using Concrete Mixer	cum	8,138.00
Case II	Using Batching Plant, Transit Mixer and Crane/concrete pump	cum	6,874.00
(ii)	PCC Grade M25		
Case I	Using Concrete Mixer	cum	8,401.00
Case II	Using Batching Plant, Transit Mixer and Crane/concrete pump	cum	7,133.00
(iii)	PCC Grade M30		
Case I	Using Concrete Mixer	cum	8,453.00
Case II	Using Batching Plant, Transit Mixer and Crane/concrete pump	cum	7,188.00
(iv)	PCC Grade M35		
Case I	Using Concrete Mixer	cum	8,574.00
Case II	Using Batching Plant, Transit Mixer and Crane/concrete pump	cum	7,307.00
D	Intermediate plug		
(I)	Grade M20 PCC		
Case I	Using Concrete Mixer	cum	7,795.00
Case II	Using Batching Plant, Transit Mixer and Crane/concrete pump	cum	6,578.00
(ii)	Grade M25 PCC		
Case I	Using Concrete Mixer	cum	8,045.00
Case II	Using Batching Plant, Transit Mixer and Crane/concrete pump	cum	6,824.00
(iii)	Grade M30 PCC		
Case I	Using Concrete Mixer	cum	8,095.00
Case II	Using Batching Plant, Transit Mixer and Crane/concrete pump	cum	6,876.00
E	Top plug		
(i)	Grade M15 PCC		
Case I	Using Concrete Mixer	cum	6,740.00
(ii)	Grade M20 PCC		
Case I	Using Concrete Mixer	cum	7,189.00
(iii)	Grade M25 PCC		
Case I	Using Concrete Mixer	cum	7,645.00
Case II	Using Batching Plant, Transit Mixer and Crane/concrete pump	cum	6,731.00
(iv)	Grade M30 PCC		
Case I	Using Concrete Mixer	cum	7,695.00
Case II	Using Batching Plant, Transit Mixer and Crane/concrete pump	cum	6,775.00
F	Well cap		
(i)	RCC Grade M20		
Case I	Using concrete Mixer	cum	7,491.00
Case II	Using Batching Plant, Transit Mixer and Concrete Pump	cum	6,539.00
(ii)	RCC Grade M25		
Case I	Using concrete Mixer	cum	8,004.00
Case II	Using Batching Plant, Transit Mixer and Concrete Pump	cum	7,057.00
(iii)	RCC Grade M30		
Case I	Using Concrete Mixer	cum	8,013.00
Case II	Using Batching Plant, Transit Mixer and Concrete Pump	cum	7,068.00

Item Code	Description	Unit	Justified Rate
(iv)	RCC Grade M35		
Case I	Using Concrete Mixer	cum	8,104.00
Case II	Using Batching Plant, Transit Mixer and Concrete Pump	cum	7,165.00
(v)	RCC M40 Grade	cum	7,346.00
12.12	Sinking of 6 m external diameter well (other than pneumatic method of sinking) through all types of strata namely sandy soil, clayey soil and rock as shown against each case, complete as per drawing and technical specifications. Depth of sinking is reckoned from bed level.		
A	Sandy soil		
(i)	Depth below bed level upto 3.0 M	metre	5,339.00
(ii)	Beyond 3m upto 10m depth	metre	7,415.00
(iii)	Beyond 10m upto 20m		
a	Add 5% for every additional meter depth of sinking over the rate of sinking for the previous meter	metre	9,793.00
(iv)	Beyond 20m upto 30 m		
a	Add 7.5% for every additional meter depth of sinking over the rate of sinking for the previous meter	metre	18,370.00
b	Add 20% of cost for Kentledge including supports, loading arrangement and Labour .		22,044.00
(v)	Beyond 30m upto 40 m	metre	
a	Add 10% for every additional meter depth of sinking over the rate of sinking for the previous meter		43,648.00
b	Add 20% of cost for Kentledge including supports, loading arrangement and Labour .	metre	52,377.00
B	Clayey soil (6m dia. Well)		
(i)	Depth below bed level upto 3.0 M	metre	7,446.00
(ii)	Beyond 3m upto 10m depth	metre	16,646.00
(iii)	Beyond 10 m upto 20 m		
a	Add 5% for every additional meter depth of sinking over the rate of sinking for the previous meter	metre	21,984.00
b	Add for dewatering @ 5% of cost, if required.	metre	23,084.00
(iv)	Beyond 20m upto 30 m		
a	Add 7.5% for every additional meter depth of sinking over the rate of sinking for the previous meter	metre	41,237.00
b	Add 5% of cost for dewatering of the cost, if required	metre	54,124.00
c	Add 25% of cost for Kentledge including supports, loading arrangement and Labour).	metre	51,547.00
(v)	Beyond 30m upto 40 m		
a	Add 10% for every additional meter depth of sinking over the rate of sinking for the previous meter	metre	97,976.00
b	Add 5% of cost for dewatering, if required	metre	1,23,450.00
c	Add 20% of cost for Kentledge including supports, loading arrangement and Labour).	metre	1,17,572.00
C	Soft rock (6m dia well)		
(i)	Depth of soft rock strata upto 3m	metre	28,415.00
D	Hard rock (6m dia well)		
(i)	Depth of soft rock strata upto 3m	metre	28,002.00
12.13	Sinking of 7 m external diameter well (other than pneumatic method of sinking) through all types of strata namely sandy soil, clayey soil and rock as shown against each case, complete as per drawing and technical specifications. Depth of sinking is reckoned from bed level.		
A	Sandy soil		
(i)	Depth below bed level upto 3.0 M	metre	7,786.00
(ii)	Beyond 3m upto 10m depth	metre	10,232.00
(iii)	Beyond 10m upto 20m		

