



**GOVERNMENT OF RAJASTHAN
RAJASTHAN URBAN INFRASTRUCTURE
DEVELOPMENT PROJECT
(RUIDP)**

**INTEGRATED
SCHEDULE OF RATES
2023**

(w.e.f. 01/10/2023)

**Issued By
Project Director
RUIDP
JAIPUR (Raj)**

Price: Rs. 1200/-

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2023**

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Project Director, RUIDP, JAIPUR (Raj)

**Consultant
Ojasvi Software, New Delhi**

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शासन सचिव,
स्वायत्त शासन विभाग एवं
परियोजना निदेशक, राजस्थान शहरी आधारभूत
विकास परियोजना (आरयूआईडीपी),
राज्य मिशन निदेशक, अमृत एवं
स्मार्ट सिटीज, राजस्थान, जयपुर

Secretary to Government,
Department of Local Self Government and
Project Director, Rajasthan Urban Infrastructure
Development Project (RUIDP),
State Mission Director, AMRUT &
Smart Cities, Rajasthan, Jaipur

FOREWORD

- RUIDP is a SPV for infrastructure development work in State of Rajasthan financed by Asian Development Bank (ADB). Integrated Schedule of Rates published by RUIDP from time to time is a comprehensive and useful technical document for estimation of infrastructure civil works. In addition to Rajasthan Urban Infrastructure Development Project (RUIDP), this Schedule of Rates has been used by many Departments, Institutions, Public Sector Undertakings, Architects and Builders. The first schedule of rate was published by RUIDP in year January-2008. Subsequently, it was published in the year 2011, 2013, 2017 and 2022.

Last edition of SOR was published in the year 2022. Revision of this SOR has become pertinent due to changes in the prices of labour, materials and machineries. Apart from it, the entire engineering community is witnessing great changes in terms of new ideas, items, concepts & technologies. All these have necessitated revision in the prevailing SOR. These components are being incorporated in the SOR-2023.

Urban sector needs typical nature of infrastructure works, which requires extensive Schedule of Rates catering all the requirements. Engineers of RUIDP through their learnings, experiences and feedback from other departments have made efforts of accommodating various items of civil/ mechanical/ electrical & other components.

I am sure that RUIDP Schedule of Rates 2023 will be beneficial to all the engineers, line department & other stake holders in general.

This SOR is approved by the RUIDP and is made effective from 1st October -2023.

(Kailash Chand Meena, IAS)
Project Director, RUIDP

Dr. Hemant Kumar Sharma
Chief Engineer cum
Addl. Project Director

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PREFACE

Rajasthan Urban Infrastructure Development Project (RUIDP) has prepared Integrated Schedule of Rates 2023, for the estimation of works under its umbrella with the intention to accommodate various items related to multi-sector urban infrastructure works. It was also intended that the estimation based on this SOR will provide the updated cost estimates for the benefit of analysis and guidance to different stakeholders in their assessments.

The release of new SOR is primarily required due to change in basic rates of Labour, Machinery and material; cement, steel; petroleum products; transportation and other materials. There have been learnings during the work execution of various sectoral works, so few items have been added/ modified based on the requirement of such works accordingly.

The present basic rates of material/ equipments/ labour etc. have been procured from the various sources i.e. from different vendors, available schedule of rates of different departments i.e. PWD, MORTH, Archeological, CPWD, Trenchless society of India & codes of Bureau of India standard and Delhi Schedule of Rates (DSR) etc. The team of engineers having sectoral experiences was constituted to explore the market rates by approaching the vendors personally or through phone/e-mail, receiving quotations, price lists etc. to the maximum possible extent.

The support of various manufacturers/vendors/suppliers has made us comfortable to reach at reasonable rates of the materials. Though best efforts have been made to procure the present basic rates of every item; however, few vendors were reluctant to provide any written document for the support of rates, therefore, rates of some items could not be received directly from the market. Rates of Such items have been derived on the basis of earlier BSR rates & experience with suitable adjustments.

Regular meetings were held with RUIDP engineers and consultants working with RUIDP for detailed discussions and to freeze the basic rates of labour, machinery and materials and nomenclatures of SOR items. The nomenclatures of many items have been improved by making it more generic and comprehensive. Various new items based on new material/technology have also been added in the SOR 2023.

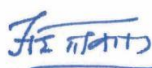
The composite rate of items has been derived considering likely 10% overheads and further 10 % contractor profit over composite cost of labour, machinery and

material. Further, GST @ 18% has been considered on the overall composite cost/activity cost. The basic rates have been collected from various sources upto June -2023, therefore RUIDP SoR-2023 is reflecting the prevailing market rates of materials as on or just before 30.06.2023. However, the future trend in costs should be accounted for by all concerned for preparation of their updated estimates. Accordingly, engineer's estimate or price justification may be worked on present market basis.

I am gratified for the input of Shri Arun Vyas, Chief Engineer, Shri Mahendra Mohan, Financial Advisor and subject expert consultants working with RUIDP for their valuable suggestions and refinement of SOR. This attempt had been successful only due to the extensive efforts of Engineers of RUIDP working in different sectors by ensuring incorporation of related sectoral items & their proper nomenclatures in the SOR namely; Er. Mohan Lal Saini, Addl. Chief Engineer, Superintending Engineers - Er. Kapil Gupta, Er. Shrawan Singh Khiria, & Er. K. C. Agarwal. Executive Engineers- Er. Anil Vijayvargiya, Er. Sandeep Bhargava, Er. Shiv Ratan Pareek, Er. Anurag Sharma, Er. Shruti Singh, Er. Poornima Mahalawat, supported by the team of engineers namely Er. Mahesh Garg, Er. Pramod Pathak, Er. Vijay Gupta, Er. Rohit Jangid, Er. Mukesh Saini, Er. Nisha Beniwal, Er. Neelam Meena and Er. Poonam Saini. The task has been completed for its substantial revision in true spirit with the extensive work and support from expert and engineers from PMCBC and CMSC consultancy.

This Integrated Schedule of Rates -2023 has been prepared to cater the need of Urban Infrastructure Development to accommodate the various sectors for estimation, evaluation etc. All possible efforts have been exercised and cautions have been taken to make the SoR-2023 extensive use. If any discrepancy or deviation is observed, may kindly be intimated to the undersigned for the consideration.

This Integrated Schedule of Rates 2023 has been prepared successfully under valuable guidance of Shri Kailash Chand Meena, Project Director RUIDP, Jaipur. This work would not have been possible without the earnest efforts of persons who have contributed directly or indirectly to complete this work, are also thankfully acknowledged.


(Dr. Hemant Kumar Sharma)
Chief Engineer cum
Addl. Project Director

CONTENTS

S. No	NAME OF CHAPTER/ SUBHEAD	PAGE NO.
	COMMON WORKS	
1	CARRIAGE OF MATERIALS	1
2	SITE CLEARANCE	3
3	DISMANTLING	6
4	EARTH WORK	10
5	SURVEY, TESTING, INVESTIGATION AND SITE OFFICE	17
6	MORTARS	24
	ROAD WORKS	
7	ROAD WORKS (Sub-base/ Bases)	25
8	ROAD WORKS (Bituminous Bases)	27
9	CEMENT CONCRETE PAVEMENTS	34
10	TRAFFIC SIGNS, MARKINGS & OTHER ROAD APPURTENANCES	38
11	PIPE CULVERTS	44
12	MAINTENANCE OF ROADS	46
	BRIDGE WORKS	
13	FOUNDATIONS	50
14	SUB-STRUCTURE & SUPER-STRUCTURE	62
15	RIVER TRAINING & PROTECTION WORKS	74
16	REPAIR & REHABILITATION	76
17	SEWER LINE WORKS	77
18	STP (Sewage Treatment Plant)	123

S. No	NAME OF CHAPTER/ SUBHEAD	PAGE NO.
19	WATER SUPPLY	147
20	TUBE WELL	203
	BUILDING WORKS	
21	CONCRETE WORK	205
22	FORM WORK	208
23	REINFORCED CEMENT CONCRETE	210
24	BRICK WORK	215
25	STONE WORK (Masonry)	219
26	STONE WORK (Slabs)	221
27	MARBLE WORK	226
28	WOOD AND PVC WORK	231
29	STEEL WORK	261
30	FLOORING	266
31	ROOFING	273
32	FINISHING	288
33	REPAIRS TO BUILDINGS	296
34	WATER SUPPLY (Building)	305
35	DRAINAGE (Building)	319
36	SANITARY INSTALLATIONS	325
37	ALUMINIUM WORK	338
38	WATER PROOFING	342
39	HORTICULTURE	348
40	HERITAGE WORK	358
41	SOLID WASTE MANAGEMENT	367

S. No	NAME OF CHAPTER/ SUBHEAD	PAGE NO.
	INSTRUMENTATION	
42	TRAFFIC SIGNALS	369
43	INSTRUMENTATION	378
44	MOTOR STARTERS	386
45	DISMANTLING OF EXISTING STRUCTURE/ MISC. ITEM	389
46	SHIFTING OF OVER-HEAD LINES (Dismantling & Re Erecting the Same)	391
47	PLC & SCADA	396
48	SMART SOLUTIONS	411
49	LIFTS	428
	ELECTRICAL	
50	ELECTRICAL WIRING IN PVC CONDUIT	433
51	ELECTRICAL WIRING IN STEEL CONDUIT	436
52	ELECTRICAL WIRING IN PVC TRUNKING	439
53	DRAWING OF WIRES & SUBMAINS	441
54	G.I./M.S./WOODEN BOXES, LAMINATES & DISMANTLING	446
55	DISTRIBUTION BOARD & IT'S ACCESSORIES	450
56	ELECTRICAL ACCESSORIES	460
57	LT PANELS & ACCESSORIES	468
58	AIR-CIRCUIT BREAKERS & MCCB	481
59	SWITCH FUSE UNIT, CHANGE OVER SWITCH	487
60	LT CABLES	493
61	LT CABLE TERMINATION & ACCESSORIES	502
62	H T CABLES & TERMINATION KITS	512
63	EARTHING & LIGHTNING ARRESTER	515
64	FANS	522

S. No	NAME OF CHAPTER/ SUBHEAD	PAGE NO.
65	STORAGE WATER HEATERS	527
66	INDOOR LIGHTING	530
67	OUTDOOR LIGHTING	535
68	OVER HEAD LINES	545
69	LOCAL AREA NETWORKING	553
70	ELECTRICAL DRIVEN PUMPSETS	561
71	AIR COOLING & AIRCONDITIONING	567
72	SUBSTATION EQUIPMENTS	584
73	FIRE PROTECTION WORKS	604
74	HIRE CHARGES FOR PA SYSTEM & TEMPORARY LIGHTING	625
75	REPAIRING OF FANS, COOLERS, PUMPS, MOTORS, FRIDGES AND AIRCONDITIONERS	634
76	SOLAR BASED WATER SUPPLY SCHEMES	643
	Annexure 'A'	645
	BASIC RATES	
A	MACHINARY	647
B	LABOUR	653
C	MATERIALS	655
D	HORTICULTURE SUPPLY ITEMS	766

1.0 CARRIAGE OF MATERIALS

CARRIAGE OF MATERIALS (By Mechanical Means)											
Code	Materials	Unit	Rate for lead					Rate beyond initial lead			Remarks
			1 Km	2 Km	3 Km	4 Km	5 Km	Beyond 5 Km upto 10 Km. per Km.	Beyond 10 Km. upto 20 Km. per Km.	Beyond 20 Km. per Km.	
1	2	3	4	5	6	7	8	9	10	11	12
1.1	Carriage of Materials by mechanical transport including loading, unloading and stacking ::										The rates will be applicable to net quantities after deduction of prescribed percentage for voids mentioned in the specification under subhead "Carriage of Materials"
1.1.1	Earth	cum	161.51	185.54	209.35	232.33	254.76	20.32	17.19	14.51	
1.1.2	Sand, bazri, ballast, kankar	cum	129.21	148.43	167.48	185.87	203.81	16.25	13.75	11.61	
1.1.3	Stone, boulders, gravelly material	cum	152.01	174.63	197.03	218.67	239.78	19.12	16.18	13.66	
1.1.4	Bricks	1000 Nos	344.56	395.83	446.61	495.65	543.49	43.34	36.66	30.95	
1.1.5	Brick Tiles	1000 Nos	206.74	237.50	267.97	297.39	326.09	26.00	22.00	18.57	

CARRIAGE OF MATERIALS (By Manual Means)

Code No.	Materials	Unit	Primary Lead	Beyond initial lead	Remarks
			Cost of carriage including loading, unloading & stacking for first 50 m.	Every additional lead of 50 m or part thereof beyond 1st 50 m upto 9 such additional leads	
1	2	3	4		6
1.2	Carriage of materials by manual labour including loading, unloading and stacking for lead less than 0.5 Km :				The rate is applicable to net quantities after deduction of prescribed percentage for voids mentioned in the specifications under sub-head "Carriage of Materials"
1.2.1	Earth	cum	187.74	40.88	
1.2.2	Sand, bazri, ballast, kankar	cum	150.19	32.70	
1.2.3	Stone, boulders, gravelly material	cum	220.87	48.09	
1.2.4	Bricks	1000 Nos	350.44	76.30	
1.2.5	Brick Tiles	1000 Nos	219.02	47.69	

Code No	Description	Unit	Rate Rs.
1.3	Loading and unloading of stone boulder / stone aggregates / sand / canker / moorum by mechanical means.	cum	79.70
1.4	Loading and Unloading of Boulders by Manual Means	cum	109.50
1.5	Loading and Unloading of Cement or Steel by Manual Means and stacking.	tonne	143.50

2.0 SITE CLEARANCE

Code No	Description	Unit	Rate Rs.
2	SITE CLEARANCE		
2.1	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 to required compaction as per MoRT&H specification clause 201. (Measurement of girth to be done at height of 1 m above ground level)		
2.1.1	Girth from 300 mm to 600 mm	each	461.50
2.1.2	Girth from 600 mm to 900 mm	each	752.00
2.1.3	Girth from 900 mm to 1800 mm	each	1,572.00
2.1.4	Girth from 1800 mm to 2700 mm	each	3,075.00
2.1.5	Girth above 2700 mm	each	6,010.00
2.2	Clearing Grass and Removal of Rubbish (Maximum 150mm) by manual means and disposal at a lead of 50 metres as per MoRT&H specification clause 201.	hectare	35,900.00
2.3	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 a lead of 50 metres from road boundary including removal and disposal of top organic soil not exceeding 150 mm in thickness as directed by Engineer.		
2.3.1	In area of light jungle	hectare	61,600.00
2.3.2	In area of thorny jungle	hectare	81,700.00
2.4	Dismantling of existing structures like culverts, bridges, retaining walls, CC road 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 50 metres as directed by Engineer.		
2.4.1	Lime Concrete, cement concrete grade M-10 (1:5:10) and below	cum	393.50
2.4.2	Cement Concrete Grade M-15 and above and PCC blocks	cum	678.00
2.4.3	Prestressed /Reinforced cement concrete with separating, cleaning, straightening and cutting of bars	cum	1,692.00
2.4.4	Dismantling Brick / Tile work		
2.4.4.1	In lime mortar	cum	275.50
2.4.4.2	In cement mortar	cum	394.50
2.4.4.3	In mud mortar	cum	239.50

Code No	Description	Unit	Rate Rs.
2.4.4.4	Dry brick pitching or brick soling	cum	241.50
2.4.5	Dismantling Stone Masonry		
2.4.5.1	Rubble stone masonry in lime mortar	cum	327.00
2.4.5.2	Rubble stone masonry in cement mortar.	cum	386.00
2.4.5.3	Rubble Stone Masonry in mud mortar.	cum	294.00
2.4.5.4	Dry rubble masonry	cum	259.50
2.4.5.5	Stone pitching/ dry stone spells.	cum	243.50
2.4.5.6	Boulders laid in wire crates including opening of crates and stacking dismantled materials.	cum	828.00
2.4.6	Wood work wrought framed and fixed in frames of trusses upto a height of 5 m above plinth level	cum	1,020.00
2.4.7	Steel work in all type sections up to a height of 5 metre above plinth level (Riveted work where rivet are required to be cut shall be measured and paid separately)		
2.4.7.1	Including dismembering	tonne	2,925.00
2.4.7.2	Excluding dismembering	tonne	2,141.00
2.4.7.3	Extra for cutting rivets in built up steel sections.	each rivet	22.30
2.5	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:		
2.5.1	In lime mortar.	cum	492.50
2.5.2	In cement mortar.	cum	591.00
2.6	Scraping of bricks dismantled from brick masonry including stacking.		
2.6.1	In lime/Cement mortar	each	2.50
2.6.2	In mud mortar	each	0.90
2.7	Removing mortar from Stones and cleaning of stones and concrete articles including stacking (net qty of stacks of cleaned material to be measured).		
2.7.1	In Cement and Lime mortar	cum	1,007.00
2.7.2	In Mud Mortar	cum	213.50
2.8	Scarping plaster in lime or cement mortar from brick/ stone masonry	sqm	29.80
2.9	Removing all type of hume pipes and stacking within a lead of 1000 metres including earthwork and dismantling of masonry works.		
2.9.1	Up to 600 mm dia	metre	372.50
2.9.2	Above 600 mm to 900 mm dia	metre	504.00
2.9.3	Above 900 mm	metre	862.00

Code No	Description	Unit	Rate Rs.
2.10	Dismantling of flexible pavements and disposal of dismantled materials up to a lead of 50 metres as directed by Engineer.		
2.10.1	Bituminous courses	cum	445.00
2.10.2	Granular courses	cum	310.00
2.11	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 as per MoRT&H specification clause 202.	metre	124.50
2.12	Dismantling kerb stone by manual means and disposal of dismantled material with all lifts and up to a lead of 1000 metre as per MoRT&H specification clause 202.	metre	17.90
2.13	Dismantling kerb stone channel by manual means and disposal of dismantled material with all lifts and up to a lead of 1000 metre as per MoRT&H specification clause 202.	metre	26.90
2.14	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 as per MoRT&H specification clause 202.		
2.14.1	5th KM stone	each	669.00
2.14.2	Ordinary KM Stone	each	393.00
2.14.3	200m Stone	each	78.60
2.15	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 as per MoRT&H specification clause 202.	metre	98.50
2.16	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 as per MoRT&H specification clause 202.	each	323.00

3.0 DISMANTLING

Code No	Description	Unit	Rate Rs.
3.1	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.		
3.1.1	In cement mortar	cum	462.50
3.2	Dismantling tile work in floors and roofs laid in cement mortar including stacking material within 50 metres lead.		
3.2.1	For thickness of tiles 10 mm to 25 mm	sqm	46.60
3.2.2	For thickness of tiles above 25 mm and upto 40 mm	sqm	73.90
3.3	Dismantling doors, windows and clerestory windows (steel or wood) shutter including chowkhats, architrave, holdfasts etc. complete and stacking within 50 metres lead :		
3.3.1	Of area 3 sq. metres and below	each	244.00
3.3.2	Of area beyond 3 sq. metres	each	333.50
3.4	Taking out doors, windows and clerestory window shutters (steel or wood) including stacking within 50 metres lead:		
3.4.1	Of area 3 sq. metres and below	each	100.50
3.4.2	Of area beyond 3 sq. metres	each	133.00
3.5	Demolishing dry brick pitching in floors, drains etc. including stacking serviceable material and disposal of unserviceable material within 50 metres lead :	cum	771.00
3.6	Dismantling stone slab flooring laid in cement mortar including stacking of serviceable material and disposal of unserviceable material within 50 metres lead.	sqm	166.50
3.7	Demolishing brick tile covering in terracing including stacking of serviceable material and disposal of unserviceable material within 50 metres lead.	sqm	68.50
3.8	Demolishing mud phaska in terracing and disposal of material within 50 metres lead.	cum	643.00
3.9	Dismantling roofing including ridges, hips valleys and gutters etc., and stacking the material within 50 metres lead of:		
3.9.1	G.S. Sheet	sqm	113.50
3.9.2	Asbestos sheet	sqm	52.30
3.10	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	1,663.00

Code No	Description	Unit	Rate Rs.
3.11	Dismantling jack arch roofing and floors including stacking of serviceable material and disposal of unserviceable material within 50 metres lead.	sqm	154.00
3.12	Dismantling tiled roofing with battens boarding etc. complete including stacking of serviceable material and disposal of unserviceable material within 50 metres lead.	sqm	133.50
3.13	Demolishing thatch roofing including mats, bamboo, jaffari etc. complete including stacking of serviceable material and disposal of unserviceable material within 50 metres lead.	sqm	37.00
3.14	Dismantling wooden ballies in posts and struts including stacking within 50 metres lead.	metre	12.80
3.15	Dismantling and stacking within 50 metres lead, fencing posts or struts including all earth work and dismantling of concrete etc. in base of :		
3.15.1	T' or 'L' iron or pipe	each	133.00
3.15.2	R.C.C.	each	133.00
3.16	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	5.95
3.17	Dismantling barbed wire or flexible wire rope in fencing including making rolls and stacking within 50 metres lead.	kg	24.00
3.18	Dismantling wooden trellis work excluding frames but including stacking the serviceable material within 50 metres lead.	sqm	40.10
3.19	Dismantling expanded metal or I.R.C. fabrics with necessary battens and beading including stacking the serviceable material within 50 metres lead.	sqm	48.40
3.20	Dismantling wooden boardings in lining of walls and partitions, excluding supporting members but including stacking within 50 metres lead :		
3.20.1	Upto 10 mm thick	sqm	39.20
3.20.2	Thickness above 10 mm upto 25 mm	sqm	50.10
3.20.3	Thickness above 25 mm upto 40 mm	sqm	56.50
3.21	Dismantling precast concrete or stone slabs in walls, partition walls etc. including stacking within 50 metres lead:		
3.21.1	Thickness upto 40 mm	sqm	183.00
3.21.2	Thickness above 40 mm upto 75 mm	sqm	274.50
3.22	Dismantling cement asbestos, Celotax or other hard board ceiling or partition walls including stacking of serviceable materials and disposal of unserviceable materials within 50 metres lead.	sqm	38.60
3.23	Dismantling C.I. or asbestos rain water pipe with fittings and clamps including stacking the material within 50 metres lead :		

Code No	Description	Unit	Rate Rs.
3.23.1	75 to 80 mm dia pipe.	metre	46.30
3.23.2	100 mm dia pipe	metre	47.50
3.23.3	150 mm dia pipe	metre	48.70
3.24	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 :		
3.24.1	15 mm to 40 mm nominal bore	metre	89.90
3.24.2	Above 40 mm nominal bore	metre	95.10
3.25	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:		
3.25.1	Upto 150 mm diameter	metre	253.50
3.25.2	Above 150 mm dia upto 300 mm dia.	metre	338.50
3.25.3	Above 300 mm diameter	metre	445.50
3.26	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:		
3.26.1	Upto 150 mm diameter	metre	202.50
3.26.2	Above 150 mm diameter	metre	243.50
3.27	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 into municipal dumps within 50 metres lead as per direction of Engineer-in-charge.	each	428.50
3.28	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 into municipal dumps within 50 metres lead as per direction of Engineer-in-charge.	each	247.50
3.29	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	2,840.00
3.30	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 into municipal dumps within 50 metres lead including refilling the excavated gap.	each	589.00

Code No	Description	Unit	Rate Rs.
3.31	Dismantling of flushing cistern of any size including stacking of useful materials near the site and disposal of unserviceable materials within 50 metres lead.	each	593.00
3.32	Dismantling of C.I. sluice valve including stacking of useful materials within a lead of 50 metres		
3.32.1	Upto 150 mm diameter	each	214.00
3.32.2	Above 150 mm diameter	each	812.00
3.33	Dismantling of spindle fire hydrant including stacking of useful materials within 50 metres lead.	each	503.00
3.34	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	33.90
3.35	Dismantling aluminium/ Gypsum partitions, doors, windows, fixed glazing and false ceiling including disposal of unserviceable surplus material and stacking of serviceable material within 50 meters lead as directed by Engineer-in-charge.	sqm	38.60

4.0 EARTH WORK

Code No	Description	Unit	Rate Rs.
4.1	Dressing of earth work in surface excavation including cutting and filling upto 30cm depth including disposal of excavated earth upto 50m and lift upto 1.5 m.	sqm	41.00
4.2	Earth work in excavation for roadway, including trimming bottom and side slopes in accordance with requirement of line, grades and cross sections, including disposal of surplus material with all lift and lead upto 1000 metre as per MoRT&H specification clause 301.		
4.2.1	In all type of soil	cum	235.50
4.2.2	In ordinary rock	cum	356.50
4.2.3	In Hard Rocks		
4.2.3.1	Using blasting (including blasting material) (considering serviceable material)	cum	631.00
4.2.3.2	Blasting prohibited (considering serviceable material)	cum	1,010.00
4.3	Earth work in excavation in soil unsuitable for road construction such as marshy soil including pumping out water, removal of the same and disposal with all lift and lead upto 1 km as per MoRT&H specification clause 301.	cum	214.50
4.4	Construction of embankment with approved material obtained from borrow pit with all lifts and leads, transporting to site, spreading, grading to required slope and compacting by vibratory roller 8-10 tonne to meet requirement of table 300-2 including cost of compensation for earth taken from private land complete as per MoRT&H specification clause 305. (Lead taken upto 5 km)	cum	178.50
4.5	Construction of embankment with approved materials deposited at site available from roadway cutting and excavation from drain and foundation of other structures, graded and compacting by vibratory roller 8-10 tonne to meet requirement of table 300-2 as per MoRT&H specification clause 305.	cum	66.50
4.6	Construction of subgrade and earthen shoulders with approved material obtained from borrow area with all lifts & leads, transporting to site, spreading, grading to required slope and compacted in layers not exceeding 200mm thickness at OMC, with vibratory roller of 80-100 KN static weight or more to attain a density 97% maximum dry density to meet requirement of table No. 300-2 as per MoRT&H specification clause 305. (Lead taken upto 5 km)	cum	205.50
4.7	Construction of Embankment with Fly ash/Pond ash available from coal or lignite burning Thermal Plants as waste material conforming to table 1 of IRC: SP: 58 - 2001, 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	87.40
4.8	Compacting original ground		

Code No	Description	Unit	Rate Rs.
4.8.1	Loosening upto a level of 500 mm below the subgrade level watered, graded and compacted in layers by vibratory roller 8-10 tonne to meet requirement of table 300-2 for subgrade construction as per MoRT&H specification clause 305.3.4.	cum	48.50
4.8.2	Loosening and recompacting original ground below embankment including Loosening levelling and recompacting original ground supporting embankment to facilitate placement of first layer of embankment, scarified to a depth of 150 mm, mixed with water at OMC and then compacted by rolling by vibratory roller 8-10 tonne so as to achieve minimum dry density as given in table 300-2 for embankment construction as per MoRT&H specification clause 305.3.4.	cum	22.60
4.9	Earth work in excavation in open area, STP, WTP, Pumping station with mechanical means including dressing of sides and ramming of bottoms, including getting out the excavated material, disposal of excavated material lead upto 1000m at suitable site as per as per drawing and as per direction of Engineer. (Measurements for payment to be done as per standard drawings).		
4.9.1	In all kind of soil		
4.9.1.1	Upto 3.0 m depth	cum	159.50
4.9.1.2	Above 3.0 m and upto 6.0 m depth	cum	186.00
4.9.1.3	Above 6.0 m and upto 9.0 m depth	cum	223.50
4.9.2	In ordinary rock		
4.9.2.1	Upto 3.0 m depth	cum	400.50
4.9.2.2	Above 3.0 m and upto 6.0 m depth	cum	471.00
4.9.2.3	Above 6.0 m and upto 9.0 m depth	cum	522.00
4.9.3	In hard rock		
4.9.3.1	Upto 3.0 m depth	cum	710.00
4.9.3.2	Above 3.0 m and upto 6.0 m depth	cum	814.00
4.9.3.3	Above 6.0 m and upto 9.0 m depth	cum	866.00
4.10	Earth work in excavation in foundation, trenches etc. including dressing of sides and ramming of bottoms, including getting out the excavated material, refilling after laying pipe/ foundation and disposal of surplus excavated material at a lead upto 50m suitable site as per direction of Engineer for following depths, below natural ground / Road top level.		
4.10.1	In all types soils/ saturated soil such as moorum, sand, sandy silt, clay, black cotton soil, kankar, etc.		
4.10.1.1	Depth upto 1.5 m	cum	229.50
4.10.1.2	Add extra for overall depth of excavation above 1.5 m and upto 3.0 m over item no 4.10.1.1	cum	16.10

Code No	Description	Unit	Rate Rs.
4.10.1.3	Add extra for overall depth of excavation above 3.0 m and upto 4.5 m over item no 4.10.1.1	cum	36.70
4.10.1.4	Add extra for overall depth of excavation above 4.5 m and upto 6.0 m over item no 4.10.1.1	cum	64.30
4.10.1.5	Add extra for overall depth of excavation above 6.0 m and upto 7.5 m over item no 4.10.1.1	cum	98.70
4.10.1.6	Add extra for overall depth of excavation above 7.5 m and upto 9.0 m over item no 4.10.1.1	cum	137.50
4.10.2	In ordinary rock.		
4.10.2.1	Depth upto 1.5 m	cum	1,064.00
4.10.2.2	Add extra for overall depth of excavation above 1.5 m and upto 3.0 m over item no 4.10.2.1	cum	74.50
4.10.2.3	Add extra for overall depth of excavation above 3.0 m and upto 4.5 m over item no 4.10.2.1	cum	170.00
4.10.2.4	Add extra for overall depth of excavation above 4.5 m and upto 6.0 m over item no 4.10.2.1	cum	298.00
4.10.2.5	Add extra for overall depth of excavation above 6.0 m and upto 7.5 m over item no 4.10.2.1	cum	457.50
4.10.2.6	Add extra for overall depth of excavation above 7.5 m and upto 9.0 m over item no 4.10.2.1	cum	638.00
4.10.3	In hard rock (required blasting) including Blasting materials.		
4.10.3.1	Depth upto 1.5 m	cum	1,772.00
4.10.3.2	Add extra for overall depth of excavation above 1.5 m and upto 3.0 m over item no 4.10.3.1	cum	124.00
4.10.3.3	Add extra for overall depth of excavation above 3.0 m and upto 4.5 m over item no 4.10.3.1	cum	283.50
4.10.3.4	Add extra for overall depth of excavation above 4.5 m and upto 6.0 m over item no 4.10.3.1	cum	496.00
4.10.3.5	Add extra for overall depth of excavation above 6.0 m and upto 7.5 m over item no 4.10.3.1	cum	762.00
4.10.3.6	Add extra for overall depth of excavation above 7.5 m and upto 9.0 m over item no 4.10.3.1	cum	1,063.00
4.10.4	In hard rock (Blasting prohibited)		
4.10.4.1	Depth upto 1.5 m	cum	2,493.00
4.10.4.2	Add extra for overall depth of excavation above 1.5 m and upto 3.0 m over item no 4.10.4.1	cum	174.50
4.10.4.3	Add extra for overall depth of excavation above 3.0 m and upto 4.5 m over item no 4.10.4.1	cum	399.00
4.10.4.4	Add extra for overall depth of excavation above 4.5 m and upto 6.0 m over item no 4.10.4.1	cum	698.00

Code No	Description	Unit	Rate Rs.
4.10.4.5	Add extra for overall depth of excavation above 6.0 m and upto 7.5 m over item no 4.10.4.1	cum	1,072.00
4.10.4.6	Add extra for overall depth of excavation above 7.5 m and upto 9.0 m over item no 4.10.4.1	cum	1,496.00
4.11	Add extra over item no 4.10.1, 4.10.2, 4.10.3 and 4.10.4 in RUIDP SOR for excavation in saturated soil, silt and sludge where pumping or bailing out of water is required including shoring strutting where required and dewatering, where width is upto 6 metre.		
4.11.1	Excavation depth from ground level 0.0 to 9.0 m		
4.11.1.1	Excavation from Encountered depth of water table 0.0 to 1.5 m	cum	45.90
4.11.1.2	Excavation from Encountered depth of water table 1.5 to 3.0 m	cum	91.80
4.11.1.3	Excavation from Encountered depth of water table 3.0 to 4.5 m	cum	183.50
4.11.1.4	Excavation from Encountered depth of water table 4.5 to 6.0 m	cum	275.50
4.11.1.5	Excavation from Encountered depth of water table 6.0 to 7.5 m	cum	367.00
4.11.1.6	Excavation from Encountered depth of water table 7.5 to 9.0 m	cum	734.00
4.12	Filling with locally available river sand at all levels including watering ramming consolidating and dressing complete including cost of sand.	cum	1,013.00
4.13	Earth filling with available surplus soil excavated from foundations and taken only from outside of building plinth in layers not exceeding 20cm in depth, consolidating each deposited layer including ramming and watering and consolidation with lead up to 50 m and lift upto 1.5 m.	cum	159.00
4.14	Providing and fixing CLOSE timbering in foundation, trenches etc at all depth including strutting, shoring and packing cavities (wherever required) complete. (Measurements to be taken of the face area timbered).	sqm	141.50
4.15	Extra for planking, strutting and packing material for cavities IN CLOSE TIMBERING if required to be left permanently in position (face area of timber permanently left to be measured)	sqm	1,121.00
4.16	Providing and fixing OPEN timbering in foundation, trenches etc at all depth including strutting, shoring and packing cavities (wherever required) complete.	sqm	71.90
4.17	Extra for planking, strutting and packing material for cavities IN OPEN TIMBERING if required to be left permanently in position (face area of timber permanently left to be measured)	sqm	477.50
4.18	Compensation for earth, taken from private land with all lead and lift (Land to be arranged by private negotiations by the Contractor) [MoRTH Specification : Clause 301 to 305]	cum	88.50
4.19	Supplying Chlorpyrifos/ Lindane emulsifiable concentrate of 20% in sealed containers including delivery as specified.	litre	230.00

Code No	Description	Unit	Rate Rs.
4.20	Diluting and injecting Chlorpyriphos/ Lindane E.C. 20% with 1% concentration for POST-CONSTRUCTIONAL anti-termite treatment (excluding the cost of chemical emulsion) :		
4.20.1	Along external wall where the apron is not provided using chemical emulsion @ 7.5 litres / sum of the vertical surface of the substructure to a depth of 300 mm including excavation channel along the wall & rodding etc. complete:	metre	22.60
4.20.2	Along the external wall below concrete or masonry apron using chemical emulsion @ 2.25 litres per linear metre including drilling and plugging holes etc.	sqm	22.60
4.20.3	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 :	sqm	196.00
4.20.4	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 :	metre	24.50
4.21	Diluting and injecting chemical emulsion for POST-CONSTRUCTIONAL anti-termite treatment (excluding the cost of chemical emulsion) at points of contact of wood work by chemical emulsion Chlorpyriphos/ Lindane (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	70.30
4.22	Diluting and injection Chlorpyrifos Emulsifiable concentrate 20% with 1% concentration for PRE-CONSTRUCTIONAL Anti termite treatment as per IS 6313 part III as amended from time to time and creating a continuous chemical barrier under and around the column pits, wall trenches, basement excavation, top surface of plinth filling, junction of wall and floor along the external perimeter of building expansion joints, over the top surface of consolidated earth of which approach is to be laid surrounding of pipes and conduits etc. complete as per specification (Plinth floor area only shall be measured for payment and excluding the cost of chemical emulsion).	sqm	262.50
4.23	Silt clearance of drains, channels and canals with lift 1.5 Mtr and lead up to 50 Mtr.	cum	384.50
4.24	Sludge clearance of drains, channels and canals with lift 1.5 Mtr and lead up to 50 Mtr.	cum	411.00
4.25	Providing Barricading for Trenches using 80 - 100 mm dia Wooden Ballies as vertical post, atleast 1.5m above ground level and atleast 30-45 cm below ground level at a spacing of 3 m. Two rows of PVC Tape (preferably red in colour) strip barricading horizontal strip securely tied by the vertical members. Vertical members shall be painted in red and white colour. Rate is inclusive removal and cleaning of site complete in all respect.	metre	113.50

Code No	Description	Unit	Rate Rs.
4.26	Providing and fixing Barricading at site of work for restricting the general public using 80-100 mm dia Wooden Ballies as vertical post with average spacing of 1.80 meter between two vertical posts, having height at least 1.5 m above road/ ground level and at least 30-45 cm below road/ ground level by making suitable size hole in road/ ground, providing and fixing two rows of 80-100 mm Wooden Ballies as horizontal members with jute russies. Both vertical and horizontal members shall be painted in red and white colour strips as per approved pattern as and when it becomes shabby but at least after every alternate shifting at new location. After shifting/ removal of barricading holes shall be filled up properly and site is to be cleared in all respect. (Note: measurement is to be done in linear basis)	metre	114.00
4.27	Providing and fixing Barricading at site of work for restricting the general public using 80-100 mm dia Wooden Ballies as vertical post with average spacing of 1.80 meter between two vertical posts, having height at least 1.5 m above road/ ground level and at least 30-45 cm below road/ ground level by making suitable size hole in road/ ground, providing and fixing suitably two rows of 100mm wide PVC Tape preferably of red colour. The vertical members shall be painted in red and white colour strips as per approved pattern as and when it becomes shabby but at least after every alternate shifting at new location. After shifting/ removal of barricading holes shall be filled up properly and site is to be cleared in all respect. (Note: measurement is to be done in linear basis)	sqm	144.50
4.28	Providing and fixing Barricading at site of work for restricting the general public using 40 mm dia M.S. pipe ("B" class) as vertical post with average spacing of 1.80 meter between two vertical posts, having height at least 1.5 m above road/ ground level and at least 30-45 cm below road/ ground level by making suitable size hole in road/ ground, providing and fixing suitably two rows of 100mm wide PVC Tape preferably of red colour. The M.S. pipe shall be painted in red and white colour strips as per approved pattern as and when it becomes shabby but at least after every alternate shifting at new location. After shifting/ removal of barricading the hole shall be filled up properly and site is to be cleared in all respect. (Note: measurement is to be done in linear basis)	metre	50.50
4.29	Providing and fixing Barricading at site of work for restricting the general public using 40 mm dia M.S. pipe ("B" class) as vertical post with average spacing of 1.80 meter between two vertical posts, having height at least 1.5 m above road/ ground level and at least 30-45 cm below road/ ground level by making suitable size hole in road/ ground, providing and fixing two rows of 40 mm dia M.S. pipe ("B" class) as horizontal members with nuts & bolts. Both vertical and horizontal members shall be painted in red and white colour strips as per approved pattern as when it becomes shabby but at least after every alternate shifting at new location. After shifting/ removal of barricading holes shall be filled up properly and site is to be cleared in all respect. (Note: measurement is to be done in linear basis)	metre	69.40

Code No	Description	Unit	Rate Rs.
4.30	Providing and Fixing Minimum 0.63mm thick GI corrugated sheets (minimum width of each sheet shall be 60 cm) for covering the barricading in one/ two rows one above another and painting in red and white stripes as per the specifications and directions of the Engineer In-charge with proper fixing arrangements with GI limpet washers nuts and bolts complete in all respect.	sqm	147.00

5.0 SURVEY, TESTING, INVESTIGATION AND SITE OFFICE

Code No	Description	Unit	Rate Rs.
5.1	Topographic Survey		
5.1.1	Topographic Survey with a grid area of 15MX15M, includes all features such as structures (bridges, culverts etc.) utilities, existing roads, electric and telephone installations (both O/H as well as underground), huts, buildings, fencing and trees, oil, water and gas lines etc. using Total Station and develop a drawing in AUTO CAD format using the layering system and Geo referencing including supply of detailed drawings (with DGPS) in appropriate scale in A-2 size complete in all respect.		
5.1.1.1	For preparation of plans of built-up areas Upto 10 hectare	hectare	3,884.00
5.1.1.2	For preparation of plans of built-up areas beyond 10 hectare	hectare	3,249.00
5.1.1.3	For preparation of plans of open areas Upto 10 hectare	hectare	2,905.00
5.1.1.4	For preparation of plans of open areas beyond 10 hectare	hectare	2,283.00
5.1.2	Topographic Survey by taking longitudinal sections at every 10m interval, cross sections at every 5m interval on either side of center line of Road including supply of detailed drawings in appropriate scale & size in soft copy & Hard copy complete all respect as per direction of Engineer and detailed alignment plans with covering all features in a width:		
5.1.2.1	Upto 10 mtrs.	km	7,767.00
5.1.2.2	From 10mtrs. Upto 20 mtrs.	km	9,709.00
5.1.2.3	From 20mtrs. Upto 30 mtrs.	km	11,096.00
5.1.2.4	From 30 mtrs. Upto 50 mtrs.	km	12,945.00
5.1.3	Fly levelling for transfer level from GTS benchmark to project area by close traverse method for fixing of temporary bench Mark as reference.	km	746.00
5.1.4	Fly levelling from location of temporary bench benchmark along the proposed alignment at minimum 50 m interval & where the abrupt changed of levels including supply of drawing of L-section and levels in tabular form complete all respect as per direction of Engineer. (For disposal point of treated effluent and rising main of pipeline works etc.)	km	1,909.00
5.1.5	Establish Bench Mark / Reference pillar of size 15 cm X 15 cm X 45 cm shall be cast in RCC of grade M-15 with a nail fixed in the centre of the top surface. The reference pillar shall be embedded in concrete up to a depth of 30 cm with CC M10 (5 cm wide all around). The balance 15 cm above ground shall be painted yellow. The spacing shall be 250m.	each	737.00

Code No	Description	Unit	Rate Rs.
5.1.6	Installation of GPS pillar at every 5 km. of size 300 mm x 300 mm x 900 mm in RCC of grade M-15. The pillars shall be embedded 600 mm in ground with CC M-10 grade (50 mm wide all around). The balance 300 mm above ground shall be painted yellow and pillar no marked on it.	each	2,035.00
5.2	Pavement Investigation and Evaluation		
5.2.1	BBD Tests as per IRC: 81-1997 ("Guidelines for Strengthening of Flexible Road Pavements Using Benkelman Beam Deflection Technique") and pavement evaluation	km	5,597.00
5.2.2	Test pit to obtain the existing pavement crust details and DCP test for physical characteristics of the sub-grade soil	each	2,099.00
5.2.3	Auger Boring (2 m depth) sampling/testing	each	3,777.00
5.2.4	Auger Boring (4 m depth) sampling/testing	each	5,668.00
5.2.5	Auger Boring (6 m depth) sampling/testing	each	7,553.00
5.2.6	California Bearing Ratio test	each	1,963.00
5.3	Material survey and Investigation		
5.3.1	Identification of Quarry site, collection of samples of Stone metal/Fine Aggregate/GSB and laboratory testing viz. Flakiness and Elongation Index, Aggregate Impact Value (AIV), Specific Gravity and Water Absorption, Stripping and Coating test, Los Angeles Abrasion Value (LAV), Gradation, Specific Gravity, silt content and Fineness Modulus, Laboratory Compaction Test (Modified Proctor Test), CBR Test from NABL approved laboratory and preparation of report complete in all respect.		
5.3.1.1	Stone metal samples from crushers/quarries	each	4,233.00
5.3.1.2	Fine Aggregates from crushers/quarries	each	2,113.00
5.3.1.3	GSB from crushers/quarries	each	4,241.00
5.3.2	Identification Borrow area, borrow pits sample testing from NABL approved laboratory (Soil Classification, Sieve Analysis, Atterberg Limits, Laboratory Compaction Test (Modified Proctor Test), 4-day soaked CBR, Free swell Index)	each	7,403.00
5.4	Traffic Survey-To carry out traffic volume count survey and turning movement count survey. This traffic data will be analyzed to find out daily traffic. Peak Hour traffic volumes, turning movements, patterns etc.		
5.4.1	Traffic Volume counts (3 days count)		
5.4.1.1	Two Lane Road	each	26,057.00
5.4.1.2	Four Lane Road	each	32,911.00
5.4.2	Traffic Volume counts (7 days count)		
5.4.2.1	Two Lane Road	each	52,043.00
5.4.2.2	Four Lane Road	each	68,035.00

Code No	Description	Unit	Rate Rs.
5.4.3	Axle Load Surveys (one day)		
5.4.3.1	Two Lane Road	each	15,349.00
5.4.3.2	Four Lane Road	each	18,776.00
5.4.4	Intersection Volume Count and Pedestrian/animal cross count (in Peak Hours)	each	8,817.00
5.4.5	OD Survey and Commodity movement characteristics (1 day)		
5.4.5.1	Two Lane Road	each	11,494.00
5.4.5.2	Four Lane Road	each	13,778.00
5.5	Water Sample Tests		
5.5.1	Water Quality Analysis– Collecting representative sample and Physical & Chemical testing of Parameter from NABL approved laboratory as per CPHEEO manual: PH, TDS, Electrical Conductivity (EC), Taste & Odour, turbidity, magnesium, Total hardness, total alkalinity, chloride, Dissolved Oxygen (DO), sulphate, nitrate, fluoride, Calcium, Iron, Pesticide, Manganese, Cooper, Aluminium, Residual Chlorine, Zinc, phenolic compound, Arsenic, Cadmium, Chromium, cyanides, lead, selenium, Mercury.	each	8,467.00
5.5.2	Collecting representative sample and Bacteriological Parameter testing of water from NABL approved laboratory as per CPHEEO manual: Total coliforms, faecal coliforms	each	1,963.00
5.6	Raw Sewage Analysis– Collecting representative sample and Physical & Chemical testing of Parameter from NABL approved laboratory as per CPHEEO manual: PH, Temperature, TSS, TDS, Inorganic dissolved solids, Alkalinity as CaCO ₃ , total hardness as CaCO ₃ , chloride as Cl, sulphate as SO ₄ , Fluoride as F, Phosphate as PO ₄ , Ammonical Nitrogen as N, Sodium as Na, TKN, BOD at 200 C, COD, Silica as SiO ₂ , oil and grease, sulphide as S, phenolic compound and submission of report complete in all respect.	each	7,853.00
5.7	Municipal Solid Waste Sample analysis - Collecting representative sample of Municipal Solid Waste (MSW) and analyze physical and chemical Characterization and composition of each component in %age in NABL approved laboratory as per CPHEEO manual: Various parameters for Characterization are moisture content, total solids, volatile solids of total solids, fixed solids percent of total solids, organic carbon, COD and calorific value. Composition of each component in %age viz. Paper, Rubber, Leather & Synthetics, Metals, Inert, Plastics, Organics, Textiles, Wood & Others and submission of report complete in all respect.	each	10,566.00
5.8	Ambient Air Quality Monitoring- For parameters – PM-2.5 & PM-10, SO ₂ , NO ₂ , CO from NABL approved laboratory and submission of report complete in all respect.	each	6,197.00

Code No	Description	Unit	Rate Rs.
5.9	Ambient Noise Quality Monitoring - To Identify sources of noise, Noise due to traffic/transportation of vehicles, Noise due to heavy equipment operations, Duration and variations in noise over time etc. the equivalent noise levels shall be monitored (Lday and Lnight in Leq dBA) from NABL approved laboratory and submission of report complete in all respect.	each	2,492.00
5.10	Survey for identify the Existing Underground utilities: Field survey using Geo-radar system & Total Station for GIS mapping, collecting of data and plotting the details on digital map of Existing Underground utilities for a width of 15 m including supply of detailed drawings of lanes in appropriate scale & A-2 size in soft copy & Hard copy complete all respect.		
5.10.1	(a) Water mains: Alignment using appropriate techniques and it's attributes depth of laying, diameter and material and location of pipe/ appurtenances/ meters. (b) Location of manholes and alignment of sewers. (c) Road levels at every intersections or 50 meters whichever is less. (d) Present condition of available services.		
5.10.1.1	Upto 2 Km	km	28,931.00
5.10.1.2	Beyond 2 km and upto 5 Km	km	24,401.00
5.10.1.3	Beyond 5 km	km	19,871.00
5.11	Excavation for taking trial pits along pipe/sewer line -Trenches/pits size 1.0mx1.0mx1.5m - for field verification for location/details of utilities, and refilling of excavated trench/pit as per standard engineering practices:		
5.11.1	Area with Cement Concrete Roads	each	2,256.00
5.11.2	Area with Bituminous road Surface	each	2,085.00
5.11.3	Area with metal/non-metal surface	each	1,228.00
5.12	Add extra for extra excavation in trial pits for each and every 0.5 m depth or part thereof.	each	423.00
5.13	Surveys for evaluation of discharge, efficiency of pump and head losses in piping within the pump house for centrifugal pumps in existing operating conditions of each pump set.	each	1,306.00
5.14	Surveys/ Bench Test for evaluation of discharge, efficiency of pump and head losses in piping within the pump house for submersible pumps in existing operating conditions of each pump set.	each	1,499.00
5.15	Geotechnical Investigations:		
5.15.1	To Analyze the soil conditions by drilling bore holes at different locations to represent soil strata to conduct Standard penetration test (SPT) for determining SBC in hole as per IS-2131 including collection of disturbed and undisturbed soil samples at every 3.0 m or at change of strata analyzing the soil or grain size, atterberg		

Code No	Description	Unit	Rate Rs.
	limits, bulk & dry densities, shear parameters and specific gravity. In case of rock, collection of core, calculation of RQD (Rock Quality Designation) and core recovery and comprehensive strength of rock. Geo-tech investigation to be done at different locations complete in all respect as per specifications.		
5.15.1.1	In hard Soil	metre	1,888.00
5.15.1.2	In ordinary/soft rock	metre	2,832.00
5.15.1.3	In Hard Rock	metre	3,777.00
5.15.2	Plate load test for determining SBC at a specified depth and draw load settlement curve as per Indian standard complete in all respect as per specifications.	each	43,805.00
5.16	Site clearance, labelling and demarcation of land boundary by providing and fixing boundary stone of size 15cmx10cmx120cm (60cm below ground) stone at every 50 m interval & corner of the land and to write the length of the land boundary on corner stones from one corner to another corner by enamel paint.	metre	19.00
5.17	Preparation of detailed plans, elevations, sections of existing buildings.	sqm	62.00
5.18	Socio-economic survey – To collect the information regarding social and economical status of beneficiaries in terms of their livelihood in a prescribed format. The Census cum Socio-economic survey to be conducted by using questionnaire with a battery of questions to address social and economical status.	each	41.00
5.19	Survey of all properties, preparation of GIS based consumer mapping of consumer water connection & consumer sewer connections and database, plotting assets on GIS map etc (Satellite image will be provided by the Department)	each property	65.50
5.20	Photography for the CAAP activities	each	43.00
5.21	SITE OFFICE		
5.21.1	Providing, arranging, managing and maintaining 500 sq.ft. well furnished office and well-equipped Laboratory with 3 tables, 10 chairs, 2 steel almirah, one computer with printer & operator, sufficient number of display etc. to the satisfaction of the Project Manager including Electrical, Water expenses etc. For execution of this item the date of start shall be considered only when the Contractor has actually rented/constructed the required premises established the office & Laboratory as per requirement. This item shall remain valid only for original contract period; no additional payment shall be made for whatsoever reason even if time extension is provided or date of completion is extended. This office and laboratory including furniture and all other equipment shall be property of contractor after completion of Project.	month	23,500.00
5.21.2	Providing, arranging, managing and maintaining minimum 350 sq.ft. office with two tables, 6 chairs, one steel almirah, one computer with printer & operator, sufficient number of display etc. fully furnished office to the satisfaction of the Project Manager including Electrical, Water expenses etc. For execution of this item the date of start shall		

Code No	Description	Unit	Rate Rs.
	be considered only when the Contractor has actually rented/constructed the required premises established the office & Laboratory as per requirement. This item shall remain valid only for original contact period; no additional payment shall be made for whatsoever reason even if time extension if provided or date of completion is extended. This office and laboratory including furniture and all other equipment shall be property of contractor after completion of Project as per specification and direction of the Engineer.	month	16,100.00
5.21.3	Providing, arranging, managing, and maintaining minimum 250 sq.ft. well-equipped Laboratory as per specifications with two tables, 4 chairs, one steel almirah, sufficient number of display etc. to the satisfaction of the Project Manager including Electrical, Water expenses etc. For execution of this item the date of start shall be considered only when the Contractor has actually rented/constructed the required premises established the Laboratory as per requirement. This item shall remain valid only for original contact period; no additional payment shall be made for whatsoever reason even if time extension if provided or date of completion is extended. This laboratory including furniture and all other equipment shall be property of contractor after completion of Project.	month	8,450.00
5.21.4	Supply of laboratory equipments like Analytical Balance, Autoclave, Dissolved Oxygen Sampler, Drying Oven, Hot Plates, Incubator, Microscope, Binocular, Membrane Filter Assembly, Muffle Furnace, PH Meter portable, Electrical Conductivity Meter, Refrigerator (165 ltr.), Sludge Sampler, Soxhlet extraction unit, Centrifuge, Colorimeter, Kjeldhal apparatus, Distillation Unit, Turbidity meter, Vacuum pump, Water bath (thermostat controlled), Black Bottles and Glass wares of approved make including analytical chemicals and commissioning as per technical specification and the direction of the Engineer.	set	2,66,700.00
5.22	Door-to-door survey for Sewer & Water house service connection of all properties to be connected with Sewer Network, Preparation of sketch drawing true to site showing layout arrangement for each house sewer connection with all the details i.e. location of IC, septic tank, size of outlet pipe from property, proposed pipe length etc. and obtain approval from Project manager or his representative, Preparation of as built drawing (Layout plan) in AutoCAD for each property / dwelling connected with sewer network.	No	55.50
5.23	Drone Survey utilizing a UAV with Drone camera having a min resolution of 20 MP or higher quality with a high-end surveying drone for 15 x 15 meter grid, equipped with RTK /PPK from a height of 80-100 meters. Capturing data with 60% image overlap and with prior DGCA / statutory permission. These sophisticated tools can deliver high ground sampling distance horizontal & vertical accuracy should be 10 cm & 15 cm respectively.		
5.23.1	For preparation of plans of built-up areas Upto 5 sq.km.	LS	1,75,000.00

Code No	Description	Unit	Rate Rs.
5.23.2	Add extra for preparation of plans of built-up areas between 5 sq.km to 15 sq.km.	sq.km.	18,000.00
5.23.3	Add extra for preparation of plans of open areas beyond 15 sq.km.	sq.km.	15,000.00

6.0 MORTARS

Code No	Description	Unit	Rate Rs.
6.1	Cement Mortar 1:1 (1 cement : 1 fine sand)	cum	7,976.00
6.2	Cement mortar 1:2 (1 cement : 2 fine sand).	cum	6,261.00
6.3	Cement mortar 1:3 (1 cement : 3 fine sand).	cum	5,406.00
6.4	Cement mortar 1:4 (1 cement : 4 fine sand).	cum	4,608.00
6.5	Cement mortar 1:5 (1 cement : 5 fine sand).	cum	4,178.00
6.6	Cement mortar 1:6 (1 cement : 6 fine sand).	cum	3,810.00
6.7	Cement mortar 1:2 (1 cement : 2 coarse sand).	cum	6,397.00
6.8	Cement mortar 1:3 (1 cement : 3 coarse sand).	cum	5,559.00
6.9	Cement mortar 1:4 (1 cement : 4 coarse sand).	cum	4,761.00
6.10	Cement mortar 1:5 (1 cement : 5 coarse sand).	cum	4,331.00
6.11	Cement mortar 1:6 (1 cement : 6 coarse sand).	cum	3,963.00
6.12	Cement mortar 1:2 (1 cement : 2 stone dust).	cum	5,475.00
6.13	Cement mortar 1:2 (1 cement : 2 marble dust).	cum	4,918.00
6.14	Cement mortar 1:5 (1 cement : 5 marble dust).	cum	2,666.00
6.15	White cement mortar 1:2 (1 white cement : 2 marble dust).	cum	14,397.00
6.16	White cement mortar 1:3 (1 white cement : 3 marble dust).	cum	11,003.00
6.17	White cement mortar 1:5 (1 white cement : 5 marble dust).	cum	6,987.00
6.18	Mud mortar	cum	701.00

7.0 ROAD WORKS (Sub-base/ Bases)

Code No	Description	Unit	Rate Rs.
7.1	Providing, laying, spreading and compacting 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 MoRT&H specification clause - 401 including all material, labour, machinery, lighting, guarding and maintenance of diversion.		
7.1.1	Grading - I Material	cum	1,376.00
7.1.2	Grading - II Material	cum	1,375.00
7.1.3	Grading - III Material	cum	1,360.00
7.2	Providing, laying, spreading and compacting of granular sub-base by providing close graded material (Table 400-1), 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 MoRT&H specification clause - 401 including all material, labour, machinery, lighting, guarding and maintenance of diversion.		
7.2.1	Grading - I Material	cum	1,173.00
7.2.2	Grading - II Material	cum	1,173.00
7.2.3	Grading - III Material	cum	1,157.00
7.3	Providing, laying and spreading of granular sub-base by providing coarse graded Material (Table 400-2), 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 MoRT&H specification clause - 401 including all material, labour, machinery, lighting, guarding and maintenance of diversion.		
7.3.1	Grading - I Material	cum	1,128.00
7.3.2	Grading - II Material	cum	1,103.00
7.3.3	Grading - III Material	cum	1,106.00
7.4	Providing laying, spreading and compacting inverted choke by providing, laying, spreading and compacting screening B type/ coarse sand of specified grade in sub base course in uniform layer on a prepared surface with motor grader and compacting with power roller etc complete as per clause 404.3.2 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion complete.	cum	2,134.00
7.5	Providing laying, spreading and compacting stone aggregates of specific sizes as per Table 400-7 to Water Bound Macadam specification including spreading in uniform thickness; hand packing,		

Code No	Description	Unit	Rate Rs.
	rolling with power roller 8-10 tonnes, in stages to proper grade and camber, applying and brooming requisite type of screening (Table 400-8) binding materials to fill up the interstices of coarse aggregates, watering (with water browser) and compacting to required density, making necessary earthen bund to protect edges as per clause 404 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion complete.		
7.5.1	Hand broken - Grade-I (90-45mm)	cum	1,752.00
7.5.2	Hand broken - Grade-II (63-45mm)	cum	1,709.00
7.5.3	Crusher broken - Grade-II (63-45mm)	cum	1,915.00
7.5.4	Crusher broken - Grade-III (53-22.4mm)	cum	1,897.00
7.6	Providing, laying, spreading (with paver finisher only) and compacting wet mix macadam (WMM) base course comprising of graded stone aggregate and granular material conforming to MoRT&H specifications (Table 400-II) in layers of equal compacted thickness each consolidated, including pre-mixing the material with water at OMC in mechanical mixer (Pug Mill), carriage of mixed material by tippers to site, laying in uniform layers in base course on a well prepared sub-base/ base course and compacting with power vibratory-roller to achieve the desired density complete as per MoRT&H specification clause - 406 including all material, labour, machinery, lighting, guarding and maintenance of diversion.	cum	1,775.00
7.7	Scarifying existing granular road surface, including picking up scarified material and stacking of old serviceable material within a lead of 1000 meters complete as per clause 305.4.3 of MoRT&H specification including all labour, machinery, lighting, guarding and maintenance of diversion.	sqm	41.60

8.0 ROAD WORKS (Bituminous Bases)

Code No	Description	Unit	Rate Rs.
8.1	Providing and applying primer coat over prepared surface of granular base with bitumen emulsion as per IS : 8887 and approved quality @ 0.6 kg/sqm with the help of spray set fitted on bitumen Container (boiler) after cleaning the surface including removing of binding material and other foreign matter with wire brushes and small picks, sweeping with brooms or soft brushes and finally dusting with old gunny bags and compressed air to receive bituminous treatment complete as per clause 502 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion.	sqm	33.70
8.2	Extra for additional bitumen emulsion used in above item for every 1 kg per 10 sqm	sqm	5.40
8.3	Providing and applying tack coat on the prepared surface with bitumen emulsion as per IS: 8887 and approved quality @ 0.2 kg/sqm with the help of spray set fitted on bitumen Container (boiler) after cleaning the surface with brooms or soft brushes and finally dusting with old gunny bags and compressed air to receive bituminous treatment complete as per clause 502 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion.	sqm	12.00
8.4	Extra for additional bitumen emulsion used in above item for every 1 kg per 10 sqm	sqm	5.40
8.5	Providing and laying bituminous macadam in 50/75 mm compacted thickness on prepared surface with specified graded crushed stone aggregates as per Table 500-4, Grading-II for base/ binding course, loading of aggregate with F.E. loader, heating and mixing of stone aggregate and bitumen in computerised hot mix plant, transported to site by tippers to paver, laid over a previously prepared surface with paver finisher fitted with electronic sensing device to the required grade, level and alignment and rolling with power roller and vibratory compactor as per clauses 501.6 and 501.7 to achieve the desired compaction complete as per clause 504 of MoRT&H specification and including all material, labour, machinery, lighting, guarding and maintenance of diversion but excluding cost of primer/ tack coat.		
8.5.1	With Bitumen VG-grade 30 @ 3.3% (percentage by weight of total mix)	cum	6,010.00
8.5.2	With Bitumen VG-grade 30 @ 3.4% (percentage by weight of total mix)	cum	6,140.00
8.5.3	With CRMB 60 grade @ 3.3% (percentage by weight of total mix)	cum	6,210.00
8.5.4	With CRMB 60 grade @ 3.4% (percentage by weight of total mix)	cum	6,340.00
8.5.5	With Bitumen VG-grade 30 @ 3.3% (percentage by weight of total mix)	tonne	2,740.00

Code No	Description	Unit	Rate Rs.
8.5.6	With Bitumen VG-grade 30 @ 3.4% (percentage by weight of total mix)	tonne	2,795.00
8.5.7	With CRMB 60 grade @ 3.3% (percentage by weight of total mix)	tonne	2,830.00
8.5.8	With CRMB 60 grade @ 3.4% (percentage by weight of total mix)	tonne	2,890.00
8.6	Providing and laying penetration macadam over prepared surface by providing a layer of compacted crushed coarse aggregate as per Table 500-6 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 as per clause 505 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion.		
8.6.1	50 mm compacted thickness with Bitumen VG-grade 30 @ 5 kg/sqm	sqm	369.50
8.6.2	75 mm compacted thickness with Bitumen VG-grade 30 @ 6.8 kg/sqm	sqm	498.50
8.7	Providing, laying and consolidation of crushed stone aggregate as per Table 500-7 on prepared surface as per built-up-spray grout specification, 75mm thick as base coarse in two layer composite construction of crushed stone aggregates using motor grader, chip spreader for key aggregate with application of bituminous binder VG-grade 30 with spray set (including Cost of anti-stripping compound Minimum 1% in Lime/Cement as per design wherever required) @ 15 Kg/ 10 Sqm after each layer, and laying key aggregates on top of the second layer and rolling with power roller (8-10 tonne), as per clause 506 of MoRT&H Specification including all labour, machinery, lighting, guarding and maintenance of diversion but excluding cost of primer/ tack coat.	cum	3,885.00
8.8	Providing and laying 50-75 mm compacted thick design mix (approved by Engineer) Dense Bituminous Macadam on prepared surface with specified graded crushed aggregates as per Table 500-9, 500-10 with bitumen binder set (including Cost of anti-stripping compound Minimum 1% in Lime/Cement as per design wherever required) for base/ binder course including loading of material with F.E. loader, heating and mixing of stone aggregate, filler and bitumen in computerised hot mix plant, transporting the mixed material by tippers to paver and laying with paver finisher fitted with electronic sensor control as per clause 504.3.5 to the required level and grade, compacting by power rollers and vibratory rollers or 150 to 250 KN pneumatic tyred roller with TP = 0.7 Mpa to achieve the desired density (approximately 2.3 tonne/cum) complete as per clause 507 of MoRT&H specification but excluding primer/tack coat, including all material, labour, machinery, lighting, guarding and maintenance of diversion.		
8.8.1	Grade-II with Bitumen VG-grade 30 @ 4.25 %, lime filler @ 2% (percent by weight of total mix)	cum	7,530.00