Item Code	Description	Unit	Justified Rate
a	Add 5% for every additional meter depth of sinking over the rate of sinking for the previous meter	metre	13,514.00
(iv)	Beyond 20m upto 30 m		
a	Add 7.5% for every additional meter depth of sinking over the rate of sinking for the previous meter	metre	25,350.00
b	Add 20% of cost for Kentledge including supports, loading arrangement and Labour).	metre	30,420.00
(v)	Beyond 30m upto 40 m		
a	Add 10% for every additional meter depth of sinking over the rate of sinking for the previous meter	metre	60,229.00
b	Add 20% of cost for Kentledge including supports, loading arrangement, and Labour etc.	metre	72,275.00
B	Clayey soil (7m dia. Well)		
(I)	Depth below bed level upto 3.0 M	metre	10,232.00
(ii)	Beyond 3m upto 10m depth	metre	16,511.00
(iii)	Beyond 10 m upto 20 m		
a	Add 5% for every additional meter depth of sinking over the rate of sinking for the previous meter	metre	21,807.00
b	Add for dewatering @ 5% of cost, if required.	metre	22,898.00
(iv)	Beyond 20m upto 30 m		
a	Add 7.5% for every additional meter depth of sinking over the rate of sinking for the previous meter	metre	40,905.00
b	Add 5% of cost for dewatering on the cost, if required	metre	53,688.00
c	Add 25% of cost for Kentledge including supports, loading arrangement and Labour).	metre	51,132.00
(v)	Beyond 30m upto 40 m		
a	Add 10% for every additional meter depth of sinking over the rate of sinking for the previous meter	metre	97,187.00
b	Add 5% of cost for dewatering, if required	metre	1,22,456.00
c	Add 20% of cost for Kentledge including supports, loading arrangement and Labour).		1,16,625.00
C	Soft rock (7m dia well)		
(i)	Depth of soft rock strata upto 3m	metre	22,643.00
D	Hard rock (7m dia well)		
(i)	Depth upto 3 m	metre	33,778.00
12.14	Sinking of 8 m external diameter well (other than pneumatic method of sinking) through all types of strata namely sandy soil, clayey soil and rock as shown against each case, complete as per drawing and technical specifications. Depth of sinking is reckoned from bed level.		
A	Sandy soil		
(i)	Depth below bed level upto 3.0 M	metre	9,491.00
(ii)	Beyond 3m upto 10m depth	metre	11,601.00
(iii)	Beyond 10m upto 20m		
a	Add 5% for every additional meter depth of sinking over the rate of sinking for the previous meter	metre	15,322.00
(iv)	Beyond 20m upto 30 m		
a	Add 7.5% for every additional meter depth of sinking over the rate of sinking for the previous meter	metre	28,739.00
b	Add 20% of cost for Kentledge including supports, loading arrangement and Labour .	metre	34,487.00
(v)	Beyond 30m upto 40 m		
a	Add 10% for every additional meter depth of sinking over the rate of sinking for the previous meter	metre	68,281.00
b	Add 20% of cost for Kentledge including supports, loading arrangement, and Labour etc.	metre	81,937.00
B	Clayey soil (8m dia. Well)		
(i)	Depth upto 3.0 M	metre	12,527.00

Item Code	Description	Unit	Justified Rate
(ii)	Beyond 3m upto 10m depth	metre	17,559.00
(iii)	Beyond 10 m upto 20 m		
a	Add 5% for every additional meter depth of sinking over the rate of sinking for the previous meter	metre	23,190.00
b	Add for dewatering @ 5% of cost, if required.	metre	24,350.00
(iv)	Beyond 20m upto 30 m		
a	Add 7.5% for every additional meter depth of sinking over the rate of sinking for the previous meter	metre	43,499.00
b	Add 5% of cost for dewatering on the cost, if required	metre	57,092.00
c	Add 25% of cost for Kentledge including supports, loading arrangement and Labour).	metre	54,374.00
(v)	Beyond 30m upto 40 m		
a	Add 10% for every additional meter depth of sinking over the rate of sinking for the previous meter	metre	1,03,348.00
b	Add 5% of cost for dewatering, if required	metre	1,30,219.00
c	Add 20% of cost for Kentledge including supports, loading arrangement and Labour).	metre	1,24,018.00
C	Soft rock (8m dia well)		
(i)	Depth in soft rock strata upto 3m	metre	25,282.00
D	Hard rock (8m dia well)		
(i)	Depth in hard rock strata upto 3 m	metre	35,532.00
12.15	Sinking of 9 m external diameter well (other than pneumatic method of sinking) through all types of strata namely sandy soil, clayey soil and rock as shown against each case, complete as per drawing and technical specifications. Depth of sinking is reckoned from bed level.		
A	Sandy soil		
(i)	Depth below bed level upto 3.0 M	metre	9,679.00
(ii)	Beyond 3m upto 10m depth	metre	12,718.00
(iii)	Beyond 10m upto 20m		
a	Add 5% for every additional meter depth of sinking over the rate of sinking for the previous meter	metre	16,797.00
(iv)	Beyond 20m upto 30 m		
a	Add 7.5% for every additional meter depth of sinking over the rate of sinking for the previous meter	metre	31,508.00
b	Add 20% of cost for Kentledge including supports, loading arrangement and Labour .	metre	37,810.00
(v)	Beyond 30m upto 40 m		
a	Add 10% for every additional meter depth of sinking over the rate of sinking for the previous meter	metre	74,859.00
b	Add 20% of cost for Kentledge including supports, loading arrangement, and Labour etc.	metre	89,830.00
B	Clayey soil (9m dia. Well)		
(i)	Depth below bed level upto 3.0 M	metre	13,303.00
(ii)	Beyond 3m upto 10m depth	metre	18,895.00
(iii)	Beyond 10 m upto 20 m		
a	Add 5% for every additional meter depth of sinking over the rate of sinking for the previous meter	metre	24,955.00
b	Add for dewatering @ 5% of cost, if required.	metre	26,203.00
(iv)	Beyond 20m upto 30 m		
a	Add 7.5% for every additional meter depth of sinking over the rate of sinking for the previous meter	metre	46,810.00
b	Add 5% of cost for dewatering on the cost, if required	metre	61,438.00
c	Add 25% of cost for Kentledge including supports, loading arrangement and Labour).	metre	58,512.00
(v)	Beyond 30m upto 40 m		
a	Add 10% for every additional meter depth of sinking over the rate of sinking for the previous meter	metre	1,11,215.00

Item Code	Description	Unit	Justified Rate
b	Add 5% of cost for dewatering, if required	metre	1,40,131.00
c	Add 20% of cost for Kentledge including supports, loading arrangement and Labour).	metre	1,33,458.00
C	Soft rock (9m dia well)		
(i)	Depth upto 3m	metre	31,010.00
D	Hard rock (9m dia well)		
(i)	Depth of hard rock strata upto 3 m	metre	40,478.00
12.16	Sinking of 10 m external diameter well (other than pneumatic method of sinking) through all types of strata namely sandy soil, clayey soil and rock as shown against each case, complete as per drawing and technical specifications. Depth of sinking is reckoned from bed level.		
A	Sandy soil		
(i)	Depth below bed level upto 3.0 M	metre	11,349.00
(ii)	Beyond 3m upto 10m depth	metre	13,511.00
(iii)	Beyond 10m upto 20m		
a	Add 5% for every additional meter depth of sinking over the rate of sinking for the previous meter	metre	17,843.00
(iv)	Beyond 20m upto 30 m		
a	Add 7.5% for every additional meter depth of sinking over the rate of sinking for the previous meter	metre	33,468.00
b	Add 20% of cost for Kentledge including supports, loading arrangement and Labour .	metre	40,161.00
(v)	Beyond 30m upto 40 m		
a	Add 10% for every additional meter depth of sinking over the rate of sinking for the previous meter	metre	79,514.00
b	Add 20% of cost for Kentledge including supports, loading arrangement, and Labour etc.	metre	95,417.00
B	Clayey soil (10m dia. Well)		
(i)	Depth below bed level upto 3.0 M	metre	15,148.00
(ii)	Beyond 3m upto 10m depth	metre	19,202.00
(iii)	Beyond 10 m upto 20 m		
a	Add 5% for every additional meter depth of sinking over the rate of sinking for the previous meter	metre	25,360.00
b	Add for dewatering @ 5% of cost, if required.	metre	26,628.00
(iv)	Beyond 20m upto 30 m		
a	Add 7.5% for every additional meter depth of sinking over the rate of sinking for the previous meter	metre	47,568.00
'b	Add 5% of cost for dewatering on the cost, if required	metre	62,434.00
c	Add 25% of cost for Kentledge including supports, loading arrangement and Labour).	metre	59,461.00
(v)	Beyond 30m upto 40 m		
a	Add 10% for every additional meter depth of sinking over the rate of sinking for the previous meter	metre	1,13,015.00
b	Add 5% of cost for dewatering, if required	metre	1,42,399.00
c	Add 20% of cost for Kentledge including supports, loading arrangement and Labour).		1,35,618.00
C	Soft rock (10m dia well)		
(i)	Depth of soft rock strata upto 3m	metre	31,544.00
D	Hard rock (10m dia well)		
(i)	Depth of hard rock strata upto 3 m	metre	44,285.00
12.17	Sinking of 11 m external diameter well (other than pneumatic method of sinking) through all types of strata namely sandy soil, clayey soil and rock as shown against each case, complete as per drawing and technical specifications. Depth of sinking is reckoned from bed level.		
A	Sandy soil		

Item Code	Description	Unit	Justified Rate
(i)	Depth from bed level upto 3.0 M	metre	25,393.00
(ii)	Beyond 3m upto 10m depth	metre	22,210.00
(iii)	Beyond 10m upto 20m		
a	Add 5% for every additional meter depth of sinking over the rate of sinking for the previous meter	metre	29,332.00
(iv)	Beyond 20m upto 30 m		
a	Add 7.5% for every additional meter depth of sinking over the rate of sinking for the previous meter	metre	55,021.00
b	Add 20% of cost for Kentledge including supports, loading arrangement and Labour .	metre	66,025.00
(v)	Beyond 30m upto 40 m		
a	Add 10% for every additional meter depth of sinking over the rate of sinking for the previous meter	metre	1,30,722.00
b	Add 20% of cost for Kentledge including supports, loading arrangement, and Labour etc.	metre	1,56,866.00
B	Clayey soil (11 m dia. Well)		
(i)	Depth from bed level upto 3.0 M	metre	25,194.00
(ii)	Beyond 3m upto 10m depth	metre	40,090.00
(iii)	Beyond 10 m upto 20 m		
a	Add 5% for every additional meter depth of sinking over the rate of sinking for the previous meter	metre	52,948.00
b	Add for dewatering @ 5% of cost, if required.	metre	55,595.00
(iv)	Beyond 20m upto 30 m		
a	Add 7.5% for every additional meter depth of sinking over the rate of sinking for the previous meter	metre	99,317.00
b	Add 5% of cost for dewatering on the cost, if required	metre	1,30,354.00
c	Add 25% of cost for Kentledge including supports, loading arrangement and Labour).	metre	1,24,146.00
(v)	Beyond 30m upto 40 m		
a	Add 10% for every additional meter depth of sinking over the rate of sinking for the previous meter	metre	2,35,964.00
b	Add 5% of cost for dewatering, if required	metre	2,97,314.00
c	Add 20% of cost for Kentledge including supports, loading arrangement and Labour).	metre	2,83,156.00
C	Soft rock (11m dia well)		
(i)	Depth of soft rock strata upto 3m	metre	70,270.00
D	Hard rock (11m dia well)		
(i)	Depth of hard rock upto 3 m	metre	97,723.00
12.18	Sinking of 12 m external diameter well (other than pneumatic method of sinking) through all types of strata namely sandy soil, clayey soil and rock as shown against each case, complete as per drawing and technical specifications. Depth of sinking is reckoned from bed level.		
A	Sandy soil		
(i)	I) Depth below bed level upto 3.0 M	metre	53,667.00
(ii)	Beyond 3m upto 10m depth	metre	61,805.00
(iii)	Beyond 10m upto 20m		
a	Add 5% for every additional meter depth of sinking over the rate of sinking for the previous meter	metre	81,624.00
(iv)	Beyond 20m upto 30 m		
a	Add 7.5% for every additional meter depth of sinking over the rate of sinking for the previous meter	metre	1,53,105.00
b	Add 20% of cost for Kentledge including supports, loading arrangement and Labour .	metre	1,83,726.00
(v)	Beyond 30m upto 40 m		
a	Add 10% for every additional meter depth of sinking over the rate of sinking for the previous meter	metre	3,63,756.00

Item Code	Description	Unit	Justified Rate
b	Add 20% of cost for Kentledge including supports, loading arrangement, and Labour etc.	metre	4,36,507.00
B	Clayey soil (12 m dia. Well)		
(i)	Depth below bed level upto 3.0 M	metre	61,047.00
(ii)	Beyond 3m upto 10m depth	metre	96,597.00
(iii)	Beyond 10 m upto 20 m		
a	Add 5% for every additional meter depth of sinking over the rate of sinking for the previous meter	metre	1,27,573.00
b	Add for dewatering @ 5% of cost, if required.	metre	1,33,952.00
(iv)	Beyond 20m upto 30 m		
a	Add 7.5% for every additional meter depth of sinking over the rate of sinking for the previous meter	metre	2,39,293.00
b	Add 5% of cost for dewatering on the cost, if required	metre	3,14,072.00
c	Add 25% of cost for Kentledge including supports, loading arrangement and Labour).	metre	2,99,117.00
(v)	Beyond 30m upto 40 m		
a	Add 10% for every additional meter depth of sinking over the rate of sinking for the previous meter	metre	5,68,526.00
b	Add 5% of cost for dewatering, if required	metre	7,16,342.00
c	Add 20% of cost for Kentledge including supports, loading arrangement and Labour).	metre	6,82,231.00
C	Soft rock (12m dia well)		
(i)	Depth of soft rock strata upto 3m	metre	1,61,701.00
D	Hard rock (12m dia well)		
(i)	Depth of hard rock strata upto 3 m	metre	2,12,530.00
12.19	Sinking of Twin D Type well (other than pneumatic method of sinking) through all types of strata namely sandy soil, clayey soil and rock as shown against each case, complete as per drawing and technical specifications. Depth of sinking is reckoned from bed level.		
A	Sandy soil		
(i)	Depth from bed level upto 3.0 M	metre	12,060.00
(ii)	Beyond 3m upto 10m depth	metre	13,096.00
(iii)	Beyond 10m upto 20m		
a	Add 5% for every additional meter depth of sinking over the rate of sinking for the previous meter	metre	17,297.00
(iv)	Beyond 20m upto 30 m		
a	Add 7.5% for every additional meter depth of sinking over the rate of sinking for the previous meter	metre	32,445.00
b	Add 20% of cost for Kentledge including supports, loading arrangement and Labour .	metre	38,934.00
(v)	Beyond 30m upto 40 m		
a	Add 10% for every additional meter depth of sinking over the rate of sinking for the previous meter	metre	77,088.00
b	Add 20% of cost for Kentledge including supports, loading arrangement, and Labour etc.	metre	92,505.00
B	Clayey soil (Twin D Type Well)		
(i)	Depth below bed level upto 3.0 M	metre	14,450.00
(ii)	Beyond 3m upto 10m depth	metre	21,244.00
(iii)	Beyond 10 m upto 20 m		
a	Add 5% for every additional meter depth of sinking over the rate of sinking for the previous meter	metre	28,056.00
b	Add for dewatering @ 5% of cost, if required.	metre	29,459.00
(iv)	Beyond 20m upto 30 m		
a	Add 7.5% for every additional meter depth of sinking over the rate of sinking for the previous meter	metre	52,626.00
b	Add 5% of cost for dewatering on the cost, if required	metre	69,072.00