Code No	Description	Unit	Rate Rs.
8.8.2	Grade-II with Bitumen VG-grade 30 @ 4.50 %, lime filler @ 2% (percent by weight of total mix)	cum	7,860.00
8.8.3	Grade-II with CRMB-60 @ 4.25 %, lime filler @ 2% (percent by weight of total mix)	cum	7,800.00
8.8.4	Grade-II with CRMB-60 @ 4.50 %, lime filler @ 2% (percent by weight of total mix)	cum	8,150.00
8.8.5	Grade-II with Bitumen VG-grade 30 @ 4.25 %, lime filler @ 2% (percent by weight of total mix)	tonne	3,265.00
8.8.6	Grade-II with Bitumen VG-grade 30 @ 4.50 %, lime filler @ 2% (percent by weight of total mix)	tonne	3,410.00
8.8.7	Grade-II with CRMB-60 @ 4.25 %, lime filler @ 2% (percent by weight of total mix)	tonne	3,380.00
8.8.8	Grade-II with CRMB-60 @ 4.50 %, lime filler @ 2% (percent by weight of total mix)	tonne	3,530.00
8.9	Providing laying and consolidation Semi Dense Bituminous Concrete, as per Design Mix (approved by Engineer), on prepared surface with specified graded crushed aggregates as per table 500-15 for wearing coarse including loading of material with F.E. loader, hot mixing of stone aggregate, filler and bitumen (including Cost of anti-stripping compound Minimum 1% in Lime/Cement as per design wherever required) heating and mixing in in computerised hot mix plant, transporting the mixed material by tippers to paver and laying with paver finisher fitted with electronic sensor control to the required level and grade, compacting by power rollers and vibratory rollers or 150 to 250 KN pneumatic tyred roller with TP = 0.7 Mpa, to achieve the desired density (approximately 2.3 tonne/cum) complete as per clause 508 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion but excluding primer/tack coat.		
8.9.1	35-40 mm compacted thickness (Grade-1) using Bitumen VG-grade 30 @ 4.5% (percent by weight of total mix)	cum	8,070.00
8.9.2	35-40 mm compacted thickness (Grade-1) using CRMB-60 @ 4.5% (percent by weight of total mix)	cum	8,360.00
8.9.3	25-30 mm compacted thickness (Grade-2) using Bitumen VG-grade 30 @ 5% (percent by weight of total mix)	cum	8,740.00
8.9.4	25-30 mm compacted thickness (Grade-2) using CRMB-60 @ 5% (percent by weight of total mix)	cum	9,060.00
8.9.5	35-40 mm compacted thickness (Grade-1) using Bitumen VG-grade 30 @ 4.5% (percent by weight of total mix)	tonne	3,495.00
8.9.6	35-40 mm compacted thickness (Grade-1) using CRMB-60 @ 4.5% (percent by weight of total mix)	tonne	3,620.00
8.9.7	25-30 mm compacted thickness (Grade-2) using Bitumen VG-grade 30 @ 5% (percent by weight of total mix)	tonne	3,790.00

Code No	Description	Unit	Rate Rs.
8.9.8	25-30 mm compacted thickness (Grade-2) using CRMB-60 @ 5% (percent by weight of total mix)	tonne	3,925.00
8.10	Providing and laying 30-45 mm compacted thickness Bituminous Concrete as per design mix (approved by Engineer) on prepared surface with specified grade stone aggregate as per Table - 500-18 with bitumen for wearing course including loading of aggregate with F.E. loader and hot mixing of stone aggregate and bitumen (including Cost of anti-stripping compound Minimum 1% in Lime/Cement as per design wherever required) in computerised hot mix plant, transporting the mixed material by tippers to paver and laying with paver finisher fitted with electronic sensing device (as per clause 504-3.5) to the required level and grade and compacting by power rollers and vibratory rollers or 150 to 250 KN pneumatic tyred roller with TP = 0.7 Mpa, to achieve the desired density complete as per clause 509 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion but excluding primer/tack coat.		
8.10.1	Grade-II with Bitumen VG-grade 30 @ 6% (percent by weight of total mix)	cum	10,250.00
8.10.2	Grade-II with bitumen of grade CRMB-60 @ 6% (percent by weight of total mix)	cum	10,650.00
8.10.3	Grade-II with bitumen of grade SBS PMB-40 @ 6% (percent by weight of total mix)	cum	10,250.00
8.10.4	Grade-II with Bitumen VG-grade 30 @ 6% (percent by weight of total mix)	tonne	4,360.00
8.10.5	Grade-II with bitumen of grade CRMB-60 @ 6% (percent by weight of total mix)	tonne	4,525.00
8.10.6	Grade-II with bitumen of grade SBS PMB-40 @ 6% (percent by weight of total mix)	tonne	4,350.00
8.11	Providing and laying surface dressing as wearing course consisting of a layer of bituminous binder as per Table 500-20 (including Cost of anti-stripping compound Minimum 1% in Lime/Cement as per design wherever required) laid on the prepared surface, followed by a cover of crushed stone chippings of specified size (may be pre coated also) & rolling with power roller all complete as per clause 510 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion.		
8.11.1	With 19mm crushed stone chipping 0.15 cum and binder 12 Kg per 10 Sqm - Bitumen VG-grade 30	sqm	93.40
8.11.2	With 19mm crushed stone chipping 0.15 cum and binder 12 Kg per 10 Sqm - CRMB-60	sqm	96.70
8.11.3	With 13mm crushed stone chipping 0.10 cum and binder 10 Kg per 10 Sqm - Bitumen VG-grade 30	sqm	74.20
8.11.4	With 13mm crushed stone chipping 0.10 cum and binder 10 Kg per 10 Sqm - CRMB-60	sqm	76.90

Code No	Description	Unit	Rate Rs.
8.12	Providing and laying open graded premix carpet 20mm thick (compacted), on prepared surface in a single course as wearing course, composed of specified graded crushed stone aggregate as per Table 500-23, premixed with bituminous binder @ 14.60 kg/ 10sqm (including Cost of anti-stripping compound Minimum 1% in Lime/Cement as per design wherever required), including loading of material with F.E. loader, hot mixing of stone aggregate and bitumen in computerised hot mix plant, transporting the mixed material by tippers to paver and laying with paver finisher fitted with electronic sensor control to the required level and grade, compacting smooth wheeled roller 8-10 tonne capacity and finishing to required level to achieve the desired density as per clause 511 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion but excluding cost of tack coat/ seal coat.		
8.12.1	With Bitumen VG-grade 30	sqm	119.00
8.12.2	With bitumen of grade CRMB-60	sqm	123.00
8.13	Deduct for using manual paver finisher instead of paver finisher fitted with electronic sensing device for all bituminous work.		
8.13.1	By Volume	cum	83.50
8.13.2	By Weight	tonne	37.10
8.14	Providing and applying liquid seal coat type "A" comprising of a layer of bituminous binder @ 9.8 kg/ 10 Sqm (including Cost of anti-stripping compound Minimum 1% in Lime/Cement as per design wherever required) followed by a cover of stone chipping @ 0.09 cum/10 sqm of specified grading and rolling with power roller 8-10 tonne complete as per clause 513 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion.		
8.14.1	With Bitumen VG-grade 30	sqm	69.00
8.14.2	With bitumen of grade CRMB-60	sqm	71.70
8.15	Providing and applying premixed seal coat Type "B" comprising of thin application of fine aggregate 0.06 cum/ 10 sqm premix with bitumen binder @ 6.8 Kg/ 10 Sqm (including Cost of anti-stripping compound Minimum 1% in Lime/Cement as per design wherever required) laying with paver finisher with electronic sensor control and rolling with power roller 8-10 tonne complete as per clause 513 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion.		
8.15.1	With Bitumen VG-grade 30	sqm	48.10
8.15.2	With bitumen of grade CRMB-60	sqm	49.90
8.16	Providing and laying premixed seal coat using hot mix plant and paver finisher with aggregate of 6.7mm size defined as 100% passing through 11.20mm sieve and retain on 2.36mm sieve with 0.09 cum per 10 sqm premix with bitumen binder @ 4.5% and rolling		

Code No	Description	Unit	Rate Rs.
	with power roller 8-10 tonne complete as per clause 513 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion.		
8.16.1	With Bitumen VG-grade 30	sqm	68.90
8.16.2	With bitumen of grade CRMB-60	sqm	71.60
8.17	Providing and laying 25 mm thick bitumen mastic asphalt wearing course with paving grade bitumen meeting the requirements given in table 500-29 (including Cost of anti-stripping compound Minimum 1% in Lime/Cement as per design wherever required) @ 14-17% (by weight) as per job mix formula, coarse aggregate as per Table 500-32, fine aggregate as per Table 500-31 and lime stone powder as filler, prepared by using mastic cooker and laid to required level and grade after cleaning the surface, including providing antiskid surface with bitumen precoated fine-grained hard stone chipping of 13.2 mm nominal size @ 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 degree Centigrade, protruding 1 mm to 4 mm over mastic surface, all complete including all material, labour, machinery, lighting, guarding and maintenance of diversion complete as per clause 515 of MoRT&H specification.	sqm	705.00
8.18	Cost of bitumen to be added or subtracted when it varies from the job mix formula adopted in above item		
8.18.1	Bitumen VG-grade 30	tonne	58,400.00
8.18.2	CRMB 60	tonne	61,100.00
8.19	Providing and applying low viscosity bitumen emulsion @ 8.25 kg per 10 sqm for sealing cracks less than 3 mm wide or incipient fretting or disintegration in an existing bituminous surfacing including covering with 3mm stone grit as per clause 518 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion.	sqm	93.30
8.20	Providing and applying low viscosity bitumen emulsion RS1 for sealing cracks less than 3 mm wide or incipient fretting or disintegration in an existing bituminous surfacing.	sqm	89.20
8.21	Providing and laying 20mm thick Mix Seal Surfacing on a prepared surface in a single course composed of specified graded crushed aggregates as per table (500-19) premixed with bituminous binder (including cost of anti-stripping compound, wherever required) with lead of mixed material up to 1 Km. [MoRTH Specification: Clause 508 & 112) in a hot mix plant 40-60 TPH with Front end loader, laying with paver finisher transporting the mixed material up to lead of 20 km by tipper and rolling with power roller 8-10 tonne to achieve density approved by the department with all lead, but excluding cost of track coat.		
8.21.1	Type "A" (22 Kg. binder per 10 Sqm) bitumen VG 30	Sqm	165.00

Code No	Description	Unit	Rate Rs.
8.21.2	Type "A" (22 Kg. binder per 10 Sqm) crumb rubber modified bitumen- CRMB 60	Sqm	171.00
8.21.3	Type "B" (19 Kg. Binder per 10 Sqm) bitumen VG 30	Sqm	147.50
8.21.4	Type "B" (19 Kg. Binder per 10 Sqm) Crumb rubber modified bitumen- CRMB 60	Sqm	152.50
8.22	Milling of existing bituminous surface to specified depth of bituminous layer including disposal of removed material with all lift and lead upto 1000 m etc complete. Using machine like Writgen (W100) or equivalent.	sqm	64.40

9.0 CEMENT CONCRETE PAVEMENTS

Code No	Description	Unit	Rate Rs.
9.1	Providing and laying lean cement concrete 1:4:8 in 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 complete as per clause 601, 112 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion.	cum	3,070.00
9.2	Providing and laying lean cement concrete 1:4:8 in 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 manually, compacting with surface vibrator, finishing and curing complete as per clause 601, 112 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion.	cum	3,030.00
9.3	Providing and laying lean cement concrete 1:4:8 in 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 concrete mixer, laid manually, compacted with surface vibrator, finishing and curing complete as per clause 601, 112 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion.	cum	2,955.00
9.4	Providing and laying un-reinforced, dowel jointed, plain cement concrete mix in 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, 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		

Code No	Description	Unit	Rate Rs.
	and grades complete as per drawing and as per clause 602, 112 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion.		
9.4.1	PCC M-20	cum	6,340.00
9.4.2	PCC M-25	cum	6,670.00
9.4.3	PCC M-30	cum	6,740.00
9.4.4	PCC M-40	cum	6,810.00
9.5	Providing and laying un-reinforced, dowel jointed, plain cement concrete mix With Concrete Mixer & vibrator 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, mixed as per approved mix design, laid, 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, admixtures (if required) as approved, curing compound, finishing to lines and grades complete as per drawing and as per clause 602, 112 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion.		
9.5.1	PCC M-20	cum	5,790.00
9.5.2	PCC M-25	cum	6,120.00
9.5.3	PCC M-30	cum	6,190.00
9.5.4	PCC M-40	cum	6,260.00
9.6	Providing and laying un-reinforced, plain cement concrete mix with Concrete Mixer & vibrator 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, mixed as per approved mix design, laid, spread, compacted and finished in a continuous operation including provision of contraction, expansion, construction and longitudinal joints etc including all material, labour, machinery, lighting, guarding and maintenance of diversion.		
9.6.1	PCC M-20	cum	5,650.00
9.6.2	PCC M-25	cum	5,980.00
9.6.3	PCC M-30	cum	6,060.00
9.7	Providing and laying rolled cement concrete mix of M-10 base course with coarse and fine aggregate conforming to IS:383, the size of coarse aggregate not exceeding 25 mm with minimum aggregate cement ratio 15:1 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 complete as per clause 603, 112 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion.	cum	3,420.00

Code No	Description	Unit	Rate Rs.
9.8	Providing and laying 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 transported to site, laid with a fixed form or slip form paver, spread, 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 complete including all material, labour, machinery, lighting, guarding and maintenance of diversion.	cum	2,770.00
9.9	Providing and laying un-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 complete including all material, labour, machinery, lighting, guarding and maintenance of diversion.	cum	6,250.00
9.10	Providing and fixing of precast concrete interlocking tiles of desired shape of M 30 grade manufactured from fully computerized automatic stationery hydraulic vibro pressed machine and fully computerized automatic batching plant of class A1/A2 as per BS 6717:2001. The CC interlocking paving blocks be laid on average 50mm. thick bed of coarse sand and the joint is to be filled with fine sand. Laying procedure on compacted sub-base as defined. Complete job is to be executed as per the instruction of Engineer in-charge. The rates to be inclusive of all lead & Lifts etc. complete as per specifications. Tensile splitting strength, abrasion and braking load etc. as per BS 6717:2001, Grey cement.		
9.10.1	60mm thick	sqm	718.00
9.10.2	80mm thick	sqm	792.00
9.10.3	100mm thick	sqm	895.00
9.11	Providing and fixing of 60mm thick precast cement concrete interlocking paver block casted with rubber moulds in approved reflective colour and design having minimum compressive strength of 300 kg/ sq cm. The CC paving blocks be laid on average 50mm thick bed of coarse sand and the joint is to be filled with fine sand. Laying procedure on compacted sub-base as defined. Complete job is to be executed as per the instruction of Engineer in-charge. The rates to be inclusive of all lead & Lifts etc. complete as per specifications.	sqm	795.00

Code No	Description	Unit	Rate Rs.
9.12	Removing & re-fixing of precast cement concrete interlocking paving blocks of all sizes over 50 mm thick course sand bedding (duly compacted) including filling of joints with sand complete in all respect.	sqm	613.00
9.13	Flooring with Cobble stone of approx. Size 125x125x75 mm (thick) laid on 25 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 stone, laid in approved pattern complete in all respect as per direction of Engineer-in-charge.	sqm	1,822.00
9.14	Removing & re-fixing of stone slab flooring set in pattern over 20 mm thick base of cement mortar 1:6 (1 cement : 6 course sand) and finished with cement sand mortar 1:3 complete in all respect.	sqm	565.00
9.15	Providing and laying treatment of wear & tear concrete surface with pre-mixed, ready to use, high-performance, curing free, quick-setting ready to use cement mortar for repairing of potholes with minimum 25mm depth and without cutting the panel so that traffic can be mobilized in 2 hours. The high-performance cement should be curing free, achieve compressive strength of 10 MPa within 4 Hours, achieve bond strength of 4 MPa within 24 Hours, non-shrink and non-toxic.	cum	79,500.00

10.0 TRAFFIC SIGNS, MARKINGS & OTHER ROAD APPURTENANCES

Code No	Description	Unit	Rate Rs.
10.1	Providing and fixing precast cement concrete M-20 grade (Using mechanical Concrete Mixer) kerb stone top and bottom width 115 and 165 mm respectively, 250 mm high on 150 mm thick PCC M-10 grade foundation as per design, including fixing at site as per clause 408 of MoRT&H Specification including all material, labour, machinery, lighting, guarding and maintenance of diversion.	metre	326.00
10.2	Providing and laying cast-in-situ cement concrete M-20 grade kerb stone channel top and bottom width 115 and 165 mm respectively, 250mm high laid with kerb laying machine, on 150 mm thick PCC M-10 grade foundation (laid manually) as per design, including fixing at site as per clause 408 of MoRT&H Specification including all material, labour, machinery, lighting, guarding and maintenance of diversion.		
10.2.1	Using Concrete Mixer	metre	423.50
10.2.2	Using Concrete Batching and Mixing Plant	metre	402.50
10.3	Providing and fixing in position precast Reinforced Cement Concrete M15 grade Kilometre stone of standard IRC design, including painting and printing letters etc. as per clause 804 of MoRT&H Specification including all material, labour, machinery.		
10.3.1	5th Kilometre stone	each	4,115.00
10.3.2	Ordinary Kilometre stone	each	2,437.00
10.3.3	200 metre stone	each	727.00
10.4	Providing and fixing in position Reinforced Cement Concrete Boundary pillars of standard IRC - 25 design, including finishing but excluding printing as per clause 806 of MoRT&H Specification including all material, labour, machinery.	each	693.00
10.5	Painting two coats on specified surface with synthetic enamel paint of approved brand and shade, after thorough cleaning and necessary filling to give even shade as per clause 803 of MoRT&H Specification including all material, labour.		
10.5.1	On new plastered concrete surface	sqm	105.50
10.5.2	On steel surface	sqm	91.00
10.6	Painting single coat on specified surface with synthetic enamel paint of approved brand and shade, after thorough cleaning and necessary filling to give even shade including all material, labour.		
10.6.1	On wood/ steel surface	Sqm	52.10
10.7	Painting new letters and figures of specified size, of any shade with first quality synthetic enamel paint, black or any other approved colour to give an even shade as per clause 801 of MoRT&H Specification including all material, labour.		

Code No	Description	Unit	Rate Rs.
10.7.1	Hindi (Matras, Commas and the like not to be measured and paid for. Half letters shall be counted as half).	cm. Height per letter	1.70
10.7.2	English and Roman (Hyphens, commas and the like not to be measured and paid for)	cm. Height per letter	1.00
10.8	Providing and laying marking of center line and stop line etc with hot thermoplastic compound 2.5 mm thick on road/ plain surface, including reflectorising glass beads @ 250 gms per sqm area with special applicator machine, as per IRC:35 including cleaning the surface of all dirt, dust and other foreign matter, demarcation at site and traffic control involved. The finished surface to be level, uniform and free from streaks and holes as per clause 803 of MoRT&H Specification including all material, labour, machinery, lighting, guarding and maintenance of diversion.	sqm	444.00
10.9	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 3 metre long and size 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 including all material, labour.		
10.9.1	90 cm equilateral triangle	each	5,320.00
10.9.2	60 cm equilateral triangle	each	3,725.00
10.9.3	60 cm circular	each	4,770.00
10.9.4	80 mm x 60 mm rectangular	each	6,400.00
10.9.5	60 cm x 45 cm rectangular	each	4,665.00
10.9.6	60 cm x 60 cm square	each	5,410.00
10.9.7	90 cm high octagon	each	7,980.00
10.10	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 framed to angle iron 40x40x5mm 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 including all material, labour.	sqm	11,100.00
10.11	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 framed to angle iron 40x40x5mm with area exceeding 0.9 sqm supported on two nos mild steel angle iron post 75 mm x 75		

Code No	Description	Unit	Rate Rs.
	mm x 6 mm, 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 including all material, labour.	sqm	12,000.00
10.12	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 confirming to IRC-79 and the drawings.	each	596.00
10.13	Providing and erecting overhead signs with retro reflective Type IV sign plate fixed on angle iron frame 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 galvanised steel trestles and trusses of sections and type as per structural design requirements and approved plans.		
10.13.1	Truss and Vertical Support	tonne	90,800.00
10.13.2	Providing and fixing High Intensity retro reflective Type IV sign plate made out of 2.00 mm thick aluminium sheet face to be fully covered with blue/green high intensity grade retro reflective sheet and logo/matters, boarder made of with similar type of white sheeting after etching treatment of aluminium sheet, the black side is to be painted with epoxy grey paint. the plate is to be fixed on 40X40X5 mm angle iron frame with help of aluminium rivets.	sqm	12,800.00
10.14	Providing and erecting direction and place identifications retro-reflectorised sign as per IRC:67 made of high intensity grade sheeting vide clause 807.3, fixed over aluminium sheeting 2 mm thick supported on mild steel angle iron post 75 x 75 x 6 mm firmly fixed to 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.		
10.14.1	Identification sign board of size upto 0.90 sqm	sqm	4,325.00
10.14.2	Identification sign board of size above 0.90 sqm	sqm	7,210.00
10.15	Supply and fixing sign board upto 4.5 meter height made of the following specifications board base of A.C.P / transparent PVC acrylic sheet 3 mm thick fixed on MS hollow rectangular section size 50mmx25mm, letters made of acrylic material sheet 3 mm thick of any colour fixed with LED lights with all accessories and wiring with copper wire complete as required and as per direction in engineer in-charge.	sqm	13,800.00
10.16	Supplying and fixing of GI chain link fencing of required width in mesh including strengthening with 2 mm dia GI wire/ G.I. staples/ G.I.U-nails/ nuts bolts 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 30cmx30cmx60cm, 0.6 metre below ground level, every 15th post, last but one end post and corner post shall be		

Code No	Description	Unit	Rate Rs.
	strutted on both sides and end post on one side only etc complete as required and as per direction of Engineer-in-charge.		
10.16.1	Mesh size 50mm x 50mm made of GI wire 3.15mm dia	sqm	848.00
10.16.2	Mesh size 75mm x 75mm made of GI wire 3.15mm dia	sqm	815.00
10.16.3	Mesh size 100mm x 100mm made of GI wire 3.15mm dia	sqm	743.00
10.16.4	Mesh size 150mm x 150mm made of GI wire 3.15mm dia	sqm	734.00
10.17	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 of MoRTH specification & type "A" as per IS : 278-1978 size designation 5 (line wire 2.24, point wire 2.00mm mass 97-106 g/m) including all material, labour.	metre	377.50
10.18	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 30cmx30cmx60cm, 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 of MoRTH specification & type "A" as per IS : 278-1978 size designation 5 (line wire 2.24, point wire 2.00mm mass 97-106 g/m) including all material, labour.	metre	616.00
10.19	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 including all material, labour.	metre	889.00
10.20	Providing and fixing 50 mm dia G.I. 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 including all material, labour.	metre	2,790.00
10.21	Providing and fixing Tubular Steel Railing on Precast RCC posts, 1.2 m high above ground level Providing, fencing and erecting 50 mm dia G.I 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 including all material, labour.	metre	1,841.00
10.22	Providing and fixing CAT's eye made of aluminium alloy size 75x100x22mm having 21 biconvex lenses embedded in circular disk of AS plastic on each side on road surface complete including all material, labour, diversion.	each	178.00

Code No	Description	Unit	Rate Rs.
10.23	Supplying and fixing of Single Moulded twin Shank Raised Pavement Markers made of polycarbonate and ABS moulded body and reflective panels with micro prismatic lens capable of providing total internal reflection of the light entering the lens face and shall support a load of 16000 kg tested in accordance to ASTM D 4280 Type H and complying to Specifications of Category A of MORTH Circular No RW/ NH/33023/ 10-97-DC) III Dt 11.06.1997. The height, width and length shall not exceed 50 mm, 100 mm and 100 mm and with minimum reflective area of 13 Sq cm on each side and the slope to the base shall be 35+/-5 degree. The strength of detachment of the integrated cylindrical shanks, (of diameter not less than 19 +/- 2 mm and height not less than 30+/- 2 mm) from the body is to be a minimum value of 700 Kgf. Fixing will be by drilling holes on the road for the shanks to go inside, without nails and using epoxy resin based adhesiv6 as per manufacturer's recommendation and complete as directed' by the engineer. (manufactured from 3M, Avery or equivalent)	each	445.00
10.24	Supplying and fixing glow studs of size 100 X 20 mm made of heavy duty body shall be moulded ASA (Acrylic styrene Acrylortrite) of ABS having electronically welded micro prismatic lens with abrasion resistant coating as approved by Engineer- in-charge. The glow stud shall support a load of 13635 kg. tested in accordance with ASTM D4280. The slope of retro-reflective surface shall be 35+/- 5 degree to base. The panels on both sides with at least 12 cm of reflective areas up each side. The luminance intensity should be as per the specification and shall be tested as described in ASTM 1: 809 as recommended in BS : 873 part 4 : 1973 as per approved sample & manufactures by the Engineer-in-charge.	each	266.50
10.25	Providing and fixing "L" type bollard 135cm height made out of 1.25mm thick M.S. sheet welded in conical section having upper dia 15cm and lower dia 20cm with another attachment of 150x150x7mm thick plate and hold fast at bottom, whole body is painted in white stove enamel and red reflective 3 band, each of 7.5cm and one reflective sheet of 15cm dia provided to it complete in all respect including all material, labour, diversion.	each	2,010.00
10.26	Providing and fixing "SWISS" type bollard 134cm height made out of 1.25mm thick M.S. sheet welded in conical section having upper dia 15cm and lower dia 20cm with another attachment of mandatory 7mm thick plate and fixed with the help of 7cm long, 30cm dia chrome plated MS tube, this part is fixed on the body with another attachment of a cap 30x7cm, whole body is painted in black stove enamel and mandatory plate in azure blue with one compulsory keep left arrow with 10mm border reflective strip each of 7.5cm on body complete in all respect including all material, labour, diversion.	each	1,796.00
10.27	Providing and fixing hazard marker made out of 2mm thick M.S. angle iron 25x25x3mm and fixed on channel posts 75x75x6mm and hold fast at bottom whole body is painted in white stoving enamel and 6 nos 5 cm dia reflective sheet on white reflective background with additional border of 1.25 cm all around it complete in all respect including all material, labour, diversion.	each	617.00

Code No	Description	Unit	Rate Rs.
10.28	Providing and fixing SWISS type hazard marker made out of 2mm thick M.S. sheet size of box is 15x15cm with hold fast at bottom whole body is painted in white stoving enamel paint with white/ high intensity grade prismatic type sheeting on all four side complete in all respect including all material, labour, and diversion.	each	816.00
10.29	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 in all kind of soil.	cum	450.50
10.30	Providing and laying in place 300mm x 300mm x 16mm cement tactile directional and warning tiles (for a person with visual impairment) of the approved brand and make and specified colour for outdoor floors such as footpath, courtyard, multimodals location etc. laid on 20mm thick base of cement mortar 1:4 (1 cement: 4 coarse sand) in all shapes and patterns including grouting the joints with white cement with matching pigments etc. complete as per direction of engineer in-charge	sqm	1,630.00
10.31	Providing and laying in place 300mm x 300mm x 9.8mm vitrified tactile warning and directional tiles of the approved brand, make and colour inside the buildings at in all corridors and lobbies, level differences etc. as per accessibility standards and as per the installation instructions prescribed by the manufacturer including zarri making wherever required and finishing including grouting the joints with white cement with matching pigments etc. up to the satisfaction of the engineer in-charge complete.	sqm	2,305.00
10.32	Providing and fixing in place 300mm x 300mm x 3mm polyurethane stick on tactile directional tiles and warning tiles having bevelled edges and of the approved brand, make and colour and conforming to ISO 23599: 2012 inside the building on all floors in corridors, lobbies , level differences as per accessibility standards and to be installed as per the installation instructions given by the manufacturer using butyl rubber adhesive and the hardware specified by the manufacturer, as per the direction of the engineer in-charge complete.	each	3,705.00

11.0 PIPE CULVERTS

Code No	Description	Unit	Rate Rs.
11.1	Plain cement concrete 1:3:6 mix with crushed stone aggregate mechanically mixed, placed in foundation and compacted by vibration including curing as per clause 1000 & 1700 of MoRT&H specification including all material, labour form work, machinery.		
11.1.1	Using stone aggregate 40 mm nominal size	cum	4,620.00
11.1.2	Using stone aggregate 20 mm nominal size	cum	4,750.00
11.2	Providing and Laying Reinforced cement concrete pipe NP4/ prestressed concrete pipe for culverts including jointing ends and fixing collar with cement mortar 1:2 complete as per clause 1000 & 2900 of MoRT&H specification including all material, labour form work, machinery.		
11.2.1	150 mm internal diameter	metre	494.50
11.2.2	200 mm internal diameter	metre	631.00
11.2.3	250 mm internal diameter	metre	842.00
11.2.4	300 mm internal diameter	metre	1,187.00
11.2.5	350 mm internal diameter	metre	1,777.00
11.2.6	400 mm internal diameter	metre	1,970.00
11.2.7	450 mm internal diameter	metre	2,135.00
11.2.8	500 mm internal diameter	metre	2,530.00
11.2.9	600 mm internal diameter	metre	3,535.00
11.2.10	700 mm internal diameter	metre	4,605.00
11.2.11	800 mm internal diameter	metre	5,640.00
11.2.12	900 mm internal diameter	metre	7,130.00
11.2.13	1000 mm internal diameter	metre	8,550.00
11.2.14	1100 mm internal diameter	metre	8,770.00
11.2.15	1200 mm internal diameter	metre	10,650.00
11.2.16	1400 mm internal diameter	metre	16,250.00
11.2.17	1600 mm internal diameter	metre	19,500.00
11.3	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		

Code No	Description	Unit	Rate Rs.
	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.		
11.3.1	Single Row for one utility service	metre	2,122.00
11.3.2	Double Row for two utility services	metre	3,860.00
11.3.3	Triple Row for three utility services	metre	5,630.00

12.0 MAINTENANCE OF ROADS

Code No	Description	Unit	Rate Rs.
12.1	Filling of Pot- holes and patch repairs with Built up Spray Grout in two layers with 53-22.4mm size of aggregate upto 75mm depth and 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 506, compacting with 8-10 tonne power roller, trimming and finishing the surface to form a smooth continuous surface complete using Bitumen VG-grade 30 as per clause 503, 506 & 3004.2 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion.	sqm	296.50
12.2	Filling of Pot- holes and patch repairs with open graded premix surfacing 20mm thick compacted with bitumen binder VG-grade 30 @ 14.60 kg/10 sqm and aggregate in Hot mix plant, transporting the mixed material with tipper and laying manually to the required level and grade, rolling with power roller, 8-10 tonne, 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 complete as per clause 3004.2 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion.	sqm	137.50
12.3	Filling of Pot holes and patch repairs with surface dressing consisting of a layer of with bitumen binder as per Table 500-2 laid on prepared surface followed by a cover of crushed stone chipping of specified size and rolling with power roller, 8-10 tonne including 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 and 3004.2 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion.		
12.3.1	First coat with 0.15 cum crushed stone chipping 19mm nominal size and Bitumen VG-grade 30 @12 kg per 10 sqm	sqm	95.50
12.3.2	Second coat with 0.10 cum crushed stone chipping 13mm nominal size and Bitumen VG-grade 30 @10 kg per 10 sqm	sqm	95.50
12.4	Providing and laying Precast reinforced cement concrete Box culvert section of M-40 grade designed for 'AA' class loading as per IRC specifications including the effect of impact, EQ etc. complete on firm base of 200mm thick lean concrete of M-10 grade with aggregate of size 40mm nominal of following internal sizes. The work includes required safety measures, construction of drain for		