Item Code	Description	Unit	Justified Rate
c	Add 25% of cost for Kentledge including supports, loading arrangement and Labour).	metre	65,782.00
(v)	Beyond 30m upto 40 m		
a	Add 10% for every additional meter depth of sinking over the rate of sinking for the previous meter	metre	1,25,033.00
b	Add 5% of cost for dewatering, if required	metre	1,57,541.00
c	Add 20% of cost for Kentledge including supports, loading arrangement and Labour).	metre	1,50,039.00
C	Soft rock (Twin D Type well)		
(i)	Depth of soft rock strata upto 3m	metre	35,011.00
D	Hard rock (Twin D Type well)		
(i)	Depth of hard rock strata upto 3 m	metre	46,387.00
12.20	Pneumatic sinking of wells with equipment of approved design, drawing and specifications worked by competent and trained personnel and comprising of compression and decompression chambers, reducers, two air locks separately for men and plant & materials, arrangement for supply of fresh air to working chambers, check valves, exhaust valves, shafts made from steel plates of riveted construction not less than 6 mm thick to withstand an air pressure of 0.50 MPa, controlled blasting of hard rock where required, staircases and 1 m wide landing plate forms with railing, arrangement for compression and decompression, electric lighting of 50 V maximum, proper rooms for rest and medical examinations and compliance with safety precautions as per IS:4138, all as per clause 1207.6 of MoRTH Specifications.		1,18,526.83
12.21	Sand filling in wells complete as per drawing and technical specifications	cum	1,544.00
12.22	Providing steel liner 10 mm thick for curbs and 6mm thick for steining of wells including fabricating and setting out as per detailed drawing	tonne	98,552.00
12.23	Bored cast-in-situ M35 grade R.C.C. pile excluding reinforcement complete as per drawing and technical specifications and removal of excavated earth with all lifts and lead upto 1000 m. (Pile diameter-750 mm)	metre	6,721.00
12.24	Bored cast-in-situ M35 grade R.C.C. pile excluding reinforcement complete as per drawing and technical specifications and removal of excavated earth with all lifts and lead upto 1000 m. (Pile diameter-1000 mm)	metre	11,074.00
12.25	Bored cast-in-situ M35 grade R.C.C. pile excluding reinforcement complete as per drawing and technical specifications and removal of excavated earth with all lifts and lead upto 1000 m. (Pile diameter-1200 mm)	metre	14,283.00
12.26	Driven cast-in-place vertical M35 grade R.C.C. pile excluding reinforcement complete as per drawing and & Technical Specification (Pile diameter - 750 mm)	metre	5,024.00
12.27	Driven cast-in-place vertical M35 grade R.C.C. piles excluding reinforcement complete as per drawing and & Technical Specification (Pile diameter - 1000 mm)	metre	8,172.00
12.28	Driven cast-in-place vertical M35 grade R.C.C. piles excluding reinforcement complete as per drawing and & Technical Specification (Pile diameter - 1200 mm)	metre	11,913.00
12.29	Driven precast vertical M35 grade R.C.C. piles excluding reinforcement complete as per drawing and & Technical Specification (Pile Diameter=500 mm)	metre	3,808.00
12.30	Driven precast vertical M35 grade R.C.C. piles excluding reinforcement complete as per drawing and & Technical Specification (Pile Diameter=750 mm)	metre	5,960.00
12.31	Driven precast vertical M35 grade R.C.C. piles excluding reinforcement complete as per drawing and & Technical Specification (Pile Diameter=1000 mm)	metre	9,253.00
12.32	Driven precast vertical M35 grade R.C.C. piles excluding reinforcement complete as per drawing and & Technical Specification (Size of pile - 300 mm x 300 mm)	metre	3,012.00

Item Code	Description	Unit	Justified Rate
12.33	Driven precast vertical M35 grade R.C.C. piles excluding reinforcement complete as per drawing and & Technical Specification (Size of pile - 500 mm x 500 mm)	metre	4,529.00
12.34	Driven precast vertical M35 grade R.C.C. piles excluding reinforcement complete as per drawing and & Technical Specification (Size of pile - 750 mm x 750 mm)	metre	7,487.00
12.35	Driven vertical steel piles complete as per drawing and & Technical Specification (Section of the pile - H Section steel column 400 x 250 mm (ISHB Series))	metre	7,535.00
12.36	Driven vertical steel piles complete as per drawing and & Technical Specification (Section of the pile - H Section steel column 450 x 250 mm (ISHB Series))	metre	8,557.00
12.37	Pile load test on single vertical pile in accordance with IS:2911(Part-IV)	tonne	5,300.00
12.38	Cement concrete for reinforced concrete in pile cap complete as per drawing and Technical Specification		
A	RCC Grade M20		
(i)	Using Concrete Mixer	cum	7,525.00
(ii)	Using Batching Plant, Transit Mixer and Concrete Pump	cum	6,615.00
B	RCC Grade M25		
(i)	Using concrete mixer.	cum	8,023.00
(ii)	Using Batching Plant, Transit Mixer and Concrete Pump	cum	7,143.00
C	RCC Grade M30		
(i)	Using concrete mixer.	cum	8,086.00
(ii)	Using Batching Plant, Transit Mixer and Concrete Pump	cum	7,175.00
D	RCC Grade M35		
(i)	Using concrete mixer.	cum	8,217.00
(ii)	Using Batching Plant, Transit Mixer and Concrete Pump	cum	7,337.00
12.39	Levelling course for Pile cap	cum	6,586.00
12.40	Supplying, fitting and placing un-coated HYSD bar reinforcement in foundation complete as per drawing and technical specifications	tonne	1,08,448.00
12.41	Supplying, fitting and placing un-coated Mild steel reinforcement complete in foundation as per drawing and technical specification	tonne	77,698.00
CHAPTER-13			
SUB-STRUCTURE			
Item Code	Description	Unit	Justified Rate
13.1	Brick masonry work in 1:3 in sub-structure complete excluding pointing and plastering, as per drawing and technical specifications	cum	8,440.00
13.2	Pointing with cement mortar (1:3) on brick work in substructure as per Technical specifications	10 sqm	1,078.00
13.3	Plastering with cement mortar (1:3) on brick work in sub-structure as per Technical specifications	10 sqm	1,767.00
13.4	Stone masonry work in cement mortar 1:3 for substructure complete as per drawing and Technical Specifications		
A	Random Rubble Masonry	cum	5,399.00
B	Coursed rubble masonry (first sort)	cum	5,824.00
C	Ashlar masonry (first sort)	cum	7,905.00
13.5	Plain/Reinforced cement concrete in sub-structure complete as per drawing and technical specifications		
A	PCC Grade M15		
(p)	Height upto 5m	cum	7,414.00
B	PCC Grade M20		
(p)	Height upto 5m	cum	7,907.00
C	PCC Grade M25		
(p)	Height upto 5m		

Item Code	Description	Unit	Justified Rate
Case I	Using concrete Mixer	cum	8,410.00
Case II	With Batching Plant, Transit Mixer and Concrete Pump	cum	7,404.00
(q)	Height 5m to 10m		
Case I	Using concrete Mixer	cum	8,715.00
Case II	With Batching Plant, Transit Mixer and Concrete Pump	cum	7,673.00
(r)	Height above 10m		
Case I	Using concrete Mixer	cum	9,098.00
Case II	With Batching Plant, Transit Mixer and Concrete Pump	cum	8,009.00
D	PCC Grade M30		
(p)	Height upto 5m		
Case I	Using concrete Mixer	cum	8,464.00
Case II	With Batching Plant, Transit Mixer and Concrete Pump	cum	7,452.00
(q)	Height 5m to 10m		
Case I	Using concrete Mixer	cum	8,772.00
Case II	With Batching Plant, Transit Mixer and Concrete Pump	cum	7,723.00
(r)	Height above 10m		
Case I	Using concrete Mixer	cum	9,156.00
Case II	With Batching Plant, Transit Mixer and Concrete Pump	cum	8,062.00
E	RCC Grade M20		
(p)	Height upto 5m		
Case I	Using concrete Mixer	cum	7,978.00
Case II	With Batching Plant, Transit Mixer and Concrete Pump	cum	6,968.00
(q)	Height 5m to 10m		
Case I	Using concrete Mixer	cum	8,269.00
Case II	With Batching Plant, Transit Mixer and Concrete Pump	cum	7,221.00
(r)	Height above 10m		
Case I	Using concrete Mixer	cum	8,631.00
Case II	With Batching Plant, Transit Mixer and Concrete Pump	cum	7,538.00
F	RCC Grade M25		
(p)	Height upto 5m		
Case I	Using concrete Mixer	cum	8,487.00
Case II	With Batching Plant, Transit Mixer and Concrete Pump	cum	7,481.00
(q)	Height 5m to 10m		
Case I	Using concrete Mixer	cum	8,764.00
Case II	With Batching Plant, Transit Mixer and Concrete Pump	cum	7,726.00
(r)	Height above 10m		
Case I	Using concrete Mixer	cum	9,181.00
Case II	With Batching Plant, Transit Mixer and Concrete Pump	cum	8,093.00
G	RCC Grade M30		
(p)	Height upto 5m		
Case I	Using concrete Mixer	cum	8,517.00
Case II	With Batching Plant, Transit Mixer and Concrete Pump	cum	7,513.00
(q)	Height 5m to 10m		
Case I	Using concrete Mixer	cum	8,757.00
Case II	With Batching Plant, Transit Mixer and Concrete Pump	cum	7,724.00
(r)	Height above 10m		
Case I	Using concrete Mixer	cum	9,098.00
Case II	With Batching Plant, Transit Mixer and Concrete Pump	cum	8,025.00
H	RCC Grade M35		

Item Code	Description	Unit	Justified Rate
(p)	Height upto 5m		
Case I	Using concrete Mixer	cum	8,656.00
Case II	With Batching Plant, Transit Mixer and Concrete Pump	cum	7,726.00
(q)	Height 5m to 10m		
Case I	Using concrete Mixer	cum	8,845.00
Case II	With Batching Plant, Transit Mixer and Concrete Pump	cum	7,894.00
(r)	Height above 10m		
Case I	Using concrete Mixer	cum	9,128.00
Case II	With Batching Plant, Transit Mixer and Concrete Pump	cum	8,147.00
13.6	Supplying, fitting and placing HYSD bar reinforcement in sub-structure complete as per drawing and technical specifications	tonne	1,08,756.00
13.7	Supplying, fitting and placing Mild steel reinforcement complete in sub-structure as per drawing and technical specification	tonne	76,098.00
13.8	Providing weep holes in Brick masonry/Plain/Reinforced concrete abutment, wing wall/return wall with 100 mm dia AC pipe, extending through the full width of the structure with slope of 1V :20H towards drawing face. Complete as per drawing and Technical specifications	each	143.00
13.9	Back filling behind abutment, wing wall and return wall complete as per drawing and Technical specification		
A	Granular material	cum	1,410.00
B	Sandy material	cum	1,906.00
13.10	Providing and laying of Filter media with granular materials/stone crushed aggregates satisfying the requirements laid down in clause 2504.2.2. of MoRTH specifications to a thickness of not less than 600 mm with smaller size towards the soil and bigger size towards the wall and provided over the entire surface behind abutment, wing wall and return wall to the full height compacted to a firm condition complete as per drawing and technical specification.	cum	2,171.00
13.11	Supplying, fitting and fixing in position true to line and level cast steel rocker bearing conforming to IRC: 83(Pt.-1) section IX and clause 2003 of MoRTH specifications complete including all accessories as per drawing and Technical Specifications.	tonne capacity	474.00
13.12	Supplying, fitting and fixing in position true to line and level forged steel roller bearing conforming to IRC: 83(Pt.-1) section IX and clause 2003 of MoRTH specifications complete including all accessories as per drawing and Technical Specifications.	tonne capacity	287.00
13.13	Supplying, fitting and fixing in position true to line and level sliding plate bearing with PTFE surface sliding on stainless steel complete including all accessories as per drawing and Technical Specifications and BS: 5400, section 9.1 & 9.2 (for PTFE) and clause 2004 of MoRTH Specifications.	tonne capacity	234.00
13.14	Supplying, fitting and fixing in position true to line and level elastomeric bearing conforming to IRC: 83 (Part-II) section IX and clause 2005 of MoRTH specifications complete including all accessories as per drawing and Technical Specifications.	cubic centimetre	0.98
13.15	Supplying, fitting and fixing in position true to line and level sliding plate bearing with stainless steel plate sliding on stainless steel plate with mild steel matrix complete including all accessories as per drawing and Technical Specifications.	tonne capacity	209.00
13.16	Supplying, fitting and fixing in position true to line and level POT-PTFE bearing consisting of a metal piston supported by a disc or unreinforced elastomer confined within a metal cylinder, sealing rings, dust seals, PTFE surface sliding against stainless steel mating surface, complete assembly to be of cast steel/fabricated structural steel, metal and elastomer elements to be as per IRC: 83 part-I & II respectively and other parts conforming to BS: 5400, section 9.1 & 9.2 and clause 2006 of MoRTH Specifications complete as per drawing and approved technical specifications.	tonne capacity	204.00
CHAPTER-14			
SUPER-STRUCTURE			