Code No	Description	Unit	Rate Rs.
	diversion of flowing water, cost of design of RCC Precast Box and its proof checking from IIT/MNIT Jaipur etc. complete in all respect as per specifications		
12.4.1	Size 0.60 M x 0.60 M	metre	6,560.00
12.4.2	Size 0.75 M x 0.75 M	metre	7,970.00
12.4.3	Size 1.00 M x 1.00 M	metre	11,850.00
12.4.4	Size 1.00 M x 1.25 M	metre	14,550.00
12.4.5	Size 1.25 M x 1.25 M	metre	16,350.00
12.4.6	Size 1.25 M x 1.50 M	metre	20,800.00
12.4.7	Size 1.50 M x 1.50 M	metre	22,600.00
12.4.8	Size 1.75 M x 1.75 M	metre	28,600.00
12.4.9	Size 2.00 M x 2.00 M	metre	34,300.00
12.5	Providing and fixing of reinforced Ferro-Cement drain covers designed for 'A' class loading duly marked on cover with adequate steel reinforcement having thickness 75mm to 150mm anti corrosive bitumen painted M.S. plate , Rim and M.S. lifting hooks, Admixtures like plasticizer, bond improving compound, shrinkage, resistance compound, abrasion resistant complete as per approved design etc.		
12.5.1	Standard Size 600x800mm (75mm thick) for span 300 to 450mm	sqm	1,583.00
12.5.2	Standard Size 1000x800mm (100mm thick) for span 451 to 700mm	sqm	2,600.00
12.5.3	Standard Size 1500x600mm (125mm thick) for span 701 to 1200mm	sqm	2,955.00
12.5.4	Standard Size 2100x500mm (150mm thick) for span 1201 to 1500mm	sqm	3,450.00
12.6	Providing and fixing of reinforced Ferro-Cement drain covers designed for 'AA' class loading duly marked on cover with adequate steel reinforcement having thickness 75mm to 150mm anti corrosive bitumen painted M.S. plate , Rim and M.S. lifting hooks, Admixtures like plasticizer, bond improving compound, shrinkage, resistance compound, abrasion resistant complete as per approved design etc.		
12.6.1	Standard Size 600x800mm (75mm thick) for span 300 to 450mm	sqm	1,486.00
12.6.2	Standard Size 1000x800mm (100mm thick) for span 451 to 700mm	sqm	2,885.00
12.6.3	Standard Size 1500x600mm (125mm thick) for span 701 to 1200mm	sqm	3,280.00
12.6.4	Standard Size 2100x500mm (150mm thick) for span 1201 to 1500mm	sqm	3,875.00
12.7	Providing and fixing stone slab covering of required size over drains including filling of joints with cement sand mortar 1:3 complete as per direction of Engineer-in-charge.		
12.7.1	Average thickness 60 to 75 mm	sqm	906.00
12.7.2	Average thickness 40 to 50 mm	sqm	402.50

Code No	Description	Unit	Rate Rs.
12.8	Providing and Constructing gabion structure 0.5 to 1 meter high of required section made up of soft mechanically woven hexagonal shaped G.I. wire confirming to IS 16014:2012 having zinc plus PVC coating of overall diameter of 3.7 mm and tying lacing wire of 3.2 mm with edge wire confirming to overall diameter 4.4 mm edges being mechanically selvage including placing in position, fitting neatly with trap stone rubble (15 to 23 cm) all loose ends to be securely tied (Excluding transportation) etc. complete. (In Dry condition and for under water installation extra cost to be considered)	cum	2,940.00
12.9	Providing and construction of a gabion structure for retaining earth with segments of wire crates of size 7.0 x 3.0 x 0.6m each divided into 1.5 m compartments by cross netting, made from 4 mm galvanised steel wire @ 32kg per 10 sqm having minimum tensile strength of 300Mpa conforming to IS:280 and galvanizing coating conforming to IS:4826 woven into mesh with double twist, mesh size not exceeding 100x100mm, filled with boulders with least dimension of 200mm, all loose ends to be tied with 4mm galvanized steel wire etc. complete.	cum	2,740.00
12.10	Providing and constructing gabion structures for erosion control, river training works and protection works with wire crates of size 2.0m x 1.0m x 0.30m each divided into 1 m compartments by-cross netting, made from 4 mm galvanized steel wire @ 32 kg per 10sqm having minimum tensile strength of 300Mpa conforming to IS:280 and galvanizing coating conforming to IS 4826, woven into mesh with double twist, mesh size not exceeding 100 x 100mm, filled with boulders with least dimension of 200mm, all loose ends to be securely tied with 4mm galvanized steel wire etc. complete.	cum	4,230.00
12.11	Providing and Laying CE marked Needle punched and mechanically bonded non-woven Geotextile indigenously manufactured from high quality Polypropylene stable fibres (continuous filament will not be accepted) on the prepared subgrade for separator cum filtration cum drainage application with necessary overlaps as per drawing. Type-III (TFC-TechGeo PR25), minimum width 5.0 meter as per approved comparative statement (Complete rates)	sqm	289.00
12.12	Providing and Laying CE marked Needle punched and mechanically bonded non-woven Geotextile indigenously manufactured from high quality Polypropylene stable fibres (continuous filament will not be accepted) on the prepared subgrade for separator cum filtration cum drainage application with necessary overlaps as per drawing. Type-VI(TFITechGeo PR50), minimum width 5.0 meter as per approved comparative statement (Labour rates)	sqm	118.50
12.13	Providing and laying M-30 Grade Edge blocks of size 0.30 Mtr x 0.30 Mtr x 0.15 Mtr complete as per the shape and pattern approved by the engineer in-charge.	metre	340.00
12.14	Cutting WBM surface up to 0.5 Mtr. depth including all layers of crust for laying pipe line etc. for house connection & making good to original condition.	sqm	222.50

Code No	Description	Unit	Rate Rs.
12.15	Carrying out repair to road signs including strengthening resetting or otherwise repairing signs made out of Retro Reflective sheets. Job includes patch repair to aluminium sheet, R R Sheet, posts, signs / script and repainting of posts at damaged location / positions with approved quality of enamel paint complete in all respect conforming to respective IRC/MOST specifications and as directed by Engineer-in-charge. Road sign Boards mounted on single post.	each	1,688.00
12.16	White/colour wash of trees, electric & telephone pole, guard stone etc. Upto height of 1.5 mtr. from the ground level comprising of 0.45m.white, 0.30m. red band in middle and again 0.45m. white around the periphery complete two or more coats including trimming the bushes on the stem & the root. Girth upto 900 mm, pole etc.	each	85.20
12.17	Labour charges for patching WBM surface using crushed/ hand broken aggregate including preparation of pot hole, scarifying and reshaping to the required grade and camber, as per the standard specifications, spreading of material, consolidation with mechanical drop hammer of 11.40 kg hand rammer or 8-10 tonne power roller, spreading and consolidation of binding material including cost of fuel and lubricants and hire charges of T & P.	cum	2,256.00
12.18	Providing and fixing 200 mm nominal dia (Internal dia) PVC casing pipe conforming to IS 12818: 1992 amended up to date having pressure Rating CM approved make for HP/TW and DCB with threading etc. complete as directed by Engineer in-Charge.	metre	1,220.00
12.19	Providing and inserting nipples with approved fixing compound after drilling holes for grouting as per technical specification including subsequent cutting/ removal and sealing of the holes as necessary of nipples after completion of grouting with : Epoxy grout [MoRTH Specification: Clause: 2803]	each	165.50
12.20	Arrangement of water proof tent, carpeting, VVIP arrangements of rest room, stage erection with back drop & flower decoration etc for Laying of Foundation Stone/ inaugural function etc for MoRTH/ State projects through event management team complete by providing Foundation Stone Touch Panel.	set	8,000.00

13.0 FOUNDATIONS

Code No	Description	Unit	Rate Rs.
13.1	Brick masonry work in cement mortar with mechanical mixer with First class bricks (min. 10.5 Mpa) in foundation (at any level) complete as per drawing and technical specification and as per clause 1000 & 1300 of MoRT&H specification including all scaffolding material, labour, machinery but excluding pointing and plastering.		
13.1.1	In cement mortar 1:3 (1 cement : 3 coarse sand)	cum	6,520.00
13.1.2	In cement mortar 1:4 (1 cement : 4 coarse sand)	cum	6,330.00
13.2	Random rubble stone masonry work in cement mortar with mechanical mixer in foundation (at any level) complete as per drawing and technical specification and as per clause 1000 and 1400 of MoRT&H specification including all scaffolding material, labour, machinery but excluding pointing and plastering.		
13.2.1	In cement mortar 1:3 (1 cement : 3 coarse sand)	cum	5,510.00
13.2.2	In cement mortar 1:4 (1 cement : 4 coarse sand)	cum	5,270.00
13.3	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 vibrator including curing complete as per clause 2100 of MoRT&H specification including all scaffolding, material, labour, machinery.	cum	4,455.00
13.4	Providing, laying and compacting plain/ reinforced cement concrete of specified grade in foundation/ levelling course/ pile cap using concrete mixer and vibrator complete including cost of form work, as per drawing and technical specifications and as per clause 1100, 1500,1700,2100 of MoRT&H specification including all scaffolding material, labour, machinery.		
13.4.1	PCC Grade M -15	cum	5,220.00
13.4.2	PCC Grade M -20	cum	5,880.00
13.4.3	PCC Grade M -25	cum	6,270.00
13.4.4	PCC Grade M -30	cum	6,290.00
13.4.5	RCC Grade M -20	cum	5,930.00
13.4.6	RCC Grade M -25	cum	6,320.00
13.4.7	RCC Grade M -30	cum	6,330.00
13.4.8	RCC Grade M -35	cum	6,410.00
13.5	Providing, laying and compacting design mix plain/ reinforced cement concrete of specified grade in foundation/ levelling course/ pile cap using batching plant, transit mixer and concrete pump and vibrator including cost of form work, complete as per drawing and		

Code No	Description	Unit	Rate Rs.
	technical specifications as per clause 1100, 1500,1700,2100 of MoRT&H specification including all material, labour, machinery, and maintenance of diversion.		
13.5.1	PCC Grade M -20	cum	5,170.00
13.5.2	PCC Grade M -25	cum	5,570.00
13.5.3	PCC Grade M -30	cum	5,600.00
13.5.4	PCC Grade M -35	cum	5,770.00
13.5.5	RCC Grade M -20	cum	5,220.00
13.5.6	RCC Grade M -25	cum	5,620.00
13.5.7	RCC Grade M -30	cum	5,640.00
13.5.8	RCC Grade M -35	cum	5,720.00
13.5.9	RCC Grade M -40	cum	5,780.00
13.6	Providing and constructing temporary island 16 m diameter for construction of well foundation for 8m dia. Well including all material, labour, machinery as per clause 1200 of MoRTH specification.		
13.6.1	Assuming depth of water 1.0 m and height of island to be 1.25m.	each	69,200.00
13.6.2	Assuming depth of water 4.0 m and height of island 4.5 m.	each	4,27,700.00
13.6.3	Providing and constructing one span service road to reach island location from one pier location to another pier location	metre	2,910.00
13.7	Providing and laying cutting edge of mild steel weighing 40 kg per metre for well foundation complete as per drawing and technical specification complete as per clause 1200 and 1900 of MoRT&H specification including all material, labour, machinery.	tonne	1,20,600.00
13.8	Providing and laying structural plain/ reinforced cement concrete (design mix) of specified grade in well foundation using concrete mixer and vibrator including cost of form work complete as per drawing and technical specifications and as per clause 1200, 1500 and 1700 of MoRT&H specification. including all material, labour, machinery.		
13.8.1	Well Curb		
13.8.1.1	RCC Grade M -20	cum	6,840.00
13.8.1.2	RCC Grade M -25	cum	7,310.00
13.8.1.3	RCC Grade M -30	cum	7,330.00
13.8.1.4	RCC Grade M -35	cum	7,460.00
13.8.2	Well Steining		
13.8.2.1	RCC Grade M -20	cum	6,270.00
13.8.2.2	RCC Grade M -25	cum	6,700.00
13.8.2.3	RCC Grade M -30	cum	6,720.00
13.8.2.4	RCC Grade M -35	cum	6,840.00

Code No	Description	Unit	Rate Rs.
13.8.3	Bottom Plug (including forming sump, protective bund, chiselling etc.)		
13.8.3.1	PCC Grade M -20	cum	6,380.00
13.8.3.2	PCC Grade M -25	cum	6,610.00
13.8.3.3	PCC Grade M -30	cum	6,650.00
13.8.3.4	PCC Grade M -35	cum	6,760.00
13.8.4	Intermediate Plug (including extra protective works and dewatering etc)		
13.8.4.1	PCC Grade M -20	cum	6,100.00
13.8.4.2	PCC Grade M -25	cum	6,320.00
13.8.4.3	PCC Grade M -30	cum	6,360.00
13.8.4.4	PCC Grade M -35	cum	6,460.00
13.8.5	Top Plug (including extra protective works and dewatering etc)		
13.8.5.1	PCC Grade M -20	cum	5,660.00
13.8.5.2	PCC Grade M -25	cum	6,040.00
13.8.5.3	PCC Grade M -30	cum	6,080.00
13.8.5.4	PCC Grade M -35	cum	6,220.00
13.8.6	Well Cap		
13.8.6.1	RCC Grade M -20	cum	5,720.00
13.8.6.2	RCC Grade M -25	cum	6,140.00
13.8.6.3	RCC Grade M -30	cum	6,160.00
13.8.6.4	RCC Grade M -35	cum	6,260.00
13.9	Providing and laying structural plain/ reinforced cement concrete (design mix) of specified grade in well foundation using batching plant, transit mixer and concrete pump, vibrator including cost of form work complete as per drawing and technical specifications and as per clause 1200, 1500 and 1700 of MoRT&H specification. including all material, labour, machinery, lighting, guarding and maintenance of diversion.		
13.9.1	Well Curb		
13.9.1.1	RCC Grade M -20	cum	6,020.00
13.9.1.2	RCC Grade M -25	cum	6,500.00
13.9.1.3	RCC Grade M -30	cum	6,530.00
13.9.1.4	RCC Grade M -35	cum	6,670.00
13.9.1.5	RCC Grade M -40	cum	6,740.00
13.9.2	Well Steining		
13.9.2.1	RCC Grade M -20	cum	5,520.00

Code No	Description	Unit	Rate Rs.
13.9.2.2	RCC Grade M -25	cum	5,960.00
13.9.2.3	RCC Grade M -30	cum	5,990.00
13.9.2.4	RCC Grade M -35	cum	6,110.00
13.9.2.5	RCC Grade M -40	cum	6,170.00
13.9.3	Bottom Plug (including forming sump, protective bund, chiselling etc.)		
13.9.3.1	PCC Grade M -20	cum	5,400.00
13.9.3.2	PCC Grade M -25	cum	5,620.00
13.9.3.3	PCC Grade M -30	cum	5,670.00
13.9.3.4	PCC Grade M -35	cum	5,810.00
13.9.4	Intermediate Plug (including extra protective works and dewatering etc)		
13.9.4.1	PCC Grade M -20	cum	5,160.00
13.9.4.2	PCC Grade M -25	cum	5,380.00
13.9.4.3	PCC Grade M -30	cum	5,420.00
13.9.5	Top Plug		
13.9.5.1	PCC Grade M -20	cum	4,995.00
13.9.5.2	PCC Grade M -25	cum	5,370.00
13.9.5.3	PCC Grade M -30	cum	5,410.00
13.9.6	Well Cap		
13.9.6.1	RCC Grade M -20	cum	5,170.00
13.9.6.2	RCC Grade M -25	cum	5,620.00
13.9.6.3	RCC Grade M -30	cum	5,630.00
13.9.6.4	RCC Grade M -35	cum	5,720.00
13.9.6.5	RCC Grade M -40	cum	5,820.00
13.10	Sinking of 6 m external diameter well true to vertical, through all types of soil and rock, as shown against each case, (other than pneumatic method of sinking) complete as per drawing and technical specifications including all material, labour, machinery, lighting, guarding and maintenance of diversion complete as per clause 1200 of MoRT&H specification.		
13.10.1	In sandy soil		
13.10.1.1	Depth below cutting edge upto 3m	metre	5,950.00
13.10.1.2	Depth beyond 3 m and upto 10 m	metre	8,300.00
13.10.1.3	Depth beyond 10 m and upto 20 m		
	1) Add 5% for every additional metre depth of sinking over the rate of sinking for the previous metre.	metre	-

Code No	Description	Unit	Rate Rs.
13.10.2	In Clayey soil		
13.10.2.1	Depth below cutting edge upto 3m	metre	8,300.00
13.10.2.2	Depth beyond 3 m and upto 10 m	metre	17,450.00
13.10.2.3	Depth beyond 10 m and upto 20 m		
	1) Add 5% for every additional metre depth of sinking over the rate of sinking for the previous metre.		
	2) If dewatering is required add 5% of cost	metre	-
13.10.3	In Soft Rock at all depth	metre	28,000.00
13.10.4	In Hard Rock at all depth	metre	28,800.00
13.11	Sinking of 7 m external diameter well true to vertical, through all types of soil and rock, as shown against each case, (other than pneumatic method of sinking) complete as per drawing and technical specifications including all material, labour, machinery, lighting, guarding and maintenance of diversion complete as per clause 1200 of MoRT&H specification.		
13.11.1	In sandy soil		
13.11.1.1	Depth below cutting edge upto 3m	metre	8,730.00
13.11.1.2	Depth beyond 3 m and upto 10 m	metre	11,500.00
13.11.1.3	Depth beyond 10 m and upto 20 m		
	1) Add 5% for every additional metre depth of sinking over the rate of sinking for the previous metre.	metre	-
13.11.2	In Clayey soil		
13.11.2.1	Depth below cutting edge upto 3m	metre	11,500.00
13.11.2.2	Depth beyond 3 m and upto 10 m	metre	16,700.00
13.11.2.3	Depth beyond 10 m and upto 20 m		
	1) Add 5% for every additional metre depth of sinking over the rate of sinking for the previous metre.		
	2) If dewatering is required add 5% of cost	metre	-
13.11.3	In Soft Rock at all depth	metre	21,700.00
13.11.4	In Hard Rock at all depth	metre	35,800.00
13.12	Sinking of 8 m external diameter well true to vertical, through all types of soil and rock, as shown against each case, (other than pneumatic method of sinking) complete as per drawing and technical specifications including all material, labour, machinery, lighting, guarding and maintenance of diversion complete as per clause 1200 of MoRT&H specification.		
13.12.1	In sandy soil		
13.12.1.1	Depth below cutting edge upto 3m	metre	10,650.00
13.12.1.2	Depth beyond 3 m and upto 10 m	metre	13,050.00

Code No	Description	Unit	Rate Rs.
13.12.1.3	D Depth beyond 10 m and upto 20 m 1) Add 5% for every additional metre depth of sinking over the rate of sinking for the previous metre.	metre	-
13.12.2	In Clayey soil		
13.12.2.1	Depth below cutting edge upto 3m	metre	14,100.00
13.12.2.2	Depth beyond 3 m and upto 10 m	metre	17,700.00
13.12.2.3	Depth beyond 10 m and upto 20 m 1) Add 5% for every additional metre depth of sinking over the rate of sinking for the previous metre. 2) If dewatering is required add 5% of cost	metre	-
13.12.3	In Soft Rock at all depth	metre	24,500.00
13.12.4	In Hard Rock at all depth	metre	36,900.00
13.13	Sinking of 9 m external diameter well true to vertical, through all types of soil and rock, as shown against each case, (other than pneumatic method of sinking) complete as per drawing and technical specifications including all material, labour, machinery, lighting, guarding and maintenance of diversion complete as per clause 1200 of MoRT&H specification.		
13.13.1	In sandy soil		
13.13.1.1	Depth below cutting edge upto 3m	metre	10,850.00
13.13.1.2	Depth beyond 3 m and upto 10 m	metre	14,300.00
13.13.1.3	Depth beyond 10 m and upto 20 m 1) Add 5% for every additional metre depth of sinking over the rate of sinking for the previous metre.	metre	-
13.13.2	In Clayey soil		
13.13.2.1	Depth below cutting edge upto 3m	metre	14,900.00
13.13.2.2	Depth beyond 3 m and upto 10 m	metre	19,050.00
13.13.2.3	Depth beyond 10 m and upto 20 m 1) Add 5% for every additional metre depth of sinking over the rate of sinking for the previous metre. 2) If dewatering is required add 5% of cost	metre	-
13.13.3	In Soft Rock at all depth	metre	29,100.00
13.13.4	In Hard Rock at all depth	metre	42,800.00
13.14	Sinking of 10 m external diameter well true to vertical, through all types of soil and rock, as shown against each case, (other than pneumatic method of sinking) complete as per drawing and technical specifications including all material, labour, machinery, lighting, guarding and maintenance of diversion complete as per clause 1200 of MoRT&H specification.		

Code No	Description	Unit	Rate Rs.
13.14.1	In sandy soil		
13.14.1.1	Depth below cutting edge upto 3m	metre	12,800.00
13.14.1.2	Depth beyond 3 m and upto 10 m	metre	15,200.00
13.14.1.3	Depth beyond 10 m and upto 20 m		
	1) Add 5% for every additional metre depth of sinking over the rate of sinking for the previous metre.	metre	-
13.14.2	In Clayey soil		
13.14.2.1	Depth below cutting edge upto 3m	metre	16,950.00
13.14.2.2	Depth beyond 3 m and upto 10 m	metre	19,150.00
13.14.2.3	Depth beyond 10 m and upto 20 m		
	1) Add 5% for every additional metre depth of sinking over the rate of sinking for the previous metre.		
	2) If dewatering is required add 5% of cost	metre	-
13.14.3	In Soft Rock at all depth	metre	31,900.00
13.14.4	In Hard Rock at all depth	metre	49,100.00
13.15	Sinking of 11 m external diameter well true to vertical, through all types of soil and rock, as shown against each case, (other than pneumatic method of sinking) complete as per drawing and technical specifications including all material, labour, machinery, lighting, guarding and maintenance of diversion complete as per clause 1200 of MoRT&H specification.		
13.15.1	In sandy soil		
13.15.1.1	Depth below cutting edge upto 3m	metre	28,700.00
13.15.1.2	Depth beyond 3 m and upto 10 m	metre	36,800.00
13.15.1.3	Depth beyond 10 m and upto 20 m		
	1) Add 5% for every additional metre depth of sinking over the rate of sinking for the previous metre.	metre	-
13.15.2	In Clayey soil		
13.15.2.1	Depth below cutting edge upto 3m	metre	28,100.00
13.15.2.2	Depth beyond 3 m and upto 10 m	metre	39,700.00
13.15.2.3	Depth beyond 10 m and upto 20 m		
	1) Add 5% for every additional metre depth of sinking over the rate of sinking for the previous metre.		
	2) If dewatering is required add 5% of cost	metre	-
13.15.3	In Soft Rock at all depth	metre	71,500.00
13.15.4	In Hard Rock at all depth	metre	1,08,500.00

Code No	Description	Unit	Rate Rs.
13.16	Sinking of 12 m external diameter well true to vertical, through all types of soil and rock, as shown against each case, (other than pneumatic method of sinking) complete as per drawing and technical specifications including all material, labour, machinery, lighting, guarding and maintenance of diversion complete as per clause 1200 of MoRT&H specification.		
13.16.1	In sandy soil		
13.16.1.1	Depth below cutting edge upto 3m	metre	60,600.00
13.16.1.2	Depth beyond 3 m and upto 10 m	metre	69,300.00
13.16.1.3	Depth beyond 10 m and upto 20 m		
	1) Add 5% for every additional metre depth of sinking over the rate of sinking for the previous metre.	metre	-
13.16.2	In Clayey soil		
13.16.2.1	Depth below cutting edge upto 3m	metre	68,100.00
13.16.2.2	Depth beyond 3 m and upto 10 m	metre	97,800.00
13.16.2.3	Depth beyond 10 m and upto 20 m		
	1) Add 5% for every additional metre depth of sinking over the rate of sinking for the previous metre.		
	2) If dewatering is required add 5% of cost	metre	-
13.16.3	In Soft Rock at all depth	metre	1,65,800.00
13.16.4	In Hard Rock at all depth	metre	2,39,100.00
13.17	Sinking of Twin D Type (overall length 12m, overall width 6m) well true to vertical, through all types of soil and rock, as shown against each case, (other than pneumatic method of sinking) complete as per drawing and technical specifications including all material, labour, machinery, lighting, guarding and maintenance of diversion complete as per clause 1200 of MoRT&H specification.		
13.17.1	In sandy soil		
13.17.1.1	Depth below cutting edge upto 3m	metre	13,650.00
13.17.1.2	Depth beyond 3 m and upto 10 m	metre	14,800.00
13.17.1.3	Depth beyond 10 m and upto 20 m		
	1) Add 5% for every additional metre depth of sinking over the rate of sinking for the previous metre.	metre	-
13.17.2	In Clayey soil		
13.17.2.1	Depth below cutting edge upto 3m	metre	16,200.00
13.17.2.2	Depth beyond 3 m and upto 10 m	metre	21,200.00
13.17.2.3	Depth beyond 10 m and upto 20 m		
	1) Add 5% for every additional metre depth of sinking over the rate of sinking for the previous metre.		
	2) If dewatering is required add 5% of cost	metre	-

Code No	Description	Unit	Rate Rs.
13.17.3	In Soft Rock at all depth	metre	34,700.00
13.17.4	In Hard Rock at all depth	metre	49,600.00
13.18	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 wherever 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 1200, 1207.6 of MoRT&H Specifications including all material, labour and machinery.	cum	50,400.00
13.19	Providing structural steel liner upto 10mm thickness for curbs, steining for wells and piles including fabricating and setting out as per detailed drawing as per clause 1200 & 1900 of MoRT&H specification including all material, labour and machinery.	tonne	1,07,700.00
13.20	Sand filling with compaction in wells complete as per level on drawing and technical specification as per clause 1209 of MoRT&H specification including all material, labour, machinery.	cum	1,951.00
13.21	Bored cast-in-situ R.C.C. pile with design mix concrete using batching plant, transit mixer and concrete pump, excluding reinforcement complete as per drawing and technical specifications and removal of excavated earth with all lifts and lead upto 1000 m. as per clause 1100, 1600 & 1700 of MoRT&H Specification including all material, labour and machinery.		
13.21.1	400 mm dia pile		
13.21.1.1	RCC Grade M -20 (Design mix)	metre	2,790.00
13.21.1.2	RCC Grade M -25 (Design mix)	metre	2,840.00
13.21.1.3	RCC Grade M -30 (Design mix)	metre	2,845.00
13.21.1.4	RCC Grade M -35 (Design mix)	metre	2,870.00
13.21.2	450 mm dia pile		
13.21.2.1	RCC Grade M -20 (Design mix)	metre	2,965.00
13.21.2.2	RCC Grade M -25 (Design mix)	metre	3,030.00
13.21.2.3	RCC Grade M -30 (Design mix)	metre	3,045.00
13.21.2.4	RCC Grade M -35 (Design mix)	metre	3,070.00
13.21.3	600 mm dia pile		
13.21.3.1	RCC Grade M -20 (Design mix)	metre	4,130.00
13.21.3.2	RCC Grade M -25 (Design mix)	metre	4,240.00

Code No	Description	Unit	Rate Rs.
13.21.3.3	RCC Grade M -30 (Design mix)	metre	4,250.00
13.21.3.4	RCC Grade M -35 (Design mix)	metre	4,300.00
13.21.4	750 mm dia pile		
13.21.4.1	RCC Grade M -20 (Design mix)	metre	5,470.00
13.21.4.2	RCC Grade M -25 (Design mix)	metre	5,650.00
13.21.4.3	RCC Grade M -30 (Design mix)	metre	5,660.00
13.21.4.4	RCC Grade M -35 (Design mix)	metre	5,740.00
13.21.5	1000 mm dia pile		
13.21.5.1	RCC Grade M -20 (Design mix)	metre	8,930.00
13.21.5.2	RCC Grade M -25 (Design mix)	metre	9,250.00
13.21.5.3	RCC Grade M -30 (Design mix)	metre	9,270.00
13.21.5.4	RCC Grade M -35 (Design mix)	metre	9,400.00
13.21.6	1200 mm dia pile		
13.21.6.1	RCC Grade M -20 (Design mix)	metre	11,350.00
13.21.6.2	RCC Grade M -25 (Design mix)	metre	11,800.00
13.21.6.3	RCC Grade M -30 (Design mix)	metre	11,850.00
13.21.6.4	RCC Grade M -35 (Design mix)	metre	12,000.00
13.22	Bored cast-in-situ R.C.C. pile with cutting / Drilling for anchoring of pile into rocks wherever firm rocky strata is available, shall be done upto desired depth (minimum 1.50 m) as per drawings, specifications and as directed by Engineer. Bore hole shall be cleaned properly before concreting. No, distinction shall be made for penetration through hard rock or rock socketing with design mix concrete (M-35) using batching plant, transit mixer and concrete pump excluding reinforcement complete as per drawing and technical specifications and removal of excavated earth with all lifts and lead upto 1000 m. as per clause 1100, 1600 & 1700 of MoRT&H Specification including all material, labour and machinery.		
13.22.1	450mm dia pile	metre	7,290.00
13.22.2	600 mm dia pile	metre	8,000.00
13.22.3	750 mm dia pile	metre	8,920.00
13.22.4	1000 mm dia pile	metre	14,250.00
13.22.5	1200 mm dia pile	metre	17,350.00
13.23	Driven cast-in-place true vertical R.C.C. piles excluding reinforcement complete as per drawing and technical specification as per clause 1100, 1600 & 1700 of MoRT&H Specification including all material, labour and machinery.		
13.23.1	450 mm dia pile		
13.23.1.1	RCC Grade M -20 (Design mix)	metre	2,290.00

Code No	Description	Unit	Rate Rs.
13.23.1.2	RCC Grade M -25 (Design mix)	metre	2,353.00
13.23.1.3	RCC Grade M -30 (Design mix)	metre	2,358.00
13.23.1.4	RCC Grade M -35 (Design mix)	metre	2,385.00
13.23.2	500 mm dia pile		
13.23.2.1	RCC Grade M -20 (Design mix)	metre	2,775.00
13.23.2.2	RCC Grade M -25 (Design mix)	metre	2,855.00
13.23.2.3	RCC Grade M -30 (Design mix)	metre	2,860.00
13.23.2.4	RCC Grade M -35 (Design mix)	metre	2,895.00
13.23.3	750 mm dia pile		
13.23.3.1	RCC Grade M -20 (Design mix)	metre	4,485.00
13.23.3.2	RCC Grade M -25 (Design mix)	metre	4,660.00
13.23.3.3	RCC Grade M -30 (Design mix)	metre	4,675.00
13.23.3.4	RCC Grade M -35 (Design mix)	metre	4,750.00
13.23.4	1000 mm dia pile		
13.23.4.1	RCC Grade M -20 (Design mix)	metre	7,030.00
13.23.4.2	RCC Grade M -25 (Design mix)	metre	7,340.00
13.23.4.3	RCC Grade M -30 (Design mix)	metre	7,360.00
13.23.4.4	RCC Grade M -35 (Design mix)	metre	7,500.00
13.23.5	1200 mm dia pile		
13.23.5.1	RCC Grade M -20 (Design mix)	metre	10,300.00
13.23.5.2	RCC Grade M -25 (Design mix)	metre	10,750.00
13.23.5.3	RCC Grade M -30 (Design mix)	metre	10,800.00
13.23.5.4	RCC Grade M -35 (Design mix)	metre	11,000.00
13.24	Providing and laying TMT bar reinforcement at any level in foundation/ pile/ pile cap complete as per drawing and clause 1600 of MoRT&H Specification including all material, labour and machinery.	tonne	83,600.00
13.25	Reinforcement with TMT bar in sub structure	tonne	83,600.00
13.26	Reinforcement with TMT bar in super structure	tonne	85,900.00
13.27	Plie load testing on single vertical piles in accordance with IS 2911 (Part IV) including installation of loading platform and preparation of pile head or construction of test cap and dismantling of test cap after test etc. complete as per direction of Engineer and as per clause 1100 of MoRT&H specification including all labour, material, machinery.		
13.27.1	Initial and routine vertical load test	tonne	392.50
13.27.2	Lateral load test	tonne	7,870.00

Code No	Description	Unit	Rate Rs.
13.28	Non-destructive Integrated testing of cast-in-situ pile using pile deriving analyzer or equivalent as detailed in specification and as approved by Engineer.	each	2,064.00
13.29	Providing and arranging dynamic load test for checking the load bearing capacity of pile as detailed in specification and as approved by Engineer as per ASTM D4945 including of analysis and report submission including all labour, material, machinery. This include preparation of hammer, crane, build-up of pile head, plywood, steel plates etc.	each	1,16,700.00
13.30	Providing, arranging and conducting sonic logging test on RC bored piles using cross holes sonic logging analyzer and submission of report.	each	11,000.00
13.31	Providing and conducting testing of finished PSC girder with simulation system as directed by Engineer excluding cost of girder, including reaction frame all testing equipment and their accessories complete.	per test	1,37,300.00
13.32	Making holes in all types of rock for anchorage etc. for any depth below foundation level 30/40 mm dia. including fixing charges for providing of inserts like anchor bars along the grouting, anchoring etc. true in line & plumb as per approved detailed working drawing including cost of cement grout etc. complete in all respect.(Cement grout 1:1 as per clause no. 2800 & 2806 of MoRTH Specification)(excluding cost of steel) and as per the directed of the Engineer.	metre	171.50
13.33	Drilling borehole and conducting standard penetration test from ground level and upto the depth given below or upto refusal whichever occurs earlier as per IS:2131-1981 and IS 2132-1986.The work also includes the determination of Safe Bearing capacity as per IS:6403-1981 and IS:8009-1976 from disturbed and undisturbed samples. The following properties should be also reported as per related IS codes .The whole work should be done as per direction given by Engineer-in-charge and upto satisfaction of Engineer in-charge. (i) Grain Size Anaylsis (ii) Atterberg's Limit (iii) Bulk Density (iv) Moisture Content (v) Specific Gravity (vi) Shear Parameters including Cohesion and Angle of Internal Friction.		
13.33.1	Upto 6m depth	each	9,438.00
13.33.2	upto 10m depth	each	11,325.00

14.0 SUB-STRUCTURE & SUPER-STRUCTURE

Code No	Description	Unit	Rate Rs.
14.1	Brick masonry work with First class FPS bricks (min. 10.5 Mpa) in cement mortar with mechanical mixer in substructure/ super structure at all levels complete as per clause 1300 and 2200 of MoRT&H specification including all material, labour, scaffolding etc but excluding pointing and plastering.		
14.1.1	In cement mortar 1:3 (1 cement : 3 coarse sand)	cum	6,270.00
14.1.2	In cement mortar 1:4 (1 cement : 4 coarse sand)	cum	6,060.00
14.2	Random rubble masonry work in cement mortar with mechanical mixer in substructure/ super structure at all levels complete as per clause 1400 and 2200 of MoRT&H specification including all material, labour, scaffolding etc but excluding pointing and plastering.		
14.2.1	In cement mortar 1:3 (1 cement : 3 coarse sand)	cum	5,390.00
14.2.2	In cement mortar 1:4 (1 cement : 4 coarse sand)	cum	5,110.00
14.3	Coursed rubble masonry (First sort) work in cement mortar 1:3 (1 cement : 3 coarse sand) with mechanical mixer in substructure/ super structure at all levels complete as per clause 1400 and 2200 of MoRT&H specification including all material, labour, scaffolding etc but excluding pointing and plastering.	cum	5,860.00
14.4	Pointing of any design with cement mortar (1:3) on Brick work in substructure/ super structure at any height complete as per clause 1312 of MoRT&H specification including all material, labour, scaffolding etc.	sqm	104.00
14.5	Plastering with cement mortar (1:3) on Brick/stone work in substructure/ super structure at any height complete as per clause 1312 of MoRT&H specification including all material, labour, scaffolding etc.		
14.5.1	12 mm plaster on brick work	sqm	167.50
14.5.2	20 mm plaster on stone work	sqm	262.50
14.6	Providing and laying structural plain/ reinforced cement concrete (design mix) of specified grade in substructure at all levels using concrete mixer and vibrator, including cost of form work, as per drawing and technical specifications complete as per clause 1500, 1700 and 2200 of MoRT&H specification including all material, labour, scaffolding etc.		
14.6.1	PCC Grade M -20	cum	6,450.00
14.6.2	PCC Grade M -25	cum	6,890.00
14.6.3	PCC Grade M -30	cum	6,930.00
14.6.4	RCC Grade M -20	cum	6,500.00

Code No	Description	Unit	Rate Rs.
14.6.5	RCC Grade M -25	cum	6,890.00
14.6.6	RCC Grade M -30	cum	6,910.00
14.6.7	RCC Grade M -35	cum	6,990.00
14.7	Providing and laying structural plain/ reinforced cement concrete (design mix) of specified grade in substructure at all levels using concrete mixer and vibrator, including cost of form work, as per drawing and technical specifications complete as per clause 1500, 1700 and 2200 of MoRT&H specification including all material, labour, scaffolding etc. including Providing /mixing of synthetic fibers compulsorily complying with IS 16481:2022 of 06 mm/12 mm length to be mixed @ 0.25% by weight of Cement i.e. 125 gms per 50 kg Cement up to 900 gms per cum of Concrete/ mortar.		
14.7.1	RCC Grade M -20	cum	6,950.00
14.7.2	RCC Grade M -25	cum	7,350.00
14.7.3	RCC Grade M -30	cum	7,380.00
14.7.4	RCC Grade M -35	cum	7,450.00
14.8	Providing and laying structural plain/ reinforced cement concrete (design mix) of specified grade in substructure at all levels using batching plant, transit mixer, concrete pump and vibrator including cost of form work complete as per drawing and clause 1500, 1700 and 2200 of MoRT&H specification including all scaffolding, material, labour, machinery etc. including Providing /mixing of synthetic fibers compulsorily complying with IS 16481:2022 of 06 mm/12 mm length to be mixed @ 0.25% by weight of Cement i.e. 125 gms per 50 kg Cement up to 900 gms per cum of Concrete/ mortar.		
14.8.1	RCC Grade M -20	cum	6,170.00
14.8.2	RCC Grade M -25	cum	6,600.00
14.8.3	RCC Grade M -30	cum	6,620.00
14.8.4	RCC Grade M -35	cum	6,710.00
14.8.5	RCC Grade M -40	cum	6,770.00
14.8.6	RCC Grade M -45	cum	7,040.00
14.9	Providing weep holes in brick/ stone masonry/ Plain/ Reinforced concrete abutment, wing wall/ return wall with following dia AC pipe, extending through the full width of the structure with slope of 1V : 20H towards drawing face complete as per drawing, technical specifications and clause 2205 of MoRT&H Specification including all scaffolding, material, labour, machinery etc.		
14.9.1	100 mm dia	metre	144.00
14.9.2	150 mm dia	metre	164.00

Code No	Description	Unit	Rate Rs.
14.10	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 MoRT&H specification complete including all accessories as per drawing and technical specification and as per clause 2000 & 2200 of MoRT&H Specification including all scaffolding, material, labour, machinery etc.	cubic centimetre	1.50
14.11	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 MoRT&H Specifications complete as per drawing and approved technical specifications and as per clause 2000 & 2200 of MoRT&H Specification including all scaffolding, material, labour, machinery etc.	per tonne vertical load	575.00
14.12	Providing and laying of Filter media with granular materials/stone crushed aggregates satisfying the requirements laid down in clause 2504.2.2. of MoRT&H specifications 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 including all material, labour, machinery as per clause 710.1.4 of IRC:78 and clause 2200 of MoRT&H specification.	cum	1,656.00
14.13	Back filling in foundation, trench behind abutment, wing wall and return wall etc and below pipe bed in layers not exceeding 20cm in depth, consolidating each deposited layer compacted by mechanical means with all lead and lift as per drawing and technical specification including all material, labour, machinery as per clause 2100 and 2200 of MoRT&H specification including all material, labour, machinery.		
14.13.1	Using selected granular material (as per clause 2200 of MoRT&H).	cum	1,255.00
14.14	Providing and laying precast cement concrete M-30 Grade interlocking paving blocks of 100mm thick over 50mm coarse sand bedding (duly compacted) including filling of joints with sand suitable for heavy pedestrian traffic/ light vehicle traffic of pattern as approved by Engineer.	sqm	895.00
14.15	Providing and laying precast cement concrete M-30 Grade 100mm thick paving blocks of approved shape and size (not less than 0.20 sqm), over 100mm thick PCC M-10 Grade bedding (duly compacted) including filling of joints with cement sand mortar (1:3) complete as per drawing and specification and as approved by Engineer.	sqm	1,400.00

Code No	Description	Unit	Rate Rs.
14.16	Providing and laying structural reinforced/ prestressed cement concrete (design mix) of specified grade in superstructure using concrete mixer and vibrator at all levels including cost of steel form work complete as per drawing and clause 1500, 1600 and 1700 of MoRT&H specification including all scaffolding, material, labour, machinery etc. including Providing /mixing of synthetic fibers compulsorily complying with IS 16481:2022 of 06 mm/12 mm length to be mixed @ 0.25% by weight of Cement i.e. 125 gms per 50 kg Cement up to 900 gms per cum of Concrete/ mortar.		
14.16.1	RCC Grade M -25		
14.16.1.1	For solid slab superstructure	cum	8,090.00
14.16.1.2	For T-beam & slab	cum	8,410.00
14.16.1.3	For box girder/ voided slab and balanced cantilever	cum	9,710.00
14.16.2	RCC Grade M -30		
14.16.2.1	For solid slab superstructure	cum	8,210.00
14.16.2.2	For T-beam & slab	cum	8,540.00
14.16.2.3	For box girder/ voided slab and balanced cantilever	cum	9,860.00
14.16.3	RCC/PSC Grade M -35		
14.16.3.1	For solid slab superstructure	cum	8,210.00
14.16.3.2	For T-beam & slab	cum	8,550.00
14.16.3.3	For box girder/ voided slab and balanced cantilever	cum	9,880.00
14.16.4	RCC/PSC Grade M -40		
14.16.4.1	For solid slab superstructure	cum	8,530.00
14.16.4.2	For T-beam & slab	cum	8,870.00
14.16.4.3	For box girder/ voided slab and balanced cantilever	cum	10,250.00
14.17	"Fabrication, Welding, Riveting, bolting by HSFG bolts wherever required, supply, transportation to site, Assembling, Launching, Erecting of steel girder spans as per drawings and specifications approved by Railway and department for composite construction i.e. (Steel +RCC) of superstructure of the Road Over Bridge with contractor's own mild steel confirming to IS: 2062 Grade 250(B) with all welds, rivets, nuts bolts rivet materials, weld materials, HSFG bolts, service bolts, with other ancillary steel structures fixed to the girder where necessary in proper level and alignment and as per technical specifications. etc. with contractor's own materials, fabrication, machinery, templates, fixtures, equipments tools and plants, transportation to site, skilled/ unskilled labour, excise duty., Octroi, sales tax and other taxes, all leads and lifts, descent, loading, unloading, crossing one or more Railway track if required etc. complete and as per technical specifications. The rate shall also be inclusive of cold straightening of deformed and bent girder parts before their assembly. The structural steel to be used should be		

Code No	Description	Unit	Rate Rs.
	manufactured by SAIL/ RINL/ TISCO/ ESSAR/ JINDAL only. For Painting prior approval for superior brand/ make of the paint should be taken from engineer in-charge." "The rate shall be inclusive of supply, erection and dismantling of staging and scaffolding and other temporary arrangements required for the purpose of assembly, erection and launching of girders. The rate shall also be inclusive of cold straightening of deformed and bent girder parts before/after their assembly." "Metalizing girder/ girder component such as cross girder, top chord channels, bracing etc of BG new steel girder as directed by engineer with epoxy paint spray not less than two layers after preparing surface by sand/grit blasting as per provision laid in Appendix VI of IRS B-1179 code (latest alteration) including one coat wash primer one coat epoxy zinc chrome primer and two coat of epoxy paint with approved paint conforming to IS specification for fabrication & erection of steel girder bridge (RS B 1-79) as corrected up to date with contractor's own materials, tools, plants, labour, handling, re-handling if any including all lead, lifts descents, crossing of track/ obstruction etc. complete in all respect and as per direction of the engineer. Note:1. The fabrication of girders must be got done from RDSO approved firms only. 2. For Payment purpose, nominal weight of the girder as per drawing will only be considered."	kg	183.50
14.18	Providing and laying structural reinforced/ prestressed cement concrete (design mix) of specified grade using batching plant, transit mixer, concrete pump and vibrator in superstructure at all levels including cost of steel form work complete as per clause 1500, 1600 and 1700 of MoRT&H specification including all scaffolding, material, labour, machinery etc. including Providing /mixing of synthetic fibers compulsorily complying with IS 16481:2022 of 06 mm/12 mm length to be mixed @ 0.25% by weight of Cement i.e. 125 gms per 50 kg Cement up to 900 gms per cum of Concrete/ mortar.		
14.18.1	RCC Grade M -25		
14.18.1.1	For solid slab superstructure	cum	7,260.00
14.18.1.2	For T-beam & slab	cum	7,550.00
14.18.1.3	For box girder/ voided slab and balanced cantilever	cum	8,710.00
14.18.2	RCC Grade M -30		
14.18.2.1	For solid slab superstructure	cum	7,340.00
14.18.2.2	For T-beam & slab	cum	7,630.00
14.18.2.3	For box girder/ voided slab and balanced cantilever	cum	8,800.00
14.18.3	RCC/PSC Grade M -35		
14.18.3.1	For solid slab superstructure	cum	7,350.00
14.18.3.2	For T-beam & slab	cum	7,640.00

Code No	Description	Unit	Rate Rs.
14.18.3.3	For box girder/ voided slab and balanced cantilever	cum	8,840.00
14.18.4	RCC/PSC Grade M -40		
14.18.4.1	For solid slab superstructure	cum	7,430.00
14.18.4.2	For T-beam & slab	cum	7,730.00
14.18.4.3	For box girder/ voided slab and balanced cantilever	cum	8,940.00
14.18.5	RCC/PSC Grade M -45		
14.18.5.1	For solid slab superstructure	cum	7,610.00
14.18.5.2	For T-beam & slab	cum	7,930.00
14.18.5.3	For box girder/ voided slab and balanced cantilever	cum	9,190.00
14.18.6	RCC/PSC Grade M -50		
14.18.6.1	For solid slab superstructure	cum	7,770.00
14.18.6.2	For T-beam & slab	cum	8,090.00
14.18.6.3	For box girder/ voided slab and balanced cantilever	cum	9,390.00
14.19	Providing, precasting, transportation and placing in position at all level precast pre/post-tensioned specified grade girders complete as per drawing and clause 1800 & 2300 of MoRT&H specifications including all material, labour, machinery including suitable crane etc.		
14.19.1	RCC M-40	cum	29,800.00
14.19.2	RCC M-45	cum	29,900.00
14.20	Providing, precasting, transportation and placing in position at all level precast pre/post-tensioned specified grade girders as per drawing and clause 1800 & 2300 of MoRT&H specifications (excluding cost of reinforcement, HTS strands and pre-stressing) including all material, labour, machinery (suitable crane).		
14.20.1	RCC M-40	cum	13,750.00
14.20.2	RCC M-45	cum	13,900.00
14.21	Providing and fixing helical pipes in voided concrete slabs complete as per clause 1700 & 1800 of MoRT&H specifications including all material, labour, machinery etc.		
14.21.1	600mm dia (Hot dip galvanised GI Sheet 0.7mm thick)	metre	9,720.00
14.21.2	800mm dia (Hot dip galvanised GI Sheet 0.8mm thick)	metre	12,800.00
14.22	Providing and laying structural Reinforced cement concrete (design mix) of specified grade using mechanical concrete mixer and vibrator in approach slab, friction slab, edge beam, footpath and kerb as per approved drawing and specification as directed by the Engineer as per clause 1500 & 1700 of MoRT&H specification including all scaffolding, material, labour, machinery etc. including Providing /mixing of synthetic fibers compulsorily complying with IS 16481:2022 of 06 mm/12 mm length to be mixed @ 0.25% by weight of Cement i.e. 125 gms per 50 kg Cement up to 900 gms per cum of Concrete/ mortar.		

Code No	Description	Unit	Rate Rs.
14.22.1	RCC M-30	cum	8,540.00
14.22.2	RCC M-35	cum	8,550.00
14.23	Providing and laying structural Reinforced cement concrete (design mix) of specified grade using batching plant, transit mixer, concrete pump and vibrator in approach slab, friction slab, edge beam, footpath and kerb as per approved drawing and specification as directed by the Engineer as per clause 1500 & 1700 of MoRT&H specification including all scaffolding, material, labour, machinery etc. including Providing /mixing of synthetic fibers compulsorily complying with IS 16481:2022 of 06 mm/12 mm length to be mixed @ 0.25% by weight of Cement i.e. 125 gms per 50 kg Cement up to 900 gms per cum of Concrete/ mortar.		
14.23.1	RCC M-30	cum	7,630.00
14.23.2	RCC M-35	cum	7,640.00
14.23.3	RCC M-40	cum	7,730.00
14.24	Designing, providing and erection of Precast RCC fascia panels of minimum thickness 180mm made with M-35 Grade concrete batching plant, transit mixer, concrete pump and vibrator for retaining earth with all elements and accessories including reinforcing element, complete as per approved drawing and clause 3100 of MoRT&H specifications including all material, labour, machinery etc. (Scope of work includes designing, getting approval, casting in yard including reinforcement, curing, storing, transporting, lifting, placing in position, erection with all necessary fasteners etc complete excluding cost of excavation, RCC/CC for foundation, filter media and earth filling in RE portion)	sqm	4,225.00
14.25	Construction of M-40 grade reinforced prestressed precast concrete panel of 200 mm thickness having size 4.5m x 3.5m or as per drawing, casting the panels as per approved design and drawing in factory or plant including cost of all materials, formwork, reinforcement, dowel bars, tie bars, chairs, lifting bolts, grout ports, labour and all necessary machineries which are required for prestressing the wires, preparing concrete mix as per job mix design (The minimum cement content for M40 grade of PPCP shall be 440 kg/cum of concrete), making slots in panels for fixing dowel bars, tie bars, and placing necessary reinforcement as per design and drawing, steam/curing for 28 days including lifting, transporting and placing the panels at the required position, line, level and alignment as directed by Engineer in-charge, with max 20% fly Ash (Fly-ash upto 20% by weight of Cement) over a prepared sub base. including providing and fixing in position MS Plain dowel bars precoated with anticorrosive epoxy paint of required Dia. having 45 cms. length and at 30.00 cm. c/c lubricated for half length with bituminous paint and providing & fixing TMT Fe 500 tie bars 12 mm dia. 60 cm long at 75 cm c/c, handling, straightening, necessary cutting supported by TMT FE 500, chairs with proper alignment by using properly designed		

Code No	Description	Unit	Rate Rs.
	assembly of Bulkheads. Including, Grouting of base of the panels as well as dowel and tie slots in the panels, Providing contraction joints polysulphide sealant (Pouring grade) confirming to BS : 5212 - 1989 into groove of specified size and shape as per detailed drawing including fixing Polyethylene foam backer rod of required diameter (approx. 25% larger than the initial 3 mm.to 4 mm. joint) overlaid with bond breaking tape as per detailed drawing. Item includes cleaning the joints with water jet / air compressor and allowing joint to become thoroughly dry before sealant is applied and applying primer.(A) Contraction and longitudinal joints (50 mm. deep x max. 6 mm wide)	cum	4,615.00
14.26	Providing, placing and compacting to desired density approved backfill material in layers as per approved methodology including testing for reinforced fill portion and random fill portion in the approaches between the Reinforced Soil (RS) Wall panels as per approved drawings as per clause 3103 of MoRT&H specification The soil should be predominately coarse grained not more than 10% of particle should pass 75 micron sieve The item shall be measured and paid for the finished volume of backfill and sub-grade placed in position excluding the volume of filter media at base and behind the RS walls.	cum	385.00
14.27	Supplying, fitting and placing TMT bar reinforcement in sub structure/ superstructure at all level complete as per drawing and clause 1600 & 2200 of MoRT&H Specification including all material, labour, machinery etc.	tonne	85,900.00
14.28	Providing and laying High tensile steel wires/ strands at any level including all accessories for stressing, stressing operations and grouting complete as per drawing, technical specification and as per clause 1800 of MoRT&H Specification.	tonne	1,82,100.00
14.29	Providing and laying reinforced cement concrete wearing coat M-30 grade at any level including formwork and reinforcement @ 75kg/cum complete as per drawing and technical specification and as per clause 2702 of MoRT&H Specification including all material, labour, machinery etc. including Providing /mixing of synthetic fibers compulsorily complying with IS 16481:2022 of 06 mm/12 mm length to be mixed @ 0.25% by weight of Cement i.e. 125 gms per 50 kg Cement up to 900 gms per cum of Concrete/ mortar.	cum	13,300.00
14.30	Providing and laying Precast Reinforced cement concrete slab for footpath and median with approved finish, constructed with specified grade concrete as per dimensions in the approved drawing and at locations directed by the Engineer including form work and excluding reinforcement and complete as per clause 1500 & 1700 of MoRT&H specification including all material, labour, machinery. including Providing /mixing of synthetic fibers compulsorily complying with IS 16481:2022 of 06 mm/12 mm length to be mixed @ 0.25% by weight of Cement i.e. 125 gms per 50 kg Cement up to 900 gms per cum of Concrete/ mortar.		

Code No	Description	Unit	Rate Rs.
14.30.1	RCC M-20	cum	6,830.00
14.30.2	RCC M-25	cum	7,270.00
14.30.3	RCC M-30	cum	7,300.00
14.31	Construction of precast/ cast-in-situ RCC railing M-30 grade, true to line and grade, center to center spacing between vertical post not to exceed 2000mm leaving adequate space between vertical post for expansion, complete as per drawing and technical specification and as per clause 1500, 1600, 1700 & 2703 of MoRT&H Specification including all material, labour, machinery etc.	metre	2,180.00
14.32	Providing and fixing Mild steel railing including painted, complete as per drawing and technical specification and as per clause 1900 & 2703.2 of MoRT&H Specification including all material, labour, machinery etc.	metre	4,170.00
14.33	Providing and laying expansion joint complete as per drawing and technical specification and as per clause 2605 of MoRT&H Specification including all material, labour, machinery etc		
14.33.1	Filler joint with 20mm thick compressible fibre board.	sqm	957.00
14.33.2	Filler joint with Joint sealing compound with coarse sand and 6 % bitumen by weight.	metre per cm. Depth	43.10
14.34	Providing, laying and fixing of strip seal expansion joint catering to maximum horizontal movement upto 70 mm complete as per approved drawings and as per clause 2600 of MoRT&H specifications to be installed by manufacturer's authorized representative ensuring to compliance to manufacturer's instruction for installation including preparing the edges of bridge, welding to exposed reinforcement, concreting with design mix of grade of bridge or M-35 whichever is richer including all material, labour, machinery etc complete.	metre	10,500.00
14.35	Providing and erecting Drainage Spouts with 0.15m long GI pipe 150mm dia and GI bolt 10mm dia with Galvanised MS flat clamp complete as per drawing and Technical specification as per clause 2705 of MoRT&H specifications including all material, labour, machinery etc.	each	1,083.00
14.36	Providing and applying 2 coats of water based cement paint to unplastered concrete surface at all level after cleaning the surface of dirt, dust, oil, grease, efflorescence and applying paint @ of 1 litre for 2 sqm including all material, labour, scaffolding complete as per clause 800 of MoRT&H specifications including all material, labour scaffolding etc.	sqm	73.10
14.37	Providing and constructing of Reinforced cement concrete crash barrier at the edges of the road, approaches to bridge structures and medians, constructed with specified grade concrete using mechanical mixer and vibrator with 450 mm long at expansion joints filled with pre-moulded asphalt filler board, keyed to the structure on		

Code No	Description	Unit	Rate Rs.
	which it is built and installed as per design and dimensions in the approved drawing and at locations directed by the Engineer, all as specified as per clause 809 of MoRT&H specification including all material, labour scaffolding etc. including Providing /mixing of synthetic fibers compulsorily complying with IS 16481:2022 of 06 mm/12 mm length to be mixed @ 0.25% by weight of Cement i.e. 125 gms per 50 kg Cement up to 900 gms per cum of Concrete/ mortar.		
14.37.1	RCC M-25	cum	8,110.00
14.37.2	RCC M-30	cum	8,230.00
14.37.3	RCC M-35	cum	8,230.00
14.38	Providing and constructing of Reinforced cement concrete crash barrier at the edges of the road, approaches to bridge structures and medians, constructed with specified grade concrete using batching plant, transit mixer, concrete pump and vibrator with 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 and dimensions in the approved drawing and at locations directed by the Engineer, all as specified as per clause 809 of MoRT&H specification including all material, labour scaffolding etc. including Providing /mixing of synthetic fibers compulsorily complying with IS 16481:2022 of 06 mm/12 mm length to be mixed @ 0.25% by weight of Cement i.e. 125 gms per 50 kg Cement up to 900 gms per cum of Concrete/ mortar.		
14.38.1	RCC M-25	cum	7,280.00
14.38.2	RCC M-30	cum	7,350.00
14.38.3	RCC M-35	cum	7,360.00
14.38.4	RCC M-40	cum	7,430.00
14.39	Providing and erecting a "W" metal beam crash barrier comprising of 3 mm thick corrugated sheet metal beam rail, 70 cm above road/ground level, fixed on ISMC series channel vertical post, 150 x 75 x 5 mm spaced 2 m centre to centre, 1.8 m high, 1.1 m below ground/road level, all steel parts and fitments to be galvanised by hot dip process, all fittings to conform to IS:1367 and IS:1364, metal beam rail to be fixed on the vertical post with a spacer of channel section 150 x 75 x 5 mm, 330 mm long complete as per clause 810 of MoRT&H specification including all material, labour machinery etc.	metre	4,175.00
14.40	Providing and erecting a "Thrie" metal beam crash barrier comprising of 3 mm thick corrugated sheet metal beam rail, 85 cm above road/ground level, fixed on ISMC series channel vertical post, 150 x 75 x 5 mm spaced 2 m centre to centre, 2 m high with 1.15 m below ground level, all steel parts and fitments to be galvanised by hot dip process, all fittings to conform to IS:1367 and IS:1364, metal beam rail to be fixed on the vertical post with a space of channel section 150 x 75 x 5 mm, 546 mm long complete as per clause 810 of MoRT&H specification including all material, labour machinery etc.	metre	5,540.00

Code No	Description	Unit	Rate Rs.
14.41	Providing and fixing G.I. Pipes railing of 80 mm dia. (Class B) over brackets of 16 mm thick MS plate with 200 mm at bottom & 120 mm at top with 200 mm height welded to 16 mm thick MS Plates of size 200 X 175 anchored with 400 mm long 4-12 mm dia. steel bars at the top of RCC crash barrier @1.0m c/c including fixing arrangement as per the drawing, clause 800 of MoRTH specification and as per the direction of the Engineer	metre	1,453.00
14.42	Load testing of one or more spans of bridge as selected by the Engineer as per approved load test procedure following relevant IS/IRC/Railway codes with contractor's labour, deflection measuring instruments, loading materials, recoding and analyzing the load testing results including all lead & lift, etc. complete as required. The rates are all inclusive and will be paid after load test is finished and girder is cleared of the kentledges /loading material etc. The load shall be 1.25 times the stipulated design load Based on Design load & not span (Load = 200 T)		
14.42.1	For span design load upto 100 MT.	per test	2,74,600.00
14.42.2	Extra for increase of 100 MT or part thereof in the span load capacity upto 800 MT.	per 100 T per test	34,300.00
14.43	Providing and applying elastic, elastomeric membrane forming system with anti carbonation and breathing properties. The system should be based on solvent free acrylic polymer with selected minerals fillers and should be ultra violet resistant, crack bridging type, carbonation resistant, breathable, environment friendly, water proofing coating for anti-carbonation equivalent air layer thickness denoted as R or SDCO ₂ ≥ 50mm and for breathability equivalent air layer thickness denoted as SDH ₂ O shall be ≤ 4mm for vapour transmitting barrier. The system consist of one coat primer namely PREMIX 250 or equivalent @ 75-100 g/sqm. The consumption of main polymer namely EMCECOLORFLEX or equivalent to give film thickness of 200-225 microns(solid content,70% +-3%)should be application (either by roller or brush)and surface smoothness of concrete. The total dry film thickness of the coating should be min. 200 microns for the above system. Polymer coating should be in suitable shades, including cost of materials, cleaning, chipping and removing the dirt particles of the concrete slabs with wire brush & water, labour charges for filling the bug holes, cracks, joints etc. with one component polymer modified fine repair and cosmetic mortar, labour for applying above coating, scaffolding charges, taxes all inclusive.	sqm	534.00
14.44	Providing, fixing, maintaining, shifting & refixing, barricading of minimum 2.0 mtr height at stipulated active site of the same project site, made with angle iron frame of 50x50x5mm and GI sheet of 0.63mm thick including primer painted initially, painting, lettering & border with reflective paint at the time of every shifting, traffic diversion arrangement, safety guard, suitable lightning arrangement during night, complete in all respect till completion of the project as per technical specification and direction of Engineer-In-charge and		

Code No	Description	Unit	Rate Rs.
	same shall be possessed by the contractor after completion of the Project. Payment under this item will be released (1) 50% At the time of Providing new barricading at the time of start of project at location and plan as approved by the Engineer & certification (2) 50% After completion of project including shifting re-erecting and maintaining the barricading in position, during entire construction tenure with requisite manpower /flagman etc. complete for guiding traffic and safety etc and dismantling after completion of project.	metre	4,540.00

15.0 RIVER TRAINING & PROTECTION WORKS

Code No	Description	Unit	Rate Rs.
15.1	Providing and laying specified apron for protection against scour complete as per drawing and technical specification as per clause 2503 of MoRT&H Specification.		
15.1.1	Boulder/Quarry stone, not less than 40 kg each and specific gravity not less than 2.65, without wire crates.	cum	1,839.00
15.1.2	Boulder/Quarry stone, not less than 40 kg each in wire creates made with 4mm dia GI wire confirming to IS : 280 & IS : 4826 in 100mmX100mm mesh (weaved diagonally).	cum	2,940.00
15.2	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 and as per clause 2504 of MoRT&H Specification.		
15.2.1	With R.R. Stone/ bolder, weighing not less than 40 kg, thickness not less than 150mm, Specific gravity not less than 2.65.	cum	1,839.00
15.3	Providing and laying graded stone aggregate Filter Material underneath pitching in slopes complete as per drawing and Technical specifications and as per clause 2504 of MoRT&H Specification.	cum	1,255.00
15.4	Providing and laying flooring complete as per drawing and Technical specifications and as per clause 2505 of MoRT&H Specification.		
15.4.1	Rubble stone laid in cement mortar 1:3	cum	4,815.00
15.5	Construction of dry rubble flooring at cross drainage works complete as per drawing and Technical specifications and as per clause 2506 of MoRT&H Specification.	cum	1,927.00
15.6	Constructing curtain wall complete as per drawing and Technical specification per clause 2507.2 of MoRT&H Specification.		
15.6.1	Cement concrete Grade M-15	cum	5,220.00
15.7	Providing, constructing coffer dam in river basin / dam storages as per type design including excavation, filling the middle portion with B.C. soil (in gunny bags if required). Providing impervious / semipervious materials on both sides of B.C. soil (in gunny bags if required) including ramming, compacting to the satisfaction of Engineer-in-charge till the completion of work including dismantling coffer dam after completion of works and disposing off the material as directed by the Engineer-in-charge. Note : Maximum top width payable shall be 2 Mtr. and maximum payable side slopes shall be 1.5 horizontal to 1 vertical, if the constructed top width of the side slopes are less, then the measurements at actual are payable. Extra top width or flat slopes are not payable. Contractor is free to use ballies, plastic sheets, piles, pipes, CGI sheets for supporting hearting materials instead of impervious/ semi-pervious hearting materials for which no extra payments shall be payable. 30% payment shall be withheld for dismantling of coffer dam.	cum	531.00