Item Code	Description	Unit	Justified Rate
14.1	Furnishing and Placing Reinforced/Prestressed cement concrete in super-structure as per drawing and Technical Specification		
A	RCC Grade M20		
Case I	Using Concrete Mixer		
(i)	For solid slab super-structure, 20-30% of (a+b+c)		
(p)	Height upto 5m	cum	8,643.00
(q)	Height 5m to 10m	cum	9,004.00
(r)	Height above 10m	cum	9,364.00
(ii)	For T-beam & slab, 25-35% of (a+b+c)		
(p)	Height upto 5m	cum	9,004.00
(q)	Height 5m to 10m	cum	9,364.00
(r)	Height above 10m	cum	9,724.00
Case II	Using Batching Plant, Transit Mixer and Concrete Pump		
(i)	For solid slab super-structure, 20-30% of (a+b+c)		
(p)	Height upto 5m	cum	7,545.00
(q)	Height 5m to 10m	cum	7,860.00
(r)	Height above 10m	cum	8,174.00
(ii)	For T-beam & slab, 25-35% of (a+b+c)		
(p)	Height upto 5m	cum	7,860.00
(q)	Height 5m to 10m	cum	8,174.00
(r)	Height above 10m	cum	8,488.00
B	RCC Grade M25		
Case I	Using Concrete Mixer		
(i)	For solid slab super-structure, 20-30% of (a+b+c)		
(p)	Height upto 5m	cum	9,218.00
(q)	Height 5m to 10m	cum	9,602.00
(r)	Height above 10m	cum	9,986.00
(ii)	For T-beam & slab, 25-35% of (a+b+c)		
(p)	Height upto 5m	cum	9,602.00
(q)	Height 5m to 10m	cum	9,986.00
(r)	Height above 10m	cum	10,370.00
Case II	Using Batching Plant, Transit Mixer and Concrete Pump		
(i)	For solid slab super-structure, 20-30% of (a+b+c)		
(p)	Height upto 5m	cum	8,128.00
(q)	Height 5m to 10m	cum	8,466.00
(r)	Height above 10m	cum	8,805.00
(ii)	For T-beam & slab, 25-35% of (a+b+c)		
(p)	Height upto 5m	cum	8,466.00
(q)	Height 5m to 10m	cum	8,805.00
(r)	Height above 10m	cum	9,143.00
C	RCC Grade M 30		
Case I	Using Concrete Mixer		
(i)	For solid slab super-structure, 20-30% of (a+b+c)		
(p)	Height upto 5m	cum	9,350.00
(q)	Height 5m to 10m	cum	9,740.00
(r)	Height above 10m	cum	10,129.00
(ii)	For T-beam & slab, 25-35% of (a+b+c)		
(p)	Height upto 5m	cum	9,740.00

Item Code	Description	Unit	Justified Rate
(q)	Height 5m to 10m	cum	10,129.00
(r)	Height above 10m	cum	10,519.00
Case II	Using Batching Plant, Transit Mixer and Concrete Pump.		
(i)	For solid slab super-structure, 20-30% of (a+b+c)		
(p)	Height upto 5m	cum	8,209.00
(q)	Height 5m to 10m	cum	8,551.00
(r)	Height above 10m	cum	8,893.00
(ii)	For T-beam & slab, 25-35% of (a+b+c)		
(p)	Height upto 5m	cum	8,551.00
(q)	Height 5m to 10m	cum	8,893.00
(r)	Height above 10m	cum	9,235.00
D	RCC/PSC Grade M35		
Case 1	Using concrete mixer.		
(i)	For solid slab super-structure, 18-28% of (a+b+c)		
(p)	Height upto 5m	cum	9,344.00
(q)	Height 5m to 10m	cum	9,740.00
(r)	Height above 10m	cum	10,135.00
(ii)	For T-beam & slab, 23-33% of (a+b+c)		
(p)	Height upto 5m	cum	9,740.00
(q)	Height 5m to 10m	cum	10,135.00
(r)	Height above 10m	cum	10,531.00
(iii)	For box girder and balanced cantilever, 38-58% of cost of concrete.		
(p)	Height upto 5m	cum	10,927.00
(q)	Height 5m to 10m	cum	11,719.00
(r)	Height above 10m	cum	12,511.00
Case II	Using Batching Plant, Transit Mixer and Concrete Pump		
(i)	For solid slab super-structure, 18-28% of (a+b+c)		
(p)	Height upto 5m	cum	8,215.00
(q)	Height 5m to 10m	cum	8,564.00
(r)	Height above 10m	cum	8,912.00
(ii)	For T-beam & slab, 23-33% of (a+b+c)		
(p)	Height upto 5m	cum	8,564.00
(q)	Height 5m to 10m	cum	8,912.00
(r)	Height above 10m	cum	9,260.00
(iii)	For box girder and balanced cantilever, 38-58% of cost of concrete.		
(p)	Height upto 5m	cum	9,608.00
(q)	Height 5m to 10m	cum	10,304.00
(r)	Height above 10m	cum	11,000.00
E	PSC Grade M-40		
Case 1	Using concrete mixer.		
(i)	For solid slab super-structure, 20-30% of (a+b+c)		
(p)	Height upto 5m	cum	9,765.00
(q)	Height 5m to 10m	cum	10,172.00
(r)	Height above 10m	cum	10,579.00
(ii)	For T-beam & slab, 25-35% of (a+b+c)		
(p)	Height upto 5m	cum	10,172.00
(q)	Height 5m to 10m	cum	10,579.00
(r)	Height above 10m	cum	10,986.00
Case II	Using Batching Plant, Transit Mixer and Concrete Pump		

Item Code	Description	Unit	Justified Rate
(i)	For solid slab super-structure, 18-28% of (a+b+c)		
(p)	Height upto 5m	cum	8,387.00
(q)	Height 5m to 10m	cum	8,742.00
(r)	Height above 10m	cum	9,098.00
(ii)	For T-beam & slab, 23-33% of (a+b+c)		
(p)	Height upto 5m	cum	8,742.00
(q)	Height 5m to 10m	cum	9,098.00
(r)	Height above 10m	cum	9,453.00
(iii)	For box girder and balanced cantilever, 38-58% of cost of concrete.		
(p)	Height upto 5m	cum	9,808.00
(q)	Height 5m to 10m	cum	10,519.00
(r)	Height above 10m	cum	11,230.00
F	PSC Grade M-45		
(i)	For solid slab/voided slab super-structure, 16-26% of cost of concrete (a+b+c)		
(p)	Height upto 5m	cum	8,586.00
(q)	Height 5m to 10m	cum	8,956.00
(r)	Height above 10m	cum	9,326.00
(ii)	For I-beam & slab including launching of precast girders by launching truss upto 40 m span, 21-31% of cost of concrete.		
(p)	Height upto 5m	cum	8,956.00
(q)	Height 5m to 10m	cum	9,326.00
(r)	Height above 10m	cum	9,696.00
(iii)	For cast-in-situ box girder, segmental construction and balanced cantilever, 36-56% of cost of concrete.		
(p)	Height upto 5m	cum	10,066.00
(q)	Height 5m to 10m	cum	10,807.00
(r)	Height above 10m	cum	11,547.00
G	PSC Grade M-50		
(i)	For cast-in-situ box girder, segmental construction and balanced cantilever, 35-55% of cost of concrete		
(p)	Height upto 5m	cum	10,276.00
(q)	Height 5m to 10m	cum	11,037.00
(r)	Height above 10m	cum	11,799.00
H	PSC Grade M- 55		
(i)	For cast-in-situ box girder, segmental construction and balanced cantilever, 35-55% of cost of concrete		
(p)	Height upto 5m	cum	10,721.00
(q)	Height 5m to 10m	cum	11,515.00
(r)	Height above 10m	cum	12,309.00
14.2	a) Supplying, fitting and placing HYSD bar reinforcement in super-structure complete as per drawing and technical specifications	tonne	1,11,052.00
14.3	High tensile steel wires/strands including all accessories for stressing, stressing operations and grouting complete as per drawing and Technical Specifications	tonne	1,36,472.00
14.4	Providing and laying Cement concrete wearing coat M-30 grade including reinforcement complete as per drawing and Technical Specifications	cum	15,277.00

Item Code	Description	Unit	Justified Rate
14.5	Mastic Asphalt (Providing and laying 12 mm thick mastic asphalt wearing course on top of deck slab excluding prime coat with paving grade bitumen meeting the requirements given in table 500-29, prepared by using mastic cooker and laid to required level and slope after cleaning the surface, including providing antiskid surface with bitumen precoated fine grained hard stone chipping of 9.5 mm nominal size at the rate of 0.005cum per 10 sqm and at an approximate spacing of 10 cm center to center in both directions, pressed into surface when the temperature of surfaces not less than 100 deg. C, protruding 1 mm to 4 mm over mastic surface, all complete as per clause 515.)	sqm	437.00
14.6	Construction of precast RCC railing of M30 Grade, aggregate size not exceeding 12 mm, true to line and grade, tolerance of vertical RCC post not to exceed 1 in 500, centre to centre spacing between vertical post not to exceed 2000 mm, leaving adequate space between vertical post for expansion, complete as per approved drawings and technical specifications.	metre	2,744.00
14.7	Construction of RCC railing of M30 Grade in-situ with 20 mm nominal size aggregate, true to line and grade, tolerance of vertical RCC post not to exceed 1 in 500, centre to centre spacing between vertical post not to exceed 2000 mm, leaving adequate space between vertical post for expansion, complete as per approved drawings and technical specifications.	metre	2,654.00
14.8	Providing, fitting and fixing mild steel railing complete as per drawing and Technical Specification	metre	3,696.00
14.9	Drainage Spouts complete as per drawing and Technical specification	each	1,222.00
14.10	PCC M15 Grade leveling course below approach slab complete as per drawing and Technical specification	cum	6,740.00
14.11	Reinforced cement concrete approach slab including reinforcement and formwork complete as per drawing and Technical specification	cum	12,519.00
14.12	Providing anti-corrosive treatment to HYSD reinforcement with Fusion Bonded Epoxy Coating (FBEC) (To be taken as per the prevailing market rates.)	tonne	VALUE
14.13	Precast - pretensioned Girders (Providing, precasting, transportation and placing in position precast pretensioned concrete girders as per drawing and technical specifications)	cum	34,606.00
14.14	Providing and fixing Helical pipes in voided concrete slabs	metre	324.00
14.15	Crash Barriers (The rate analysis for rigid crash barrier in reinforced cement concrete, semi-rigid crash barrier with metal beam and flexible crash barrier with wire ropes have been made and included in chapter-8 on Traffic and Transportation.)	metre	VALUE
14.16	Painting on concrete surface (Providing and applying 2 coats of water based cement paint to unplastered concrete surface after cleaning the surface of dirt, dust, oil, grease, efflorescence and applying paint @ of 1 litre for 2 Sq.m.)	metre	108.00
14.17	Burried Joint (Providing and laying a burried expansion joint, expansion gap being 20 mm, covered with 12 mm thick, 200 mm wide galvanised weldable structural steel plate as per IS: 2062, placed symmetrical to centre line of the joint, resting freely over the top surface of the deck concrete, welding of 8 mm dia. 100 mm long galvanised nails spaced 300 mm c/c along the centre line of the plate, all as specified in clause 2604.)	metre	1,649.00
14.18	Filler joint		
(i)	Providing & fixing 2 mm thick corrugated copper plate in expansion joint complete as per drawing & Technical Specification.	metre	4,403.00
(ii)	Providing & fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & Technical Specification.	metre	323.00
(iii)	Providing and fixing in position 20 mm thick premoulded joint filler in expansion joint for fixed ends of simply supported spans not exceeding 10 m to cater for a horizontal movement upto 20 mm, covered with sealant complete as per drawing and technical specifications.	metre	222.00
(iv)	Providing and filling joint sealing compound as per drawings and technical specifications with coarse sand and 6% bitumen by weight	metre	45.80

Item Code	Description	Unit	Justified Rate
14.19	Asphaltic Plug joint (Providing and laying of asphaltic plug joint to provide for horizontal movement of 25 mm and vertical movement of 2 mm, depth of joint varying from 75 mm to 100 mm, width varying from 500 mm to 750 mm (in traffic direction), covered with a closure plate of 200mm x 6mm of weldable structural steel conforming to IS: 2062, asphaltic plug to consist of polymer modified bitumen binder, carefully selected single size aggregate of 12.5 mm nominal size and a heat resistant foam caulking/backer rod, all as per approved drawings and specifications.)	metre	1,414.00
14.20	Elastomeric Slab Steel Expansion Joint (Providing and laying of an elastomeric slab steel expansion joint, catering to right or skew (less than 20 deg., moderately curved with maximum horizontal movement upto 50 mm, complete as per approved drawings and standard specifications to be installed by the manufacturer/supplier or their authorised representative ensuring compliance to the manufacturer's instructions for installation and clause 2606 of MoRTH specifications for road & bridge works.)	metre	34,821.00
14.21	Compression Seal Joint (Providing and laying of compression seal joint consisting of steel armoured nosing at two edges of the joint gap suitably anchored to the deck concrete and a preformed chloroprene elastomer or closed cell foam joint sealer compressed and fixed into the joint gap with special adhesive binder to cater for a horizontal movement upto 40 mm and vertical movement of 3 mm.)	metre	5,073.00
14.22	Strip Seal Expansion Joint (Providing and laying of a strip seal expansion joint catering to maximum horizontal movement upto 70 mm, complete as per approved drawings and standard specifications to be installed by the manufacturer/supplier or their authorised representative ensuring compliance to the manufacturer's instructions for installation.)	metre	12,224.00
14.23	Modular Strip / Box Seal Joint (Providing and laying of a modular strip Box steel expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140mm, complete as per approved drawings and standard specifications to be installed by the manufacturer/supplier or their authorised representative ensuring compliance to the manufacturer's instructions for installation.)	metre	40,654.00
14.24	Modular Strip / Box Seal Joint (Providing and laying of a modular strip box seal expansion joint catering to a horizontal movement beyond 140mm and upto 210mm, complete as per approved drawings and standard specifications to be installed by the manufacturer/supplier or their authorised representative ensuring compliance to the manufacturer's instructions for installation.)	metre	42,052.00
CHAPTER-15			
RIVER TRAINING AND PROTECTION WORKS			
Item Code	Description	Unit	Justified Rate
15.1	Providing and laying boulders apron on river bed for protection against scour with stone boulders weighing not less than 40 kg each complete as per drawing and Technical specification.		
A	Boulder laid dry without wire crates.	cum	1,974.00
15.2	Boulder apron laid in wire crates (Providing and laying of boulder apron laid in wire crates made with 4mm dia GI wire conforming to IS: 280 & IS:4826 in 100mm x 100mm mesh (weaved diagonally) including 10% extra for laps and joints laid with stone boulders weighing not less than 40 kg each.)	cum	2,268.00
15.3	Cement concrete blocks (size 0.5 x 0.5 x 0.5 m) (Providing and laying of apron with cement concrete blocks of size 0.5x0.5x0.5 m cast in-situ and made with nominal mix of M-15 grade cement concrete with a minimum cement content of 250 kg/cum as per IRC: 21-2000.)	cum	7,150.00
15.4	Providing and laying Pitching on slopes laid over prepared filter media including boulder apron laid dry in front of toe of embankment complete as per drawing and Technical specifications		