Code No	Description	Unit	Rate Rs.
15.8	Supplying & 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	219.00

16.0 REPAIR & REHABILITATION

Code No	Description	Unit	Rate Rs.
16.1	Removal of existing cement concrete wearing coat manually or with the help of jack hammers including its disposal within a lead of 1000 metres, complete as per technical specification without causing any detrimental effect to any part of the bridge structure as per clause 2809, 100 of MoRT&H Specification.	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 1000 m as per clause 2809, 100 of MoRT&H Specification.	sqm	91.10
16.3	Guniting (Minimum density 2T/Cum.) on concrete/masonry surface with wire mesh size 50x50mm of wire thickness 3mm and cement mortar 1:3, applied with compressor after cleaning surface and applying with epoxy complete as per technical specification as per clause 2807 of MoRT&H Specification.	sqm	1,290.00
16.4	Providing and inserting nipples with approved fixing compound after drilling holes for grouting as per technical specification including subsequent cutting/ removal and sealing of the holes as necessary of nipples after completion of grouting with cement/ Epoxy as per clause 2807 of MoRT&H Specification.		
16.4.1	Cement grout as per clause 2800 & 2806 of MoRT&H specification.	each	224.00
16.4.2	Epoxy grout as per clause 2800 & 2803 of MoRT&H specification.	each	224.00
16.5	Sealing of cracks/ porous concrete with following by injection process through nipples including cost of material and labour complete as per drawing and technical specification complete.		
16.5.1	Cement grout as per clause 2800 & 2806 of MoRT&H specification.	Kg	256.50
16.5.2	Epoxy grout as per clause 2800 & 2803 of MoRT&H specification.	kg	1,295.00
16.5.3	Cement mortar (1:1) grout as per clause 2800 & 2806 of MoRT&H specification.	kg	253.00
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 complete as per clause 2800 of MoRT&H specification.	sqm	816.00
16.7	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. complete as per clause 2807 of MoRT&H specification.	sqm	373.00

17.0 SEWER LINE WORKS

Code No	Description	Unit	Rate Rs.
17.1	Earth work for Sewer line and Manhole in excavation in foundation, trenches manholes, road side chambers etc. including dressing of sides and ramming of bottoms, including getting out the excavated material, refilling after laying pipe/ foundation and disposal of surplus excavated material at a lead upto 50m suitable site as per direction of Engineer for following depths, below natural ground / Road top level including allowances for any additional excavation beyond the drawings (measurement for payment to be as per standard drawings), re-handling of material/earth to complete the task.		
17.1.1	In all types soils/ saturated soil such as moorum, sand, sandy silt, clay, black cotton soil, kankar, etc.		
17.1.1.1	Depth upto 1.5 m	cum	299.00
17.1.1.2	Add extra for overall depth of excavation above 1.5 m and upto 3.0 m over item no 17.1.1.1	cum	20.90
17.1.1.3	Add extra for overall depth of excavation above 3.0 m and upto 4.5 m over item no 17.1.1.1	cum	47.80
17.1.1.4	Add extra for overall depth of excavation above 4.5 m and upto 6.0 m over item no 17.1.1.1	cum	83.70
17.1.1.5	Add extra for overall depth of excavation above 6.0 m and upto 7.5 m over item no 17.1.1.1	cum	128.50
17.1.1.6	Add extra for overall depth of excavation above 7.5 m and upto 9.0 m over item no 17.1.1.1	cum	179.50
17.1.1.7	Add extra for overall depth of excavation above 9.0 m and upto 10.5 m over item no 17.1.1.1	cum	359.00
17.1.2	In ordinary rock.		
17.1.2.1	Depth upto 1.5 m	cum	1,262.00
17.1.2.2	Add extra for overall depth of excavation above 1.5 m and upto 3.0 m over item no 17.1.2.1	cum	88.30
17.1.2.3	Add extra for overall depth of excavation above 3.0 m and upto 4.5 m over item no 17.1.2.1	cum	202.00
17.1.2.4	Add extra for overall depth of excavation above 4.5 m and upto 6.0 m over item no 17.1.2.1	cum	353.50
17.1.2.5	Add extra for overall depth of excavation above 6.0 m and upto 7.5 m over item no 17.1.2.1	cum	543.00
17.1.2.6	Add extra for overall depth of excavation above 7.5 m and upto 9.0 m over item no 17.1.2.1	cum	757.00
17.1.3	In hard rock (required blasting) including Blasting materials.		
17.1.3.1	Depth upto 1.5 m	cum	2,127.00

Code No	Description	Unit	Rate Rs.
17.1.3.2	Add extra for overall depth of excavation above 1.5 m and upto 3.0 m over item no 17.1.3.1	cum	149.00
17.1.3.3	Add extra for overall depth of excavation above 3.0 m and upto 4.5 m over item no 17.1.3.1	cum	340.50
17.1.3.4	Add extra for overall depth of excavation above 4.5 m and upto 6.0 m over item no 17.1.3.1	cum	596.00
17.1.3.5	Add extra for overall depth of excavation above 6.0 m and upto 7.5 m over item no 17.1.3.1	cum	915.00
17.1.3.6	Add extra for overall depth of excavation above 7.5 m and upto 9.0 m over item no 17.1.3.1	cum	1,276.00
17.1.4	In hard rock (Blasting prohibited)		
17.1.4.1	Depth upto 1.5 m	cum	4,320.00
17.1.4.2	Add extra for overall depth of excavation above 1.5 m and upto 3.0 m over item no 17.1.4.1	cum	302.50
17.1.4.3	Add extra for overall depth of excavation above 3.0 m and upto 4.5 m over item no 17.1.4.1	cum	691.00
17.1.4.4	Add extra for overall depth of excavation above 4.5 m and upto 6.0 m over item no 17.1.4.1	cum	1,210.00
17.1.4.5	Add extra for overall depth of excavation above 6.0 m and upto 7.5 m over item no 17.1.4.1	cum	1,858.00
17.1.4.6	Add extra for overall depth of excavation above 7.5 m and upto 9.0 m over item no 17.1.4.1	cum	2,590.00
17.1.4.7	Add extra for overall depth of excavation above 9.0 m and upto 10.5 m over item no 17.1.4.1	cum	4,320.00
17.2	Add extra over item no 17.1.1, 17.1.2, 17.1.3 and 17.1.4 in RUIDP SOR for excavation in saturated soil, silt, rock and sludge where pumping or bailing out of water including well point if required for sewer line and manhole.		
17.2.1	Excavation depth from ground level 0.0 to 9.0 m		
17.2.1.1	Excavation from Encountered depth of water table 0.0 to 1.5 m	cum	59.80
17.2.1.2	Excavation from Encountered depth of water table 1.5 to 3.0 m	cum	119.50
17.2.1.3	Excavation from Encountered depth of water table 3.0 to 4.5 m	cum	239.00
17.2.1.4	Excavation from Encountered depth of water table 4.5 to 6.0 m	cum	359.00
17.2.1.5	Excavation from Encountered depth of water table 6.0 to 7.5 m	cum	478.50
17.2.1.6	Excavation from Encountered depth of water table 7.5 to 9.0 m	cum	957.00
17.2.1.7	Excavation from encountered depth of water table 9.0 to 10.5 m	cum	1,435.00
17.3	Providing and fixing CLOSE timbering in trenches of sewer line and manholes including strutting, shoring and packing cavities (wherever required) complete. (Measurements to be taken of the face area timbered) for following depth below NGL.		

Code No	Description	Unit	Rate Rs.
17.3.1	Depth upto 3.0 m	sqm	142.50
17.3.2	Depth more than 3.0 m and upto 6.0 m	sqm	144.00
17.3.3	Depth beyond 6.0 m	sqm	146.50
17.4	Extra for planking, strutting and packing material for cavities IN CLOSE TIMBERING of sewer line and manholes if required to be left permanently in position (face area of timber permanently left to be measured)	sqm	1,121.00
17.5	Providing and fixing OPEN timbering in trenches of sewer line and manholes including strutting, shoring and packing cavities (wherever required) complete for following depth below NGL.		
17.5.1	Depth upto 3.0 m	sqm	72.60
17.5.2	Depth more than 3.0 m and upto 6.0 m	sqm	73.20
17.5.3	Depth beyond 6.0 m	sqm	74.50
17.6	Extra for planking, strutting and packing material for cavities IN OPEN TIMBERING of sewer line and manholes if required to be left permanently in position (face area of timber permanently left to be measured)	sqm	477.50
17.7	Providing and fixing close timbering made of Steel Girder Piling in sewer line and manholes work for support the both side of trenches with ISMB 250 as vertical member at 1.25 m centre to centre, ISMB 250 as horizontal member for tie at two depths, Struts to support the both side of trench of ISMB 250 and face of trench to be covered with 100*100*1235 mm wooden planks and removing Steel Girder piling after laying the sewers etc. complete as per specifications and as directed by Engineer. (Measurements to be taken of the face area timbered)		
17.7.1	Depth more than 3.0 m and upto 6.0 m	sqm	609.00
17.7.2	Depth beyond 6.0 m	sqm	731.00
17.8	Dismantling of flexible pavements for sewer line and manholes and disposal of dismantled materials up to a lead of 50 metres as directed by Engineer including allowances for any additional dismantling beyond the drawings (measurement for payment to be as per standard drawings), re-handling of material/earth to complete the task.		
17.8.1	Bituminous courses	cum	534.00
17.8.2	Granular courses	cum	372.00
17.9	Dismantling of cement concrete pavement for sewer line and manholes by mechanical means using pneumatic tools, cutting the peripheral edge by CC cutter, 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 including allowances for any additional dismantling beyond the drawings (measurement for payment to be as per standard drawings), re-handling of material/earth to complete the task.	cum	1,273.00

Code No	Description	Unit	Rate Rs.
17.10	Providing and laying un-reinforced, plain cement concrete mix in 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, mixed in a batching and mixing plant, transported to site, laid spread, compacted and finished in a continuous operation including provision of contraction, expansion, admixtures as approved, curing compound, finishing to lines and grades complete as per drawing and as per clause 602, 112 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion for road restoration under sewer line and manhole work including allowances for any additional road restoration beyond the drawings (measurement for payment to be as per standard drawings) to complete the task.		
17.10.1	cement concrete 1:3:6	cum	4,205.00
17.10.2	cement concrete 1:4:8	cum	3,785.00
17.11	Providing and laying in position cement concrete of specified grade over a prepared base course complete including finishing, curing all material, labour, machinery, lighting, guarding for road restoration under sewer line and manhole work using RMC (ready mix concrete plant) and Transit mixer including allowances for any additional road restoration beyond the drawings (measurement for payment to be as per standard drawings) to complete the task. including Providing /mixing of synthetic fibers compulsorily complying with IS 16481:2022 of 06 mm/12 mm length to be mixed @ 0.25% by weight of Cement i.e.125 gms per 50 kg Cement up to 900 gms per cum of Concrete/ mortar.		
17.11.1	PCC/ RCC Grade M -20	cum	6,130.00
17.11.2	PCC/ RCC Grade M -25	cum	6,540.00
17.12	Providing laying, spreading and compacting stone aggregates of specific sizes as per Table 400-7 to Water Bound Macadam specification including spreading in uniform thickness; hand packing, rolling with power roller 8-10 tonnes, in stages to proper grade and camber, applying and brooming requisite type of screening (Table 400-8) binding materials to fill up the interstices of coarse aggregates, watering (with water browser) and compacting to required density, making necessary earthen bund to protect edges as per clause 404 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion under sewer line and manhole work complete including allowances for any additional road restoration beyond the drawings (measurement for payment to be as per standard drawings) to complete the task.		
17.12.1	Hand broken - Grade-I (90-45mm)	cum	2,103.00
17.12.2	Hand broken - Grade-II (63-45mm)	cum	2,051.00
17.12.3	Crusher broken - Grade-II (63-45mm)	cum	2,298.00
17.12.4	Crusher broken - Grade-III (53-22.4mm)	cum	2,276.00

Code No	Description	Unit	Rate Rs.
17.13	Providing and applying tack coat on the prepared surface with bitumen emulsion as per IS: 8887 and approved quality @ 0.2 kg/sqm with the help of spray set fitted on bitumen Container (boiler) after cleaning the surface with brooms or soft brushes and finally dusting with old gunny bags and compressed air to receive bituminous treatment complete as per clause 502 of MoRT&H specification including all material, labour, machinery, lighting, guarding under sewer line and manhole work including allowances for any additional road restoration beyond the drawings (measurement for payment to be as per standard drawings) to complete the task.	sqm	14.40
17.14	Extra for additional bitumen emulsion used in above item for every 1 kg per 10 sqm including allowances for any additional road restoration beyond the drawings (measurement for payment to be as per standard drawings) to complete the task.	sqm	6.50
17.15	Providing and laying open graded premix carpet 20mm thick (compacted), on prepared surface in a single course as wearing course, composed of specified graded crushed stone aggregate as per Table 500-23, premixed with bituminous binder @ 14.60 kg/ 10sqm (including Cost of anti-stripping compound Minimum 1% in Lime/Cement as per design wherever required), including loading of material with F.E. loader, hot mixing of stone aggregate and bitumen in computerised hot mix plant, transporting the mixed material by tippers to paver and laying with paver finisher fitted with electronic sensor control to the required level and grade, compacting smooth wheeled roller 8-10 tonne capacity and finishing to required level to achieve the desired density as per clause 511 of MoRT&H specification including all material, labour, machinery, lighting, guarding but excluding cost of tack coat/ seal coat under sewer line and manhole work including allowances for any additional road restoration beyond the drawings (measurement for payment to be as per standard drawings) to complete the task.		
17.15.1	With Bitumen VG-grade 30	sqm	143.00
17.15.2	With bitumen of grade CRMB-60	sqm	148.00
17.16	Providing and applying liquid seal coat type "A" comprising of a layer of bituminous binder @ 9.8 kg/ 10 Sqm (including Cost of anti-stripping compound Minimum 1% in Lime/Cement as per design wherever required) followed by a cover of stone chipping @ 0.09 Cum/10 sqm of specified grading and rolling with power roller 8-10 tonne complete as per clause 513 of MoRT&H specification including all material, labour, machinery, lighting, guarding under sewer line and manhole work including allowances for any additional road restoration beyond the drawings (measurement for payment to be as per standard drawings) to complete the task.		
17.16.1	With Bitumen VG-grade 30	sqm	82.80
17.16.2	With bitumen of grade CRMB-60	sqm	86.00

Code No	Description	Unit	Rate Rs.
17.17	Providing and applying premixed seal coat Type "B" comprising of thin application of fine aggregate 0.06 Cum/ 10 sqm premix with bitumen binder @ 6.8 Kg/ 10 Sqm (including Cost of anti-stripping compound Minimum 1% in Lime/Cement as per design wherever required) laying with paver finisher with electronic sensor control and rolling with power roller 8-10 tonne complete as per clause 513 of MoRT&H specification including all material, labour, machinery, lighting, guarding under sewer line and manhole work including allowances for any additional road restoration beyond the drawings (measurement for payment to be as per standard drawings) to complete the task.		
17.17.1	With Bitumen VG-grade 30	sqm	57.70
17.17.2	With bitumen of grade CRMB-60	sqm	59.90
17.18	Providing at site, lowering & laying in trenches, aligning & jointing of RCC pipes NP4 class (with s/s ends) IS: 458 - 2003 (amended up to date) marked and pipes from 300 mm and upto 1800 mm manufactured through vertical / vibrated casting process at all depths with Rubber gaskets (EPDM/SBR) for sewer lines as per IS: 5382 (including cost of Rubber gaskets, lubricants) as per drawing, sectional hydro testing of the sewer pipe line (including cost and conveyance of water to site for testing) etc., complete as per specification and / or as directed by Engineer. Note : E/w to be measured and paid separately. Length of pipe shall be measured in between the outer wall of two manholes / Inspection chambers. Pipe in the manhole/inspection chamber's wall shall deemed to be included in the item of manhole/inspection chamber shall not be payable.		
17.18.1	150 mm internal diameter	metre	506.00
17.18.2	200 mm internal diameter	metre	644.00
17.18.3	250 mm internal diameter	metre	856.00
17.18.4	300 mm internal diameter	metre	1,202.00
17.18.5	350 mm internal diameter	metre	1,794.00
17.18.6	400 mm internal diameter	metre	1,989.00
17.18.7	450 mm internal diameter	metre	2,156.00
17.18.8	500 mm internal diameter	metre	2,550.00
17.18.9	600 mm internal diameter	metre	3,565.00
17.18.10	700 mm internal diameter	metre	4,640.00
17.18.11	800 mm internal diameter	metre	5,680.00
17.18.12	900 mm internal diameter	metre	7,180.00
17.18.13	1000 mm internal diameter	metre	8,610.00
17.18.14	1100 mm internal diameter	metre	8,850.00
17.18.15	1200 mm internal diameter	metre	10,750.00

Code No	Description	Unit	Rate Rs.
17.18.16	1400 mm internal diameter	metre	16,400.00
17.18.17	1600 mm internal diameter	metre	19,650.00
17.18.18	1800 mm internal diameter	metre	25,000.00
17.18.19	2000 mm internal diameter	metre	36,800.00
17.19	Providing at site, lowering & laying in trenches, aligning & jointing of RCC pipes NP3 class (with s/s ends) IS: 458 - 1988 (amended up to date) marked and pipes from 300 mm upto 2000 mm manufactured through vertical / vibrated casting process all levels with Rubber gaskets (EPDM/SBR) for sewer lines as per IS: 5382 (including cost of Rubber gaskets lubricants) as per drawing, sectional hydro testing of the sewer pipe line (including cost and conveyance of water to site for testing) etc., complete as directed by Engineer. Note : E/w to be measured and paid separately. Length of pipe shall be measured in between the outer wall of two manholes / Inspection chambers. Pipe in the manhole/inspection chamber's wall shall deemed to be included in the item of manhole/inspection chamber shall not be payable.		
17.19.1	150 mm internal diameter	metre	482.00
17.19.2	200 mm internal diameter	metre	597.00
17.19.3	250 mm internal diameter	metre	804.00
17.19.4	300 mm internal diameter	metre	1,090.00
17.19.5	350 mm internal diameter	metre	1,506.00
17.19.6	400 mm internal diameter	metre	1,676.00
17.19.7	450 mm internal diameter	metre	1,846.00
17.19.8	500 mm internal diameter	metre	2,064.00
17.19.9	600 mm internal diameter	metre	2,459.00
17.19.10	700 mm internal diameter	metre	3,305.00
17.19.11	800 mm internal diameter	metre	4,270.00
17.19.12	900 mm internal diameter	metre	5,580.00
17.19.13	1000 mm internal diameter	metre	6,790.00
17.19.14	1100 mm internal diameter	metre	7,720.00
17.19.15	1200 mm internal diameter	metre	8,720.00
17.19.16	1400 mm internal diameter	metre	12,800.00
17.19.17	1600 mm internal diameter	metre	15,950.00
17.19.18	1800 mm internal diameter	metre	21,000.00
17.19.19	2000 mm internal diameter	metre	27,400.00
17.20	Providing at site, lowering & laying in trenches, aligning & jointing of RCC pipes NP2 class (with s/s ends IS: 458 - 1988 (amended up to date) marked and manufactured through spun process at all levels		

Code No	Description	Unit	Rate Rs.
	with Rubber gaskets (EPDM/SBR) for sewer lines as per IS: 5382 (including cost of Rubber gaskets lubricants) as per drawing, sectional hydro testing of the sewer pipe line (including cost and conveyance of water to site for testing) etc., complete as directed by Engineer. Note : E/w to be measured and paid separately. Length of pipe shall be measured in between the outer wall of two manholes / Inspection chambers, Pipe in the manhole/inspection chamber's wall shall deemed to be included in the item of manhole/inspection chamber shall not be payable.		
17.20.1	150 mm internal diameter	metre	456.00
17.20.2	200 mm internal diameter	metre	617.00
17.20.3	250 mm internal diameter	metre	671.00
17.20.4	300 mm internal diameter	metre	813.00
17.20.5	350 mm internal diameter	metre	977.00
17.20.6	400 mm internal diameter	metre	1,139.00
17.20.7	450 mm internal diameter	metre	1,308.00
17.20.8	500 mm internal diameter	metre	1,674.00
17.20.9	600 mm internal diameter	metre	1,880.00
17.20.10	700 mm internal diameter	metre	2,440.00
17.20.11	800 mm internal diameter	metre	2,775.00
17.20.12	900 mm internal diameter	metre	3,875.00
17.20.13	1000 mm internal diameter	metre	4,480.00
17.20.14	1100 mm internal diameter	metre	5,620.00
17.20.15	1200 mm internal diameter	metre	6,540.00
17.20.16	1400 mm internal diameter	metre	8,100.00
17.20.17	1600 mm internal diameter	metre	10,500.00
17.20.18	1800 mm internal diameter	metre	11,200.00
17.20.19	2000 mm internal diameter	metre	12,600.00
17.21	Add extra for manufacturing of RCC pipe with Sulphate Resistant Cement instead of OPC/PPC cement		
17.21.1	NP2 Pipes		
17.21.1.1	150 mm internal diameter	metre	19.30
17.21.1.2	200 mm internal diameter	metre	24.80
17.21.1.3	250 mm internal diameter	metre	30.30
17.21.1.4	300 mm internal diameter	metre	43.60
17.21.1.5	350 mm internal diameter	metre	53.90
17.21.1.6	400 mm internal diameter	metre	60.90
17.21.1.7	450 mm internal diameter	metre	74.80

Code No	Description	Unit	Rate Rs.
17.21.1.8	500 mm internal diameter	metre	82.50
17.21.1.9	600 mm internal diameter	metre	128.00
17.21.1.10	700 mm internal diameter	metre	165.00
17.21.1.11	800 mm internal diameter	metre	187.50
17.21.1.12	900 mm internal diameter	metre	231.50
17.21.1.13	1000 mm internal diameter	metre	280.00
17.21.1.14	1100 mm internal diameter	metre	333.50
17.21.1.15	1200 mm internal diameter	metre	391.50
17.21.1.16	1400 mm internal diameter	metre	487.50
17.21.1.17	1600 mm internal diameter	metre	592.00
17.21.1.18	1800 mm internal diameter	metre	749.00
17.21.1.19	2000 mm internal diameter	metre	925.00
17.21.2	NP3 and NP4 Pipes		
17.21.2.1	150 mm internal diameter	metre	19.30
17.21.2.2	200 mm internal diameter	metre	30.40
17.21.2.3	250 mm internal diameter	metre	37.00
17.21.2.4	300 mm internal diameter	metre	59.90
17.21.2.5	350 mm internal diameter	metre	140.50
17.21.2.6	400 mm internal diameter	metre	157.00
17.21.2.7	450 mm internal diameter	metre	173.50
17.21.2.8	500 mm internal diameter	metre	190.00
17.21.2.9	600 mm internal diameter	metre	256.50
17.21.2.10	700 mm internal diameter	metre	294.00
17.21.2.11	800 mm internal diameter	metre	374.50
17.21.2.12	900 mm internal diameter	metre	440.50
17.21.2.13	1000 mm internal diameter	metre	565.00
17.21.2.14	1100 mm internal diameter	metre	616.00
17.21.2.15	1200 mm internal diameter	metre	698.00
17.21.2.16	1400 mm internal diameter	metre	913.00
17.21.2.17	1600 mm internal diameter	metre	1,073.00
17.21.2.18	1800 mm internal diameter	metre	1,289.00
17.21.2.19	2000 mm internal diameter	metre	1,625.00
17.22	Extra for providing 2.5mm thick HDPE Lining inside RCC pipe (while casting of pipe) as required.		
17.22.1	600 mm internal diameter	metre	765.00

Code No	Description	Unit	Rate Rs.
17.22.2	700 mm internal diameter	metre	893.00
17.22.3	800 mm internal diameter	metre	895.00
17.22.4	900 mm internal diameter	metre	1,148.00
17.22.5	1000 mm internal diameter	metre	1,274.00
17.22.6	1100 mm internal diameter	metre	1,403.00
17.22.7	1200 mm internal diameter	metre	1,531.00
17.22.8	1400 mm internal diameter	metre	1,785.00
17.22.9	1600 mm internal diameter	metre	2,040.00
17.22.10	1800 mm internal diameter	metre	2,296.00
17.22.11	2000 mm internal diameter	metre	2,550.00
17.23	Providing at site, lowering, laying, aligning, fixing in position and jointing in trenches at all level/ depths, ISI marked following class AC (Mazza process) pipes for sewer and drainage application as per IS 6908-1991 (amended upto date) with AC coupler joints sealed with Rubber gaskets (EPDM/SBR) as per IS 5382 complete including cost of all materials, labour, jointing, water, sectional hydro testing (including cost and conveyance of water to site for testing) etc. and commissioning as per Technical Specifications and as per direction of Engineer. Note : E/w to be measured and paid separately. Length of pipe shall be measured in between the outer wall of two manholes / Inspection chambers. Pipe in the manhole/inspection chamber's wall shall deemed to be included in the item of manhole/inspection chamber shall not be payable.		
17.23.1	Class-1		
17.23.1.1	150mm Nominal dia	metre	576.00
17.23.1.2	200 mm Nominal dia	metre	878.00
17.23.1.3	250 mm Nominal dia	metre	1,140.00
17.23.1.4	300 mm Nominal Dia	metre	1,438.00
17.23.1.5	350 mm Nominal Dia	metre	1,840.00
17.23.1.6	400 mm Nominal Dia	metre	2,224.00
17.23.1.7	450 mm Nominal Dia	metre	2,595.00
17.23.1.8	500 mm Nominal Dia	metre	3,295.00
17.23.1.9	600 mm Nominal Dia	metre	5,220.00
17.23.1.10	700 mm Nominal Dia	metre	7,140.00
17.23.1.11	800 mm Nominal Dia	metre	9,400.00
17.23.1.12	900 mm Nominal Dia	metre	11,850.00
17.23.1.13	1000 mm Nominal Dia	metre	14,300.00
17.23.2	Class-2		

Code No	Description	Unit	Rate Rs.
17.23.2.1	150mm Nominal dia	metre	699.00
17.23.2.2	200 mm Nominal dia	metre	1,137.00
17.23.2.3	250 mm Nominal dia	metre	1,412.00
17.23.2.4	300 mm Nominal Dia	metre	1,933.00
17.23.2.5	350 mm Nominal Dia	metre	2,451.00
17.23.2.6	400 mm Nominal Dia	metre	3,090.00
17.23.2.7	450 mm Nominal Dia	metre	3,655.00
17.23.2.8	500 mm Nominal Dia	metre	4,560.00
17.23.2.9	600 mm Nominal Dia	metre	6,440.00
17.23.2.10	700 mm Nominal Dia	metre	7,890.00
17.23.2.11	800 mm Nominal Dia	metre	11,200.00
17.23.2.12	900 mm Nominal Dia	metre	13,950.00
17.23.2.13	1000 mm Nominal Dia	metre	17,200.00
17.23.3	Class-3		
17.23.3.1	150mm Nominal dia	metre	863.00
17.23.3.2	200 mm Nominal dia	metre	1,407.00
17.23.3.3	250 mm Nominal dia	metre	1,744.00
17.23.3.4	300 mm Nominal Dia	metre	2,460.00
17.23.3.5	350 mm Nominal Dia	metre	3,070.00
17.23.3.6	400 mm Nominal Dia	metre	4,005.00
17.23.3.7	450 mm Nominal Dia	metre	4,825.00
17.23.3.8	500 mm Nominal Dia	metre	5,860.00
17.23.3.9	600 mm Nominal Dia	metre	8,290.00
17.23.3.10	700 mm Nominal Dia	metre	10,900.00
17.23.3.11	800 mm Nominal Dia	metre	14,600.00
17.23.3.12	900 mm Nominal Dia	metre	18,050.00
17.23.3.13	1000 mm Nominal Dia	metre	22,600.00
17.24	Providing, lowering, laying in trenches, aligning, fixing in position and jointing Ductile Iron (DI) ISI marked K-7 grade S&S pipes as per IS:8329-2000 (amended up to date), with internal High Alumina Cement (HAC) mortar lining for gravity sewer network with rubber ring (EPDM) joints as per IS: 5382-1985 (excluding special accessories) complete including all material, labour, hydraulic testing and commissioning as per technical specifications and as per direction of Engineer. Note : E/w to be measured and paid separately.		
17.24.1	100mm	metre	1,535.00

Code No	Description	Unit	Rate Rs.
17.24.2	150mm	metre	2,207.00
17.24.3	200mm	metre	2,900.00
17.24.4	250mm	metre	3,720.00
17.24.5	300mm	metre	4,680.00
17.24.6	350 mm	metre	5,740.00
17.24.7	400 mm	metre	6,820.00
17.24.8	450 mm	metre	7,960.00
17.24.9	500 mm	metre	9,560.00
17.24.10	600mm	metre	12,600.00
17.24.11	700mm	metre	16,800.00
17.24.12	800mm	metre	21,900.00
17.24.13	900mm	metre	26,600.00
17.24.14	1000mm	metre	31,600.00
17.24.15	1100mm	metre	41,000.00
17.25	Providing, lowering & laying in trenches, aligning & jointing of IS marked SW pipes (IS: 651:1980 amended up date) at all depths with rubber gaskets (EPDM/ SBR) for sewer lines and laying as per IS:4127:1983 (amended up to date) including cost of Rubber gaskets, lubricants and sectional hydro testing of the sewer pipe line (including the cost and conveyance of water to site for testing) complete in all respect as per specification and the directed of the Engineer. Note : E/w to be measured and paid separately. Length of pipe shall be measured in between the outer wall of two manholes / Inspection chambers. Pipe in the manhole/inspection chamber's wall shall deemed to be included in the item of manhole/inspection chamber shall not be payable.		
17.25.1	100 mm Nominal Dia	metre	353.50
17.25.2	150 mm Nominal Dia	metre	618.00
17.25.3	200 mm Nominal Dia	metre	997.00
17.25.4	250 mm Nominal Dia	metre	1,172.00
17.25.5	310 mm Nominal Dia	metre	1,692.00
17.26	Providing at site, lowering & laying in trenches, aligning & jointing of PVC-U pipes (SN 8) as per IS 15328 (amended up to date) and as per specifications with rubber rings with socket and spigot joint, (EPDM/SBR) for all depths for pipe length as per drawing and specification including hydraulic field testing (including the cost and conveyance of water to site for testing) and commissioning etc complete as directed by Engineer. Note : E/w to be measured and paid separately. Length of pipe shall be measured in between the outer wall of two manholes / Inspection chambers. Pipe in the manhole/inspection chamber's wall shall deemed to be included in		

Code No	Description	Unit	Rate Rs.
	the item of manhole/inspection chamber shall not be payable.		
17.26.1	110 mm Nominal Dia	metre	263.50
17.26.2	160 mm Nominal Dia	metre	548.00
17.26.3	200 mm Nominal Dia	metre	850.00
17.26.4	250 mm Nominal Dia	metre	1,300.00
17.26.5	315 mm Nominal Dia	metre	2,069.00
17.27	Providing at site, lowering & laying in trenches, aligning & jointing of U-PVC pipe as per IS 13592 (amended up to date) and as per specifications with rubber rings with socket and spigot joint, (EPDM/SBR) for all depths for pipe length as per drawing and specification including hydraulic field testing (including the cost and conveyance of water to site for testing) and commissioning etc complete as directed by Engineer for house sewer connection work. Note : E/w to be measured and paid separately. Length of pipe shall be measured in between the outer wall of two manholes / Inspection chambers. Pipe in the manhole/inspection chamber's wall shall deemed to be included in the item of manhole/inspection chamber shall not be payable.		
17.27.1	110 mm Nominal Dia	metre	245.00
17.28	Providing, lowering, laying, aligning, fixing in position at and jointing at all level/ depths ISI marked HDPE pipes of PE-100 grade and PN 6 for sewer application as per IS 14333-1996 (amended upto date) in trenches in complete including all material, labour, sectional hydro testing (including the cost and conveyance of water to site for testing) and commissioning as per Technical Specifications and as per direction of Engineer. Note: E/w to be measured and paid separately. Length of pipe shall be measured in between the outer wall of two manholes / Inspection chambers. Pipe in the manhole/inspection chamber's wall shall deemed to be included in the item of manhole/inspection chamber shall not be payable.		
17.28.1	200mm Nominal dia	metre	1,718.00
17.28.2	225 mm Nominal dia	Metre	1,951.00
17.28.3	250 mm Nominal dia	metre	2,665.00
17.28.4	315 mm Nominal dia	metre	4,310.00
17.28.5	355 mm Nominal Dia	metre	5,040.00
17.28.6	400 mm Nominal Dia	metre	6,950.00
17.28.7	450 mm Nominal Dia	metre	8,760.00
17.28.8	500 mm Nominal Dia	metre	11,550.00
17.28.9	560 mm Nominal Dia	metre	14,350.00
17.28.10	630 mm Nominal Dia	metre	18,050.00
17.28.11	800 mm Nominal Dia	metre	29,400.00

Code No	Description	Unit	Rate Rs.
17.28.12	900 mm Nominal Dia	metre	37,300.00
17.28.13	1000 mm Nominal Dia	metre	46,000.00
17.29	Providing, lowering, laying, aligning, fixing in position and jointing at all level/ depths full round HDPE DWC (double wall corrugated) pipes of SN8 grade as per IS 16098 (Part 2) amended upto date in trenches in complete including all material, labour, sectional hydro testing (including the cost and conveyance of water to site for testing) and commissioning as per Technical Specifications, drawings and as per direction of Engineer. Note : E/w to be measured and paid separately. Length of pipe shall be measured in between the outer wall of two manholes / Inspection chambers. Pipe in the manhole/inspection chamber's wall shall deemed to be included in the item of manhole/inspection chamber shall not be payable.		
17.29.1	150 mm ID	metre	429.50
17.29.2	200 mm ID	metre	618.00
17.29.3	250 mm ID	metre	949.00
17.29.4	300 mm ID	metre	1,306.00
17.29.5	400 mm ID	metre	2,250.00
17.29.6	500 mm ID	metre	3,400.00
17.29.7	600 mm ID	metre	5,810.00
17.29.8	800 mm ID	metre	9,900.00
17.29.9	1000 mm ID	metre	16,050.00
17.30	Providing granular bedding having width = outer dia of pipe (Bc) + 500mm, thickness below pipe = 0.25Bc or 100mm (whichever is higher) and haunching = 0.5Bc, with graded hard crusher broken stone of 100% passing through 20mm sieve, 20 to 50 % passing through 10mm sieve and 100 % retain on 6.3mm sieve, laying in layers of thickness 10/15cm including ramming, consolidation etc complete for all type of pipes of following sizes as per drawing and or as directed by Engineer.		
17.30.1	100 mm internal diameter	metre	128.00
17.30.2	150 mm internal diameter	metre	144.50
17.30.3	200 mm internal diameter	metre	167.00
17.30.4	250 mm internal diameter	metre	185.00
17.30.5	300 mm internal diameter	metre	210.00
17.30.6	350 mm internal diameter	metre	276.50
17.30.7	400 mm internal diameter	metre	313.00
17.30.8	450 mm internal diameter	metre	352.00
17.30.9	500 mm internal diameter	metre	389.50

Code No	Description	Unit	Rate Rs.
17.30.10	600 mm internal diameter	metre	490.00
17.30.11	700 mm internal diameter	metre	575.00
17.30.12	800 mm internal diameter	metre	683.00
17.30.13	900 mm internal diameter	metre	797.00
17.30.14	1000 mm internal diameter	metre	929.00
17.30.15	1100 mm internal diameter	metre	1,040.00
17.30.16	1200 mm internal diameter	metre	1,168.00
17.30.17	1400 mm internal diameter	metre	1,458.00
17.30.18	1600 mm internal diameter	metre	1,748.00
17.30.19	1800 mm internal diameter	metre	2,091.00
17.30.20	2000 mm internal diameter	metre	2,510.00
17.31	Providing granular bedding having width = outer dia of pipe (Bc) + 500mm, thickness below pipe = 0.25Bc or 100mm (whichever is higher) and haunching = 0.5Bc, with graded hard crusher broken stone of 100% passing through 20mm sieve, 20 to 50 % passing through 10mm sieve and 100 % retain on 6.3mm sieve, laying in layers of thickness 10/15cm including ramming, consolidation etc complete for PVC/HDPE pipes of following sizes as per drawing and or as directed by Engineer.		
17.31.1	110mm nominal dia	metre	115.50
17.31.2	160mm nominal dia	metre	131.50
17.31.3	200mm nominal dia	metre	146.50
17.31.4	250mm nominal dia	metre	164.00
17.31.5	315mm nominal dia	metre	186.50
17.32	Providing and laying plain cement concrete M15 grade (using mechanical concrete mixer) using 20mm graded hard crusher broken stone aggregate, laying in layers of not more than 15cm thick, for bedding having width = outer dia of pipe (Bc) + 200mm or 1.25Bc (whichever is higher), thickness below pipe = 0.25Bc or 100mm (whichever is higher) and haunching = 0.25Bc, for all type of pipes of following sizes, including compaction, curing, form work, etc complete as per drawing and/ or as directed by Engineer.		
17.32.1	150 mm internal diameter	metre	283.00
17.32.2	200 mm internal diameter	metre	345.00
17.32.3	250 mm internal diameter	metre	400.00
17.32.4	300 mm internal diameter	metre	482.00
17.32.5	350 mm internal diameter	metre	725.00
17.32.6	400 mm internal diameter	metre	849.00
17.32.7	450 mm internal diameter	metre	981.00

Code No	Description	Unit	Rate Rs.
17.32.8	500 mm internal diameter	metre	1,124.00
17.32.9	600 mm internal diameter	metre	1,503.00
17.32.10	700 mm internal diameter	metre	1,900.00
17.32.11	800 mm internal diameter	metre	2,459.00
17.32.12	900 mm internal diameter	metre	3,035.00
17.32.13	1000 mm internal diameter	metre	3,795.00
17.32.14	1100 mm internal diameter	metre	4,440.00
17.32.15	1200 mm internal diameter	metre	5,200.00
17.32.16	1400 mm internal diameter	metre	7,000.00
17.32.17	1600 mm internal diameter	metre	8,870.00
17.32.18	1800 mm internal diameter	metre	11,050.00
17.32.19	2000 mm internal diameter	metre	13,750.00
17.33	Providing and laying reinforced cement concrete M15 grade (using mechanical concrete mixer) with 0.4% steel reinforcement) using 20mm graded hard crusher broken stone aggregate, laying in layers of not more than 15cm thick, for bedding having width = outer dia of pipe (Bc) + 200mm or 1.25Bc (whichever is higher), thickness below pipe = 0.25Bc or 100mm (whichever is higher) and haunching = 0.25Bc, for all type of pipes of following sizes, including reinforcement, compaction, curing, form work, etc complete as per drawing and/ or as directed by Engineer.		
17.33.1	150 mm internal diameter	metre	425.00
17.33.2	200 mm internal diameter	metre	519.00
17.33.3	250 mm internal diameter	metre	600.00
17.33.4	300 mm internal diameter	metre	723.00
17.33.5	350 mm internal diameter	metre	1,090.00
17.33.6	400 mm internal diameter	metre	1,275.00
17.33.7	450 mm internal diameter	metre	1,475.00
17.33.8	500 mm internal diameter	metre	1,689.00
17.33.9	600 mm internal diameter	metre	2,258.00
17.33.10	700 mm internal diameter	metre	2,855.00
17.33.11	800 mm internal diameter	metre	3,695.00
17.33.12	900 mm internal diameter	metre	4,560.00
17.33.13	1000 mm internal diameter	metre	5,700.00
17.33.14	1100 mm internal diameter	metre	6,670.00
17.33.15	1200 mm internal diameter	metre	7,820.00
17.33.16	1400 mm internal diameter	metre	10,500.00

Code No	Description	Unit	Rate Rs.
17.33.17	1600 mm internal diameter	metre	13,300.00
17.33.18	1800 mm internal diameter	metre	16,600.00
17.33.19	2000 mm internal diameter	metre	20,600.00
17.34	Providing and laying granular bedding in layers of not more than 15cm thick, for bedding having width = outer dia of pipe (Bc) + 500mm, thickness below pipe = 0.25Bc or 100mm (whichever is higher), haunching = 0.5Bc and reinforced cement concrete M15 grade (using mechanical concrete mixer) with 1% steel reinforcement) using 20mm graded hard crusher broken stone aggregate to cover pipe having width = outer dia of pipe (Bc) + 200mm or 1.25Bc (whichever is higher), thickness over pipe = 0.25Bc or 100mm (whichever is higher) for all type of pipes of following sizes, including reinforcement, compaction, curing, form work, etc complete as per drawing and/ or as directed by Engineer.		
17.34.1	150 mm internal diameter	metre	902.00
17.34.2	200 mm internal diameter	metre	1,100.00
17.34.3	250 mm internal diameter	metre	1,273.00
17.34.4	300 mm internal diameter	metre	1,523.00
17.34.5	350 mm internal diameter	metre	2,211.00
17.34.6	400 mm internal diameter	metre	2,555.00
17.34.7	450 mm internal diameter	metre	2,925.00
17.34.8	500 mm internal diameter	metre	3,315.00
17.34.9	600 mm internal diameter	metre	4,345.00
17.34.10	700 mm internal diameter	metre	5,430.00
17.34.11	800 mm internal diameter	metre	6,970.00
17.34.12	900 mm internal diameter	metre	8,560.00
17.34.13	1000 mm internal diameter	metre	10,650.00
17.34.14	1100 mm internal diameter	metre	12,400.00
17.34.15	1200 mm internal diameter	metre	14,450.00
17.34.16	1400 mm internal diameter	metre	19,350.00
17.34.17	1600 mm internal diameter	metre	24,400.00
17.34.18	1800 mm internal diameter	metre	30,400.00
17.34.19	2000 mm internal diameter	metre	37,600.00
17.35	Providing arranging and Hydraulic testing of following RCC sewer pipe line as per IS: 783 code of practice and / or as directed by Engineer-in-charge complete including cost of water.		
17.35.1	150 mm Nominal Inside dia	metre	71.50
17.35.2	200 mm Nominal Inside dia	metre	85.50

Code No	Description	Unit	Rate Rs.
17.35.3	250 mm Nominal Inside dia	metre	87.00
17.35.4	300 mm Nominal Inside dia	metre	92.50
17.35.5	350 mm Nominal Inside dia	metre	130.00
17.35.6	400 mm Nominal Inside dia	metre	132.00
17.35.7	450 mm Nominal Inside dia	metre	151.00
17.35.8	500 mm Nominal Inside dia	metre	153.00
17.35.9	600 mm Nominal Inside dia	metre	219.00
17.35.10	700 mm Nominal Inside dia	metre	256.00
17.35.11	800 mm Nominal Inside dia	metre	283.00
17.35.12	900 mm Nominal Inside dia	metre	311.00
17.35.13	1000 mm Nominal Inside dia	metre	339.00
17.35.14	1100 mm Nominal Inside dia	metre	369.00
17.35.15	1200 mm Nominal Inside dia	metre	419.00
17.36	Providing and constructing of SEWER-BRICK (As per IS-4885 amended upto date) masonry circular manholes of "Type-A" with internal dia 0.90m and depth upto 1.65m having 230mm thick sewer brick masonry wall in cement sand mortar 1:4, including concreting PCC M-10 grade (1:4:8) for 225mm thick foundation including curing compaction and form work etc complete, PCC M15 for benching and channel portion, RCC M20 for 200mm thick cover slab including reinforcement, PCC M20 for fixing the manhole frame and cover using stone aggregate 20mm nominal size, 20mm thick inside and outside plaster in C. M. 1:3, inside plaster finished with floating coat of neat cement, vata in CM1:1 around pipe entering and leaving the manhole and also at the junction of masonry and concrete slab, providing and fixing of SFRC foot steps of approved make at every 0.30m height fixed in CM 1:3, supplying and fixing heavy duty SFRC manhole frame and cover as per IS 12592 (Part I and II) having clear opening of 560mm, including refilling of Jhiri, including curing, watering, ramming, hydro testing of manhole, conveyance & cost of water, and dewatering complete as directed by the Engineer. Note:- Excavation of earth work and road cutting for manhole will be measured and paid separately.		
17.36.1	Manhole "Type-A" of depth 0.90 m	each manhole	15,550.00
17.36.2	Providing and constructing extra depth of manhole "Type-A" for depth beyond 0.90 m and upto 1.65 m with SEWER-BRICK masonry including 20mm plaster inside and outside as per drawing and direction of Engineer.	metre	8,150.00
17.37	Providing and constructing of SEWER-BRICK (As per IS-4885 amended upto date) masonry circular manholes of "Type-B" with internal dia 1.20m and depth upto 2.50m having sewer brick masonry wall 230mm thick upto 1.5m, 345mm thick from 1.50m to		

Code No	Description	Unit	Rate Rs.
	2.50m in cement sand mortar 1:4, including concreting PCC M-10 grade (1:4:8) for 225mm thick foundation including curing compaction and form work etc complete, PCC M15 for benching and channel portion, RCC M20 for 200mm thick cover slab including reinforcement, PCC M20 for fixing the manhole frame and cover using stone aggregate 20mm nominal size, 20mm thick inside and outside plaster in C. M. 1:3, inside plaster finished with floating coat of neat cement, vata in CM1:1 around pipe entering and leaving the manhole and also at the junction of masonry and concrete slab, providing and fixing of SFRC foot steps of approved make at every 0.30m height fixed in CM 1:3, supplying and fixing heavy duty SFRC manhole frame and cover as per IS 12592 (Part I and II) having clear opening of 560mm, including refilling of Jhiri, including curing, watering, ramming, hydro testing of manhole, conveyance & cost of water, and dewatering complete as directed by the Engineer. Note:- Excavation of earth work and road cutting for manhole will be measured and paid separately.		
17.37.1	Manhole "Type-B" of depth 1.70 m	each manhole	31,700.00
17.37.2	Providing and constructing extra depth of manhole "Type-B" for depth beyond 1.70 m and upto 2.50 m with SEWER-BRICK masonry including 20mm plaster inside and outside as per drawing and direction of Engineer.	metre	14,300.00
17.38	Providing and constructing of SEWER-BRICK (As per IS-4885 amended upto date) masonry circular manholes of "Type-C" with internal dia 1.50m and depth upto 5.0m having sewer brick masonry wall 230mm thick upto 1.5m, 345mm thick from 1.50m to 2.50m and 460mm from 2.50 to 5.0m in cement sand mortar 1:4, including concreting PCC M-10 grade (1:4:8) for 225mm thick foundation including curing compaction and form work etc complete, PCC M15 for benching and channel portion, RCC M20 for 200mm thick cover slab including reinforcement, PCC M20 for fixing the manhole frame and cover using stone aggregate 20mm nominal size, 20mm thick inside and outside plaster in C. M. 1:3, inside plaster finished with floating coat of neat cement, vata in CM1:1 around pipe entering and leaving the manhole and also at the junction of masonry and concrete slab, providing and fixing of SFRC foot steps of approved make at every 0.30m height fixed in CM 1:3, supplying and fixing heavy duty SFRC manhole frame and cover as per IS 12592 (Part I and II) having clear opening of 560mm, including refilling of Jhiri, including curing, watering, ramming, hydro testing of manhole, conveyance & cost of water, and dewatering complete as directed by the Engineer. Note:- Excavation of earth work and road cutting for manhole will be measured and paid separately.		
17.38.1	Manhole "Type-C" of depth 2.60 m	each manhole	56,500.00
17.38.2	Providing and constructing extra depth of manhole "Type-C" for depth beyond 2.60 m and upto 5.0 m with SEWER-BRICK masonry including 20mm plaster inside and outside as per drawing and direction of Engineer.	metre	22,400.00

Code No	Description	Unit	Rate Rs.
17.39	Providing and constructing of SEWER-BRICK (As per IS-4885 amended upto date) masonry circular manholes of "Type-D" with internal dia 1.50m and depth upto 9.0m having sewer brick masonry wall 230mm thick upto 1.5m, 345mm thick from 1.50m to 2.50m, 460mm from 2.50 to 5.0m and 575mm from 5.0 to 9.0m in cement sand mortar 1:4, including concreting PCC M-10 grade (1:4:8) for 225mm thick foundation including curing compaction and form work etc complete, PCC M15 for benching and channel portion, RCC M20 for 200mm thick cover slab including reinforcement, PCC M20 for fixing the manhole frame and cover using stone aggregate 20mm nominal size, 20mm thick inside and outside plaster in C. M. 1:3, inside plaster finished with floating coat of neat cement, vata in CM1:1 around pipe entering and leaving the manhole and also at the junction of masonry and concrete slab, providing and fixing of SFRC foot steps of approved make at every 0.30m height fixed in CM 1:3, supplying and fixing heavy duty SFRC manhole frame and cover as per IS 12592 (Part I and II) having clear opening of 560mm, including refilling of Jhiri, including curing, watering, ramming, hydro testing of manhole, conveyance & cost of water, and dewatering complete as directed by the Engineer. Note:- Excavation of earth work and road cutting for manhole will be measured and paid separately.		
17.39.1	Manhole "Type-D" of depth 5.10m	each manhole	1,14,000.00
17.39.2	Providing and constructing extra depth of manhole "Type-D" for depth beyond 5.10 m and upto 9.0 m with SEWER-BRICK masonry including 20mm plaster inside and outside as per drawing and direction of Engineer.	metre	27,900.00
17.40	Providing and constructing of SEWER-BRICK (As per IS-4885 amended upto date) masonry circular manholes of "Type-E" with internal dia 1.80m and depth upto 14.0m having sewer brick masonry wall 230mm thick upto 1.5m, 345mm thick from 1.50m to 2.50m, 460mm from 2.50 to 5.0m, 575mm from 5.0 to 9.0m and 690mm from 9.0 to 14.0m in cement sand mortar 1:4, including concreting PCC M-10 grade (1:4:8) for 225mm thick foundation including curing compaction and form work etc complete, PCC M15 for benching and channel portion, RCC M20 for 200mm thick cover slab including reinforcement, PCC M20 for fixing the manhole frame and cover using stone aggregate 20mm nominal size, 20mm thick inside and outside plaster in C. M. 1:3, inside plaster finished with floating coat of neat cement, vata in CM1:1 around pipe entering and leaving the manhole and also at the junction of masonry and concrete slab, providing and fixing of SFRC foot steps of approved make at every 0.30m height fixed in CM 1:3, supplying and fixing heavy duty SFRC manhole frame and cover as per IS 12592 (Part I and II) having clear opening of 560mm, including refilling of Jhiri, including curing, watering, ramming, hydro testing of manhole, conveyance & cost of water, and dewatering complete as directed by the Engineer. Note:- Excavation of earth work and road cutting for manhole will be measured and paid separately.		

Code No	Description	Unit	Rate Rs.
17.40.1	Manhole "Type-E" of depth 9.10m	each manhole	2,66,600.00
17.40.2	Providing and constructing extra depth of manhole "Type-E" for depth beyond 9.10 m and upto 14.0 m with SEWER-BRICK masonry including 20mm plaster inside and outside as per drawing and direction of Engineer.	metre	38,800.00
17.41	Providing and constructing of RR stone masonry circular manholes of "Type-Z" with internal dia 0.56m and depth upto 0.90 m having 300mm thick RR stone masonry wall in cement sand mortar 1:4, including concreting PCC M-10 grade (1:3:6) for 225mm thick foundation including curing compaction and form work etc complete, PCC M15 for benching and channel portion, PCC M15 for fixing the manhole frame and cover using stone aggregate 20mm Nominal size, 20mm thick inside and outside plaster in C. M. 1:3, inside plaster finished with floating coat of neat cement, vata in CM1:1 around pipe entering and leaving the manhole and also at the junction of masonry and roof. Supplying and fixing heavy duty SFRC manhole frame and cover as per IS 12592 (Part I and II) having clear opening of 560mm, including refilling of Jhiri, including curing, watering, ramming, hydro testing of manhole, conveyance & cost of water, and dewatering complete as directed by the Engineer. Note- Only Excavation work will be measured and paid separately (Z-Type Manholes)	each	8,800.00
17.42	Providing and constructing of RR stone masonry circular manholes of "Type-A" with internal dia 0.90m and depth upto 1.65m having 300mm thick RR stone masonry wall in cement sand mortar 1:4, including concreting PCC M-10 grade (1:4:8) for 225mm thick foundation including curing compaction and form work etc complete, PCC M15 for benching and channel portion, RCC M20 for 200mm thick cover slab including reinforcement, PCC M20 for fixing the manhole frame and cover using stone aggregate 20mm nominal size, 20mm thick inside and outside plaster in C. M. 1:3, inside plaster finished with floating coat of neat cement, vata in CM1:1 around pipe entering and leaving the manhole and also at the junction of masonry and concrete slab, providing and fixing of SFRC foot steps of approved make at every 0.30m height fixed in CM 1:3, supplying and fixing heavy duty SFRC manhole frame and cover as per IS 12592 (Part I and II) having clear opening of 560mm, including refilling of Jhiri, including curing, watering, ramming, hydro testing of manhole, conveyance & cost of water, and dewatering complete as directed by the Engineer. Note:- Excavation of earth work and road cutting for manhole will be measured and paid separately.		
17.42.1	Manhole "Type-A" of depth 0.90 m	each manhole	17,050.00
17.42.2	Providing and constructing extra depth of manhole "Type-A" for depth beyond 0.90 m and upto 1.65 m with RR stone masonry including 20mm plaster inside and outside as per drawing and direction of Engineer.	metre	9,370.00

Code No	Description	Unit	Rate Rs.
17.43	Providing and constructing of RR stone masonry circular manholes of "Type-B" with internal dia 1.20m and depth upto 2.50m having RR stone masonry wall 300 thick upto 1.5m, 450mm thick from 1.50m to 2.50m in cement sand mortar 1:4, including concreting PCC M-10 grade (1:4:8) for 225mm thick foundation including curing compaction and form work etc complete, PCC M15 for benching and channel portion, RCC M20 for 200mm thick cover slab including reinforcement, PCC M20 for fixing the manhole frame and cover using stone aggregate 20mm nominal size, 20mm thick inside and outside plaster in C. M. 1:3, inside plaster finished with floating coat of neat cement, vata in CM1:1 around pipe entering and leaving the manhole and also at the junction of masonry and concrete slab, providing and fixing of SFRC foot steps of approved make at every 0.30m height fixed in CM 1:3, supplying and fixing heavy duty SFRC manhole frame and cover as per IS 12592 (Part I and II) having clear opening of 560mm, including refilling of Jhiri, including curing, watering, ramming, hydro testing of manhole, conveyance & cost of water, and dewatering complete as directed by the Engineer. Note:- Excavation of earth work and road cutting for manhole will be measured and paid separately.		
17.43.1	Manhole "Type-B" of depth 1.70 m	each manhole	33,000.00
17.43.2	Providing and constructing extra depth of manhole "Type-B" for depth beyond 1.70 m and upto 2.50 m with RR stone masonry including 20mm plaster inside and outside as per drawing and direction of Engineer.	metre	13,200.00
17.44	Providing and constructing of RR stone masonry circular manholes of "Type-C" with internal dia 1.50m and depth upto 5.0m having RR stone masonry wall 300mm thick upto 1.5m, 450mm thick from 1.50m to 2.50m and 600mm from 2.50 to 5.0m in cement sand mortar 1:4, including concreting PCC M-10 grade (1:4:8) for 225mm thick foundation including curing compaction and form work etc complete, PCC M15 for benching and channel portion, RCC M20 for 200mm thick cover slab including reinforcement, PCC M20 for fixing the manhole frame and cover using stone aggregate 20mm nominal size, 20mm thick inside and outside plaster in C. M. 1:3, inside plaster finished with floating coat of neat cement, vata in CM1:1 around pipe entering and leaving the manhole and also at the junction of masonry and concrete slab, providing and fixing of SFRC foot steps of approved make at every 0.30m height fixed in CM 1:3, supplying and fixing heavy duty SFRC manhole frame and cover as per IS 12592 (Part I and II) having clear opening of 560mm, including refilling of Jhiri, including curing, watering, ramming, hydro testing of manhole, conveyance & cost of water, and dewatering complete as directed by the Engineer. Note:- Excavation of earth work and road cutting for manhole will be measured and paid separately.		
17.44.1	Manhole "Type-C" of depth 2.60 m	each manhole	57,200.00

Code No	Description	Unit	Rate Rs.
17.44.2	Providing and constructing extra depth of manhole "Type-C" for depth beyond 2.60 m and upto 5.0 m with RR stone masonry including 20mm plaster inside and outside as per drawing and direction of Engineer.	metre	19,850.00
17.45	Providing and constructing of RCC M-20 grade cast-in-situ circular manholes of "Type-E" with internal dia 1.40m and depth upto 3.50m having 150 mm thick RCC M-20 wall, including 350 mm thick RCC M-20 grade base slab (foundation), PCC M15 for benching and channel portion, RCC M20 for 200mm thick cover slab, PCC M20 250mm thick for fixing the manhole frame and cover, vata in CM1:1 around pipe entering and leaving the manhole, providing and fixing of SFRC foot steps of approved make at every 0.30m height, supplying and fixing heavy duty SFRC manhole frame and cover as per IS 12592 (Part I and II) having clear opening of 560mm, including form work, reinforcement, curing, watering, hydro testing of manhole, conveyance & cost of water, dewatering etc. complete as directed by the Engineer. Note:- Excavation of earth work and road cutting for manhole will be measured and paid separately.		
17.45.1	Manhole of depth 1.8m as per drawing and direction of Engineer.	each manhole	46,400.00
17.45.2	Providing and constructing extra depth of manhole for depth beyond 1.8 m and upto 3.5 with 150mm thick RCC M-20 wall as per drawing and direction of Engineer.	metre	12,000.00
17.46	Providing and constructing of RCC M-20 grade cast-in-situ circular manholes of "Type-E" with internal dia 1.50m and depth upto 3.50m having 150 mm thick RCC M-20 wall, including 350 mm thick RCC M-20 grade base slab (foundation), PCC M15 for benching and channel portion, RCC M20 for 200mm thick cover slab, PCC M20 250mm thick for fixing the manhole frame and cover, vata in CM1:1 around pipe entering and leaving the manhole, providing and fixing of SFRC foot steps of approved make at every 0.30m height, supplying and fixing heavy duty SFRC manhole frame and cover as per IS 12592 (Part I and II) having clear opening of 560mm, including form work, reinforcement, curing, watering, hydro testing of manhole, conveyance & cost of water, dewatering etc. complete as directed by the Engineer. Note:- Excavation of earth work and road cutting for manhole will be measured and paid separately.		
17.46.1	Manhole of depth 1.8m as per drawing and direction of Engineer.	each manhole	49,700.00
17.46.2	Providing and constructing extra depth of manhole for depth beyond 1.8 m and upto 3.5 with 150mm thick RCC M-20 wall as per drawing and direction of Engineer.	metre	12,650.00
17.47	Providing and constructing of RCC M-20 grade cast-in-situ circular manholes of "Type-E" with internal dia 1.55m and depth upto 3.50m		

Code No	Description	Unit	Rate Rs.
	having 150 mm thick RCC M-20 wall, including 350 mm thick RCC M-20 grade base slab (foundation), PCC M15 for benching and channel portion, RCC M20 for 200mm thick cover slab, PCC M20 250mm thick for fixing the manhole frame and cover, vata in CM1:1 around pipe entering and leaving the manhole, providing and fixing of SFRC foot steps of approved make at every 0.30m height, supplying and fixing heavy duty SFRC manhole frame and cover as per IS 12592 (Part I and II) having clear opening of 560mm, including form work, reinforcement, curing, watering, hydro testing of manhole, conveyance & cost of water, dewatering etc. complete as directed by the Engineer.		
	Note:- Excavation of earth work and road cutting for manhole will be measured and paid separately.		
17.47.1	Manhole of depth 1.8m as per drawing and direction of Engineer.	each manhole	50,900.00
17.47.2	Providing and constructing extra depth of manhole for depth beyond 1.8 m and upto 3.5 with 150mm thick RCC M-20 wall as per drawing and direction of Engineer.	metre	12,950.00
17.48	Providing and constructing of RCC M-20 grade cast-in-situ circular manholes of "Type-E" with internal dia 1.75m and depth upto 3.50m having 150 mm thick RCC M-20 wall, including 350 mm thick RCC M-20 grade base slab (foundation), PCC M15 for benching and channel portion, RCC M20 for 200mm thick cover slab, PCC M20 250mm thick for fixing the manhole frame and cover, vata in CM1:1 around pipe entering and leaving the manhole, providing and fixing of SFRC foot steps of approved make at every 0.30m height, supplying and fixing heavy duty SFRC manhole frame and cover as per IS 12592 (Part I and II) having clear opening of 560mm, including form work, reinforcement, curing, watering, hydro testing of manhole, conveyance & cost of water, dewatering etc. complete as directed by the Engineer.		
	Note:- Excavation of earth work and road cutting for manhole will be measured and paid separately.		
17.48.1	Manhole of depth 1.8m as per drawing and direction of Engineer.	each manhole	59,300.00
17.48.2	Providing and constructing extra depth of manhole for depth beyond 1.8 m and upto 3.5 with 150mm thick RCC M-20 wall as per drawing and direction of Engineer.	metre	14,400.00
17.49	Providing and constructing of RCC M-20 grade cast-in-situ circular manholes of "Type-E" with internal dia 2.00m and depth upto 3.50m having 150 mm thick RCC M-20 wall, including 350 mm thick RCC M-20 grade base slab (foundation), PCC M15 for benching and channel portion, RCC M20 for 200mm thick cover slab, PCC M20 250mm thick for fixing the manhole frame and cover, vata in CM1:1 around pipe entering and leaving the manhole, providing and fixing of SFRC foot steps of approved make at every 0.30m height, supplying and fixing heavy duty SFRC manhole frame and cover as		

Code No	Description	Unit	Rate Rs.
	per IS 12592 (Part I and II) having clear opening of 560mm, including form work, reinforcement, curing, watering, hydro testing of manhole, conveyance & cost of water, dewatering etc. complete as directed by the Engineer.		
	Note:- Excavation of earth work and road cutting for manhole will be measured and paid separately.		
17.49.1	Manhole of depth 1.8m as per drawing and direction of Engineer.	each manhole	64,000.00
17.49.2	Providing and constructing extra depth of manhole for depth beyond 1.8 m and upto 3.5 with 150mm thick RCC M-20 wall as per drawing and direction of Engineer.	metre	16,100.00
17.50	Providing and constructing of RCC M-20 grade cast-in-situ circular manholes of "Type-E" with internal dia 2.20m and depth upto 3.50m having 150 mm thick RCC M-20 wall, including 350 mm thick RCC M-20 grade base slab (foundation), PCC M15 for benching and channel portion, RCC M20 for 200mm thick cover slab, PCC M20 250mm thick for fixing the manhole frame and cover, vata in CM1:1 around pipe entering and leaving the manhole, providing and fixing of SFRC foot steps of approved make at every 0.30m height, supplying and fixing heavy duty SFRC manhole frame and cover as per IS 12592 (Part I and II) having clear opening of 560mm, including form work, reinforcement, curing, watering, hydro testing of manhole, conveyance & cost of water, dewatering etc. complete as directed by the Engineer.		
	Note:- Excavation of earth work and road cutting for manhole will be measured and paid separately.		
17.50.1	Manhole of depth 1.8m as per drawing and direction of Engineer.	each manhole	75,100.00
17.50.2	Providing and constructing extra depth of manhole for depth beyond 1.8 m and upto 3.5 with 150mm thick RCC M-20 wall as per drawing and direction of Engineer.	metre	17,450.00
17.51	Providing and constructing of RCC M-20 grade cast-in-situ circular manholes of "Type-F" with internal dia 1.4m and depth upto 8.0m (2.0 in conical shape) having 150 mm thick RCC M-20 wall, including 350 mm thick RCC M-20 grade base slab (foundation), PCC M15 for benching and channel portion, PCC M20 250mm thick for fixing the manhole frame and cover, vata in CM1:1 around pipe entering and leaving the manhole, providing and fixing of SFRC foot steps of approved make at every 0.30m height, supplying and fixing heavy duty SFRC manhole frame and cover as per IS 12592 (Part I and II) having clear opening of 560mm, including form work, reinforcement, curing, watering, hydro testing of manhole, conveyance & cost of water, dewatering etc. complete as directed by the Engineer.		
	Note:- Excavation of earth work and road cutting for manhole will be measured and paid separately.		