Item Code	Description	Unit	Justified Rate
A	Stone/Boulder	cum	1,974.00
B	Cement Concrete blocks of size 0.3x0.3 x0.3 m cast in cement concrete of Grade M15	cum	7,150.00
15.5	Providing and laying Filter material underneath pitching in slopes complete as per drawing and Technical specification	cum	2,522.00
15.6	Geotextile Filter (Laying of a geotextile filter between pitching and embankment slopes on which pitching is laid to prevent escape of the embankment material through the voids of the stone pitching/cement concrete blocks as well as to allow free movement of water without creating any uplift head on the pitching.)	sqm	198.00
15.7	Toe protection (A toe wall for toe protection can either be in dry rubble masonry in case of dry rubble pitching or pitching with stones in wire crates or it can be in PCC M15 nominal mix if cement concrete block have been used for pitching . Rates for toe wall can be adopted from respective clauses depending upon approved design. The rate for excavation for foundation, dry rubble masonry and PCC M15 have been analysed and given in respective chapters.)		
15.8	Providing and laying Flooring complete as per drawing and Technical specifications laid over cement concrete bedding.		
A	Rubble stone laid in cement mortar 1:3	cum	6,340.00
B	Cement Concrete blocks Grade M15	cum	9,417.00
15.9	Dry rubble Flooring	cum	2,731.00
15.10	Curtain wall complete as per drawing and Technical specification		
A	Stone masonry in cement mortar (1:3)	cum	5,773.00
B	Cement concrete Grade M15	cum	7,010.00
15.11	Flexible Apron :Construction of flexible apron 1 m thick comprising of loose stone boulders weighing not less than 40 kg beyond curtain wall.	cum	2,082.00
15.12	Gabian Structure for Retaining Earth (Providing and construction of a gabain structure for retaining earth with segments of wire crates of size 7 m x 3 m x 0.6 m each divided into 1.5 m compartments by cross netting, made from 4 mm galvanised steel wire @ 32 kg per 10 sqm having minimum tensile strength of 300 Mpa conforming to IS:280 and galvanizing coating conforming to IS:4826, woven into mesh with double twist, mesh size not exceeding 100 x 100 mm, filled with boulders with least dimension of 200 mm, all loose ends to be tied with 4 mm galvanised steel wire)	cum	2,211.00
15.13	Gabian Structure for Erosion Control, River Training Works and Protection works (Providing and constructing gabain structures for erosion control, river training works and protection works with wire crates of size 2 m x 1 m x 0.3 m each divided into 1m compartments by cross netting, made from 4 mm galvanised steel wire @ 32 kg per 10 sqm having minimum tensile strength of 300 Mpa conforming to IS:280 and galvanizing coating conforming to IS:4826, woven into mesh with double twist, mesh size not exceeding 100 mm x 100 mm, filled with boulders with least dimension of 200 mm, all loose ends to be securely tied with 4 mm galvanised steel wire.)	cum	3,131.00
CHAPTER-16			
REPAIR AND REHABILITATION			
Item Code	Description	Unit	Justified Rate
16.1	Removal of existing cement concrete wearing coat including its disposal complete as per Technical specification without causing any detrimental effect to any part of the bridge structure and removal of dismantled material with all lifts and lead upto 1000m (Thickness 75 mm)	sqm	122.00
16.2	Removal of existing asphaltic wearing coat comprising of 50 mm thick asphaltic concrete laid over 12 mm thick mastic asphalt including disposal with all lift and lead upto 1000m.	sqm	91.00

Item Code	Description	Unit	Justified Rate
16.3	Guniting concrete surface with cement mortar applied with compressor after cleaning surface and spraying with epoxy complete as per Technical specification	sqm	1,024.00
16.4	Providing and inserting nipples with approved fixing compound after drilling holes for grouting as per Technical specifications including subsequent cutting/removal and sealing of the hole as necessary of nipples after completion of grouting with Cement/Epoxy	each	271.00
16.5	Sealing of cracks/porous concrete by injection process through nipples/Grouting complete as per Technical specification.		
A	Cement Grout	kg	313.00
B	Cement mortar (1:1) Grouting	kg	308.00
16.6	Patching of damaged concrete surface with polymer concrete and curing compounds, initiator and promoter, available in present formulations, to be applied as per instructions of manufacturer and as approved by the Engineer.	sqm	8,875.00
16.7	Sealing of crack / porous concrete with Epoxy Grout by injection through nipples complete as per clause 2803.1.	kg	873.00
16.8	Applying epoxy mortar over leached, honey combed and spalled concrete surface and exposed steel reinforcement complete as per Technical specification	sqm	720.00
16.9	Removal of defective concrete, cleaning the surface thoroughly, applying the shotcrete mixture mechanically with compressed air under pressure, comprising of cement, sand, coarse aggregates, water and quick setting compound in the proportion as per clause 2807.1., sand and coarse aggregates conforming to IS: 383 and table 1 of IS: 9012 respectively, water cement ratio ranging from 0.35 to 0.50, density of gunite not less than 2000 kg/cum, strength not less than 25 Mpa and workmanship conforming to clause 2807.6.	sqm	333.00
16.10	Applying pre-packed cement based polymer mortar of strength 45 Mpa at 28 days for replacement of spalled concrete	sqm	450.00
16.11	Epoxy bonding of new concrete to old concrete	sqm	897.00
16.12	Providing external prestressing with high tensile steel wires/strands including drilling for passage of prestressing steel, all accessories for stressing and stressing operation and grouting complete as per drawing and Technical specification	tonne	3,61,785.00
16.13	Providing external prestressing with high tensile steel wires/strands including drilling for passage of prestressing steel, all accessories for stressing and stressing operation and grouting complete as per drawing and Technical specification	tonne	3,58,762.00
16.14	Providing external prestressing with high tensile steel wires/strands including drilling for passage of prestressing steel, all accessories for stressing and stressing operation and grouting complete as per drawing and Technical specification	tonne	3,48,592.00
16.15	Replacement of bearings complete as per Technical specification	each	1,25,646.00
16.16	Rectification of bearings as per Technical specifications	each	4,811.00
16.17	Replacement of Expansion Joints complete as per drawings	metre	3,436.00
16.18	Replacement of damaged concrete railing.	metre	419.00
16.19	Replacement of crash barrier.	metre	809.00
16.20	Replacement of damaged mild steel railing	metre	340.00
16.21	Repair of crash barrier (Repair of concrete crash barrier with cement concrete of M-30 grade by cutting and trimming the damaged portion to a regular shape, cleaning the area to be repaired thoroughly, applying cement concrete after erection of proper form work.)	metre	334.00
16.22	Repair of RCC Railing (Carrying out repair of RCC M30 railing to bring it to the original shape.)	metre	252.00
16.23	Repair of steel Railing (Repair of steel railing to bring it to the original shape)	metre	332.00



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