Code No	Description	Unit	Rate Rs.
17.51.1	Manhole of depth 3.6m as per drawing and direction of Engineer.	each manhole	53,900.00
17.51.2	Providing and constructing extra depth of manhole for depth beyond 3.6 m and upto 8.0 with 150mm thick RCC M-20 wall as per drawing and direction of Engineer.	metre	12,950.00
17.52	Providing and constructing of RCC M-20 grade cast-in-situ circular manholes of "Type-F" with internal dia 1.5m and depth upto 8.0m (2.0 in conical shape) having 150 mm thick RCC M-20 wall, including 350 mm thick RCC M-20 grade base slab (foundation), PCC M15 for benching and channel portion, PCC M20 250mm thick for fixing the manhole frame and cover, vata in CM1:1 around pipe entering and leaving the manhole, providing and fixing of SFRC foot steps of approved make at every 0.30m height, supplying and fixing heavy duty SFRC manhole frame and cover as per IS 12592 (Part I and II) having clear opening of 560mm, including form work, reinforcement, curing, watering, hydro testing of manhole, conveyance & cost of water, dewatering etc. complete as directed by the Engineer. Note:- Excavation of earth work and road cutting for manhole will be measured and paid separately.		
17.52.1	Manhole of depth 3.6m as per drawing and direction of Engineer.	each manhole	56,500.00
17.52.2	Providing and constructing extra depth of manhole for depth beyond 3.6 m and upto 8.0 with 150mm thick RCC M-20 wall as per drawing and direction of Engineer.	metre	13,650.00
17.53	Providing and constructing of RCC M-20 grade cast-in-situ circular manholes of "Type-F" with internal dia 1.55m and depth upto 8.0m (2.0 in conical shape) having 150 mm thick RCC M-20 wall, including 350 mm thick RCC M-20 grade base slab (foundation), PCC M15 for benching and channel portion, PCC M20 250mm thick for fixing the manhole frame and cover, vata in CM1:1 around pipe entering and leaving the manhole, providing and fixing of SFRC foot steps of approved make at every 0.30m height, supplying and fixing heavy duty SFRC manhole frame and cover as per IS 12592 (Part I and II) having clear opening of 560mm, including form work, reinforcement, curing, watering, hydro testing of manhole, conveyance & cost of water, dewatering etc. complete as directed by the Engineer. Note:- Excavation of earth work and road cutting for manhole will be measured and paid separately.		
17.53.1	Manhole of depth 3.6m as per drawing and direction of Engineer.	each manhole	57,200.00
17.53.2	Providing and constructing extra depth of manhole for depth beyond 3.6 m and upto 8.0 with 150mm thick RCC M-20 wall as per drawing and direction of Engineer.	metre	14,200.00
17.54	Providing and constructing of RCC M-20 grade cast-in-situ circular manholes of "Type-F" with internal dia 1.75m and depth upto 8.0m		

Code No	Description	Unit	Rate Rs.
	(2.0 in conical shape) having 150 mm thick RCC M-20 wall, including 350 mm thick RCC M-20 grade base slab (foundation), PCC M15 for benching and channel portion, PCC M20 250mm thick for fixing the manhole frame and cover, vata in CM1:1 around pipe entering and leaving the manhole, providing and fixing of SFRC foot steps of approved make at every 0.30m height, supplying and fixing heavy duty SFRC manhole frame and cover as per IS 12592 (Part I and II) having clear opening of 560mm, including form work, reinforcement, curing, watering, hydro testing of manhole, conveyance & cost of water, dewatering etc. complete as directed by the Engineer.		
	Note:- Excavation of earth work and road cutting for manhole will be measured and paid separately.		
17.54.1	Manhole of depth 3.6m as per drawing and direction of Engineer.	each manhole	63,600.00
17.54.2	Providing and constructing extra depth of manhole for depth beyond 3.6 m and upto 8.0 with 150mm thick RCC M-20 wall as per drawing and direction of Engineer.	metre	15,600.00
17.55	Providing and constructing of RCC M-20 grade cast-in-situ circular manholes of "Type-F" with internal dia 2.0m and depth upto 12.0m (2.0 in conical shape) having 150 mm thick RCC M-20 wall, including 350 mm thick RCC M-20 grade base slab (foundation), PCC M15 for benching and channel portion, PCC M20 250mm thick for fixing the manhole frame and cover, vata in CM1:1 around pipe entering and leaving the manhole, providing and fixing of SFRC foot steps of approved make at every 0.30m height, supplying and fixing heavy duty SFRC manhole frame and cover as per IS 12592 (Part I and II) having clear opening of 560mm, including form work, reinforcement, curing, watering, hydro testing of manhole, conveyance & cost of water, dewatering etc. complete as directed by the Engineer.		
	Note:- Excavation of earth work and road cutting for manhole will be measured and paid separately.		
17.55.1	Manhole of depth 3.6m as per drawing and direction of Engineer.	each manhole	74,800.00
17.55.2	Providing and constructing extra depth of manhole for depth beyond 3.6 m and upto 8.0 with 150mm thick RCC M-20 wall as per drawing and direction of Engineer.	metre	17,950.00
17.55.3	Providing and constructing extra depth of manhole for depth beyond 8.0 m and upto 12.0 with 150mm thick RCC M-20 wall as per drawing and direction of Engineer.	metre	21,000.00
17.56	Providing and constructing of RCC M-20 grade cast-in-situ circular manholes of "Type-F" with internal dia 2.2m and depth upto 12.0m (2.0 in conical shape) having 150 mm thick RCC M-20 wall, including 350 mm thick RCC M-20 grade base slab (foundation), PCC M15 for benching and channel portion, PCC M20 250mm thick		

Code No	Description	Unit	Rate Rs.
	for fixing the manhole frame and cover, vata in CM1:1 around pipe entering and leaving the manhole, providing and fixing of SFRC foot steps of approved make at every 0.30m height, supplying and fixing heavy duty SFRC manhole frame and cover as per IS 12592 (Part I and II) having clear opening of 560mm, including form work, reinforcement, curing, watering, hydro testing of manhole, conveyance & cost of water, dewatering etc. complete as directed by the Engineer.		
	Note:- Excavation of earth work and road cutting for manhole will be measured and paid separately.		
17.56.1	Manhole of depth 3.6m as per drawing and direction of Engineer.	each manhole	84,500.00
17.56.2	Providing and constructing extra depth of manhole for depth beyond 3.6 m and upto 8.0 with 150mm thick RCC M-20 wall as per drawing and direction of Engineer.	metre	19,400.00
17.56.3	Providing and constructing extra depth of manhole for depth beyond 8.0 m and upto 12.0 with 150mm thick RCC M-20 wall as per drawing and direction of Engineer.	metre	22,900.00
17.57	Providing and constructing of RCC M-20 grade cast-in-situ circular manholes of "Type-F" with internal dia 2.4m and depth upto 12.0m (2.0 in conical shape) having 150 mm thick RCC M-20 wall, including 360 mm thick RCC M-20 grade base slab (foundation), PCC M15 for benching and channel portion, PCC M20 250mm thick for fixing the manhole frame and cover, vata in CM1:1 around pipe entering and leaving the manhole, providing and fixing of SFRC footsteps of approved make at every 0.34m height, supplying and fixing heavy duty SFRC manhole frame and cover as per IS 12592 (Part I and II) having clear opening of 330mm, including form work, reinforcement, curing, watering, hydro testing of manhole, conveyance & cost of water, dewatering etc. complete as directed by the Engineer. Note:- Excavation of earth work and road cutting for manhole will be measured and paid separately.		
17.57.1	Manhole of depth 3.6m as per drawing and direction of Engineer.	each	94,800.00
17.57.2	Providing and constructing extra depth of manhole for depth beyond 3.6 m and upto 8.0 with 150mm thick RCC M-20 wall as per drawing and direction of Engineer.	metre	20,900.00
17.57.3	Providing and constructing extra depth of manhole for depth beyond 8.0 m and upto 12.0 with 150mm thick RCC M-20 wall as per drawing and direction of Engineer.	metre	24,100.00
17.58	Providing and constructing of pre-cast RCC M-40 grade circular manholes with internal dia 0.56m and depth upto 0.90 m, including concreting PCC M-10 grade (1:3:6) for 225mm thick foundation including curing compaction and foRM work etc complete, PCC M15 for benching and channel portion, PCC M15 for fixing the manhole frame and cover using stone aggregate 20mm Nominal size, 20mm thick inside and outside plaster in C. M. 1:3, inside plaster finished		

Code No	Description	Unit	Rate Rs.
	with floating coat of neat cement, vata in CM1:1 around pipe entering and leaving the manhole and also at the junction of masonry and roof. Supplying and fixing heavy duty SFRC manhole frame and cover as per IS 12592 (Part I and II) having clear opening of 560mm, including refilling of Jhiri, including curing, watering, ramming, hydro testing of manhole, conveyance & cost of water, and dewatering complete as directed by the Engineer. Note-Only Excavation work will be measured and paid separately	each	8,520.00
17.59	Providing, fixing and constructing of pre-cast RCC M-40 grade circular manholes with internal dia 1.0m and up to specified depth having pre-cast RCC M-40 grade circular manhole cover frame (ID 0.56m, OD 0.92m), conical piece (top ID 0.56m, bottom ID 1.0m, vertical height 0.805m, wall thickness 125mm), and circular rings of required heights (ID 1.0m, height 150/225/300/600 mm, wall thickness 125mm) below conical piece as per required depth of manhole and having steel reinforcement in conical piece @ not less than 80 kg per cum of concrete, including cast-in-situ PCC M-10 grade (1:3:6) foundation of 1.625m dia and 150mm thickness, PCC M15 grade circular wall ID 0.925m, wall thickness 200mm, height equal to ID of sewer pipe + one wall thickness of pipe + 50 mm (to flush the manhole frame with road top, height of wall can be increased but not more than 100mm), PCC M15 grade benching and channel portion and up to top level of sewer pipe etc complete with curing compaction and form work, supplying and fixing heavy duty SFRC manhole cover as per IS 12592 (Part I and II), supplying and fixing plastic encapsulated CI/MS foot steps / SFRC foot steps, including cost of shuttering, steel reinforcement, testing for water tightness etc. complete in all respect as per drawing, as per specification and the direction of the Engineer. Note:- Excavation of earth work and road cutting for manhole will be measured and paid separately.		
17.59.1	Pre-cast RCC M-40 grade circular manhole conical piece with inbuilt cover and frame (height 0.805), cast-in-situ PCC M-10 grade foundation, PCC M15 grade circular wall ID 0.925m, wall thickness 200mm, wall height equal to ID of sewer pipe + one wall thickness of pipe + 50 mm, PCC M15 grade benching and channel portion. Depth of manhole shall be measured from top of manhole cover upto lowest invert of pipe. (Depth includes in the item = height of Conical piece + ID of Sewer pipe + 1 Wall thickness of pipe + 50mm)	each manhole	14,150.00
17.59.2	Providing and fixing pre-cast RCC M-40 grade circular ring of ID 1.0m, wall thickness 125mm, height 150/225/300/600 mm for constructing extra depth of manhole beyond depth mentioned in item no-17.59.1 as per drawing.	metre	6,990.00
17.60	Providing, fixing and constructing of pre-cast RCC M-40 grade circular manholes with internal dia 1.2m and up to specified depth having pre-cast RCC M-40 grade circular manhole cover frame (ID 0.56m, OD 0.92m), conical piece (top ID 0.56m, bottom ID 1.2m,		

Code No	Description	Unit	Rate Rs.
	vertical height 1.005m, wall thickness 125mm), and circular rings of required heights (ID 1.2m, height 150/225/300/600/900mm, wall thickness 125mm) below conical piece as per required depth of manhole and having steel reinforcement in Conical piece @ not less than 80 kg per cum of concrete, including cast-in-situ PCC M-10 grade (1:3:6) foundation of 1.825m dia and 150mm thickness, PCC M15 grade circular wall ID 1.125m, wall thickness 200mm, height equal to ID of sewer pipe + one wall thickness of pipe + 50 mm (to flush the manhole frame with road top, height of wall can be increased but not more than 100mm), PCC M15 grade benching and channel portion and up to top level of sewer pipe etc complete with curing compaction and form work, supplying and fixing heavy duty SFRC manhole cover as per IS 12592 (Part I and II), supplying and fixing plastic encapsulated CI/MS footsteps / SFRC footsteps, including cost of shuttering, steel reinforcement, testing for water tightness etc complete in all respect as per drawing, as per specification and the direction of the Engineer. Note:- Excavation of earth work and road cutting for manhole will be measured and paid separately.		
17.60.1	Pre-cast RCC M-40 grade circular manhole conical piece with inbuilt cover and frame (height 1.005), cast-in-situ PCC M-10 grade foundation, PCC M15 grade circular wall ID 1.125m, wall thickness 200mm, wall height equal to ID of sewer pipe + one wall thickness of pipe + 50 mm, PCC M15 grade benching and channel portion. Depth of manhole shall be measured from top of manhole cover upto lowest invert of pipe. (Depth includes in the item = height of Conical piece + ID of Sewer pipe + 1 Wall thickness of pipe + increased height of wall (if any) + 50mm)	each manhole	17,800.00
17.60.2	Providing and fixing pre-cast RCC M-40 grade circular ring of ID 1.2m, wall thickness 125mm, height 150/225/300/600/900mm for constructing extra depth of manhole beyond depth mentioned in item no-17.60.1 as per drawing.	metre	7,810.00
17.61	Providing, fixing and constructing of pre-cast RCC M-40 grade circular manholes with internal dia 1.5m and up to specified depth having pre-cast RCC M-40 grade circular manhole cover frame (ID 0.56m, OD 0.92m), conical piece (top ID 0.56m, bottom ID 1.5m, vertical height 1.305m, wall thickness 125mm), and circular rings of required heights (ID 1.5m, height 150/225/300/600/900/1200 mm, wall thickness 125mm) below conical piece as per required depth of manhole and having steel reinforcement in conical piece @ not less than 80 kg per cum of concrete, including cast-in-situ PCC M-10 grade (1:3:6) foundation of 2.125m dia and 150mm thickness, PCC M15 grade circular wall ID 1.425 m, wall thickness 200mm, height equal to ID of sewer pipe + one wall thickness of pipe + 50 mm (to flush the manhole frame with road top, height of wall can be increased but not more than 100mm), PCC M15 grade benching and channel portion and up to top level of sewer pipe etc complete with curing compaction and form work, supplying and fixing heavy duty SFRC manhole cover as per IS 12592 (Part I and II), supplying and		

Code No	Description	Unit	Rate Rs.
	fixing plastic encapsulated CI/MS footsteps / SFRC footsteps, including cost of shuttering, steel reinforcement, testing for water tightness etc complete in all respect as per drawing, as per specification and the direction of the Engineer. Note:- Excavation of earth work and road cutting for manhole will be measured and paid separately.		
17.61.1	Pre-cast RCC M-40 grade circular manhole conical piece with inbuilt cover and frame (height 1.305), cast-in-situ PCC M-10 grade foundation, PCC M15 grade circular wall ID 1.425m, wall thickness 200mm, wall height equal to ID of sewer pipe + one wall thickness of pipe + 50 mm, PCC M15 grade benching and channel portion. Depth of manhole shall be measured from top of manhole cover upto lowest invert of pipe. (Depth includes in the item = height of Conical piece + ID of Sewer pipe + 1 Wall thickness of pipe + increased height of wall (if any) + 50mm)	each manhole	23,900.00
17.61.2	Providing and fixing pre-cast RCC M-40 grade circular ring of ID 1.5m, wall thickness 125mm, height 150/225/300/600/900/1200mm for constructing extra depth of manhole beyond depth mentioned in item no-17.61.1 as per drawing.	metre	9,220.00
17.62	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 mmx25mm and overall 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 while casting in RCC manhole and with 30x20x15 cm cement concrete block 1:3:6 in brick/RR stone manhole complete as per design.	each	456.50
17.63	Providing, fixing of Plastic HDPE Circular Manhole Chamber made from 100% virgin UV Stabilized special roto moulding grade Polyethylene (PE) material having internal diameter of 1000mm, shall provide access for cleaning and inspection, to be used in sewers for gravity system. Chamber shall be made as per EN 13598-2 for use in non- pressure underground sewerage system. It shall be used for receiving / connecting solid wall plain surface (PVC, uPVC, HDPE) or structured wall corrugated (DWC) pipes or CI/FRP/CLAY/PP/RCC, etc. by use of appropriate transition adaptors. Chamber shall have a base and riser shaft of 1000mm internal diameter and top cone with cover opening of internal diameter of 600mm and height adjustment of minimum 450mm. Chambers shall be provided with arrangement for 4 nos. connections at the base and shall be designed to receive / connect various diameter pipes. Chamber shaft also shall be designed to receive / connect anywhere at the shaft level. Chamber base / shaft shall receive maximum of pipe having OD of 715mm. Chamber shall		

Code No	Description	Unit	Rate Rs.
	have integrated base benching. The riser shaft outside shall be reinforced with horizontal and vertical ribs of minimum 20mm thick and a projection of 55mm to enhance the products resistance to compression and anchoring in the soil. These ribs shall provide lift-retention system in case of ground water. Chamber shall have moulded-in PE manhole steps. In order for a person to step down safely the steps shall be provided at vertical distance of 250mm and the minimum width and depth of each step shall be 300mm and 125mm respectively. These steps shall be able to take a vertical load of 2kN and pull-out resistance of 1kN. Chamber shall be placed on PCC M-10 grade (1:4:8) 150mm thick, 1200mm dia foundation, etc. complete with curing, compaction and form work, supplying and fixing heavy duty SFRC manhole cover as per IS 12592 (Part I and II) complete in all respect including testing for water tightness (including the cost of RCC load distribution ring and SFRC manhole frame and cover) as per specification and the direction of the Engineer. Note: Excavation of earth work, road cutting and non-cohesive backfilling material (quarry dust / rock sand, etc., depending on native soil condition), compaction, etc. for manhole will be measured and paid separately).		
17.63.1	HDPE circular manholes 1000mm ID, 2000mm deep to invert with HDPE conical piece and bottom piece, Cast-in-situ PCC M-10 grade foundation.	each	57,000.00
17.63.2	Providing and fixing HDPE circular column extension piece of dia 1000mm ID and height 250mm/500mm/1000mm each in HDPE manhole for making extra depth beyond 2000mm as per drawing and direction of Engineer.	metre	26,200.00
17.64	Providing, fixing of Plastic HDPE Circular Manhole Chamber made from 100% virgin UV Stabilized special roto moulding grade Polyethylene (PE) material having internal diameter of 1200mm, shall provide access for cleaning and inspection, to be used in buried sewers for gravity system. Chamber shall be made as per EN 13598-2 for use in non- pressure underground drainage and sewerage system. It shall be used for receiving / connecting solid wall plain surface (PVC, uPVC, HDPE) or structured wall corrugated (DWC) pipes or CI/FRP/CLAY/PP/RCC, etc. by use of appropriate transition adaptors. Chamber shall have a base and riser shaft of 1200mm internal diameter and top cone with cover opening of internal diameter of 600mm and height adjustment of minimum 450mm. Chambers shall be provided with arrangement for 4 nos. connections at the base and shall be designed to receive / connect various diameter pipes. Chamber shaft also shall be designed to receive / connect anywhere at the shaft level. Chamber base / shaft shall receive maximum of pipe having OD of 1200mm. Chamber shall have integrated base benching. The riser shaft outside shall be reinforced with horizontal and vertical ribs of minimum 20mm thick and a projection of 55mm to enhance the products resistance to compression and anchoring in the soil. These ribs shall provide lift-		

Code No	Description	Unit	Rate Rs.
	retention system in case of ground water. Chamber shall have moulded-in PE manhole steps. In order for a person to step down safely the steps shall be provided at vertical distance of 250mm and the minimum width and depth of each step shall be 300mm and 125mm respectively. These steps shall be able to take a vertical load of 2kN and pull-out resistance of 1kN. Chamber shall be placed on PCC M-10 grade (1:4:8) 150mm thick, 1400mm dia foundation, etc. complete with curing, compaction and form work, supplying and fixing heavy duty SFRC manhole cover as per IS 12592 (Part I and II) complete in all respect including testing for water tightness (including the cost of RCC load distribution ring and SFRC manhole frame and cover) as per specification and the direction of the Engineer. {Note: Excavation of earth work, road cutting and non-cohesive backfilling material (quarry dust / rock sand, etc., depending on native soil condition)}, compaction, etc. for manhole will be measured and paid separately).		
17.64.1	HDPE circular manholes 1200mm ID, 2000mm deep to invert with HDPE conical piece and bottom piece, Cast-in-situ PCC M-10 grade foundation.	each	65,500.00
17.64.2	Providing and fixing HDPE circular column extension piece of dia 1200mm ID and height 250mm/500mm/1000mm each in HDPE manhole for making extra depth beyond 2000mm as per drawing and direction of Engineer.	metre	30,400.00
17.65	Construction of brick masonry cylindrical road side inspection chamber of 450mm dia (internal) with 230mm thick wall of brick masonry (75 class designation brick) in cement mortar 1:4 (1 cement : 4 coarse sand), wall 230mm thick, filling of Jhiri, 20mm thick inside and outside plastering with CM (1:3), inside plaster finished with neat coat of cement, with cast in situ PCC M10 grade foundation of 1010 mm dia and 100 mm thickness, 75mm thick PCC M15 flooring, precast SFRC/RCC circular 450mm dia MD manhole frame and cover (as per IS 12592 amended upto date) embedded in 200mm thick PCC M20 grade concrete, including providing and fixing 2 Nos 110mm OD, 0.5m long PVC-U pipe pieces of stiffness class SN 8 as per IS 15328 and plugging the same, testing for water tightness etc. complete as per approved drawing and/or directed by Engineer. Note: Excavation of earth work and road cutting will be measured and paid separately		
17.65.1	BM Road side inspection chamber of 450mm depth	each	5,690.00
17.65.2	BM Road side inspection chamber of 600mm depth	each	6,390.00
17.65.3	BM Road side inspection chamber of 900mm depth	each	7,790.00
17.66	Construction of stone masonry cylindrical road side inspection chamber of 450mm dia (internal) with 300mm thick wall of stone masonry in cement mortar 1:4 (1 cement : 4 coarse sand), filling of Jhiri, 20mm thick inside and outside plastering with CM (1:3), inside plaster finished with neat coat of cement, with cast in situ PCC M10 grade foundation of 1150 mm dia and 100 mm thickness,, 75mm		

Code No	Description	Unit	Rate Rs.
	thick PCC M15 flooring, precast SFRC/RCC circular 450mm dia MD manhole frame and cover (as per IS 12592 amended upto date) embedded in 200mm thick PCC M20 grade concrete, including providing and fixing 2 Nos 110mm OD, 0.5m long PVC-U pipe pieces of stiffness class SN 8 as per IS 15328 and plugging the same, testing for water tightness etc. complete as per approved drawing and/or directed by Engineer. Note: Excavation of earth work and road cutting will be measured and paid separately		
17.66.1	SM Road side inspection chamber of 450mm depth	each	6,490.00
17.66.2	SM Road side inspection chamber of 600mm depth	each	7,310.00
17.66.3	SM Road side inspection chamber of 900mm depth	each	8,940.00
17.67	Constructing providing and fixing of pre-cast RCC M-40 grade circular Road Side Inspection Chamber including earthwork with following dia and depth cylindrical piece with 100mm wall thickness, inbuilt 100mm thick base slab, inbuilt cover & frame on top, provision for 110mm OD in and out sewer connection with making proper inbuilt benching and channel with PCC M-15 grade including providing cast-in-situ 100mm thick base foundation of PCC M-10 grade, supplying and fixing circular precast SFRC Circular 300 / 450 mm dia manhole cover with frame MD-10 (as per IS-12592 amended upto date), including steel reinforcement minimum @ 80kg/cum, testing for water tightness complete in all respect as per drawing, specification and the direction of the Engineer.		
17.67.1	Pre-cast Road side inspection chamber of 300mm dia (internal), 450mm depth and 600mm dia base foundation	each	4,445.00
17.67.2	Pre-cast Road side inspection chamber of 450mm dia (internal), 600mm depth and 750mm dia base foundation	each	6,220.00
17.67.3	Pre-cast Road side inspection chamber of 450mm dia (internal), 900mm depth and 750mm dia base foundation	each	7,520.00
17.68	Providing, fixing of Plastic HDPE Circular Inspection Chamber made from 100% virgin UV Stabilized special roto moulding grade Polyethylene (PE) material having internal diameter of 600mm, shall provide access for cleaning and inspection, to be used in buried sewers for gravity system. Chamber shall be made as per EN 13598-1 for use in non- pressure underground sewerage system. It shall be used for receiving / connecting solid wall plain surface (PVC, uPVC, HDPE) or structured wall corrugated DWC) pipes or CI/FRP/CLAY/PP/RCC, etc. by use of appropriate transition adaptors; and/or for changing the direction of drainage / sewerage runs. Chamber shall have a base and riser shaft of internal diameter 600mm. Chambers shall be provided with arrangement for 4 nos. connections at the base and shall be designed to receive / connect various diameter pipes. Chamber shaft also shall be designed to receive / connect anywhere at the shaft level. Chamber base / shaft shall receive maximum of pipe having OD of 315mm. Chamber shall have integrated base benching. The riser shaft outside shall be reinforced with horizontal and vertical ribs of minimum 20mm thick		

Code No	Description	Unit	Rate Rs.
	and a projection of 40mm to enhance the products resistance to compression and anchoring in the soil. These ribs shall provide lift-retention system in case of ground water. Chamber shall be placed on PCC M-10 grade (1:4:8) 150mm thick, 800mm dia foundation, etc. complete with curing, compaction and form work, supplying and fixing heavy duty SFRC manhole cover as per IS 12592 (Part I and II) complete in all respect including testing for water tightness (including the cost of RCC load distribution ring and SFRC manhole frame and cover) as per specification and the direction of the Engineer. {Note: Excavation of earth work, road cutting and non-cohesive backfilling material (quarry dust / rock sand, etc., depending on native soil condition)}, compaction, etc. for manhole will be measured and paid separately).		
17.68.1	HDPE Road side inspection chamber of 500 mm depth	each	8,700.00
17.68.2	HDPE Road side inspection chamber of 750 mm depth	each	12,050.00
17.68.3	HDPE Road side inspection chamber of 1000 mm depth	each	15,650.00
17.68.4	HDPE Road side inspection chamber of 1200 mm depth	each	19,100.00
17.68.5	HDPE Road side inspection chamber of 1500 mm depth	each	22,500.00
17.69	Providing and making connection to the manhole/ road side chamber/ property chamber by cutting hole in wall, making good the same with brick work/ stone masonry work in cement mortar 1:4, plaster in cement mortar 1:3, encasement of pipe at manhole with 75mm thick M15 grade concrete etc complete as directed by Engineer.	each	999.00
17.70	Providing PVC-U pipes as per IS 15328 drop connection externally for depth from 0.60 m and upto 1.0 m drop from branch sewer line to main sewer manhole or vice versa including inspection and cleaning eye, PVC-U drop pipe and bend encased around with cement concrete M15 with all form work, cutting holes in walls and making good with brick/ stone masonry work in cement sand mortar 1:4 plastered with cement sand mortar 1:3 with stiff cement mortar 1:1 around PVC-U pipe in masonry wall, making required channels complete as per standard design and specifications and/ or as the directed of the Engineer:		
17.70.1	110mm dia	each	6,590.00
17.70.2	160mm dia	each	10,300.00
17.70.3	200mm dia	each	13,650.00
17.70.4	250mm dia	each	20,900.00
17.70.5	315mm dia	each	31,700.00
17.70.6	350mm dia	each	32,600.00
17.70.7	400mm dia	each	35,200.00
17.70.8	500mm dia	each	37,900.00
17.70.9	700mm dia	each	41,500.00

Code No	Description	Unit	Rate Rs.
17.71	Extra for additional drop depth of PVC-U pipes as per IS 15328 drop connection beyond 1.0 m complete as per standard specification and the direction of the Engineer. (To be paid for actual depth beyond 1.0 m)		
17.71.1	110mm dia	metre	1,750.00
17.71.2	160mm dia	metre	2,287.00
17.71.3	200mm dia	metre	2,855.00
17.71.4	250mm dia	metre	3,480.00
17.71.5	315mm dia	metre	5,190.00
17.71.6	350mm dia	metre	5,500.00
17.71.7	400mm dia	metre	5,670.00
17.71.8	500mm dia	metre	5,890.00
17.71.9	700mm dia	metre	6,860.00
17.72	Providing, fixing and erecting precast RCC (M20) Vent shaft with cowl, 125mm and 225mm internal and external dia respectively at top, 300mm and 450mm internal and external dia at bottom and 9.0m overall length, bottom 1.175m below ground level fixed in the pit 900mmx900mmx1500mm with PCC M15, 250mm in bed and minimum 200mm all around with top 150mm in PCC M15 with 20mm nominal size graded stone aggregate , junction of vent shaft and concrete grouted with cement mortar 1: including making connection with sewer manhole with 150mm dia NP4 RCC pipe (IS 458-amended upto date) as required including Type-A bedding complete as per standard design and finished with water proofing cement of approved brand as per drawings and/or as directed by Engineer. Note : Only Excavation work will be measured and paid separately	each	31,900.00
17.73	Construction of House Sewer Connection inside and outside of a dwelling properties to connect all the outlets of Kitchen, Bath, toilet/WC of the property to existing inspection chamber of Sewer Network, which includes Door-to-door survey of all properties to be connected with Sewer Network, Preparation of sketch / drawing of arrangement for each house with all the details and obtain approval from Engineer In-charge or his representative and Preparation of as built drawing (Layout plan) in AutoCAD for each property / dwelling connection with sewer network up to manhole. Including Dismantling of all type of flooring and roads, i.e. BT/CC/WMM/interlocking block etc with mechanical cutter. Including Required Excavation of pipe trench/chamber in all type of strata of specified width up to all depth, Providing, laying, jointing and aligning of PVC-U pipes (SN-8) as per 15328 (amended up to date) / HDPE DWC (double wall corrugated) pipes of SN-8 grade as per IS 16098 (amended up to date)/ SWR Pipes with required PVC/ DWC/SWR fittings with required level & location in buried position over bedding of 50 mm thick M-10 grade and in open position above		

Code No	Description	Unit	Rate Rs.
	ground/floor with an encasing of pipe 50 mm cover at 3 sides with M10 grade concrete, Providing, laying, jointing and aligning 160 mm dia PVC-U pipes (SN-8) as per IS15328 (Amended up to date) providing as sleeve to 110 mm dia PVC-U pipes / HDPE DWC (double wall corrugated) pipes (exposed to atmosphere) for crossing open drains, demolishing, If required and reconstruction of drain in original position with PCC M-10, Brick work with modular extruded burnt fly ash clay sewer bricks (Conforming to IS: 4885 - 1988) in CM 1:4, 12 mm thick plaster in CM 1:3 and Construction of 2 Nos brick masonry chamber of bricks class designation 75 of 115 mm wall thickness in cement mortar 1:4, clear inside dimension 320 x 320 x 550 mm, 50 mm thick base PCC 1:3:6, providing & fixing 350 x 350 mm RCC precast cover with frame of LD-2.5, earth filling in gaps, finishing with PCC 1:3:6 inside the chamber, Chamber-1 with square mouth S.W. gulley trap P-type of size 100 x 100 mm as per IS 651: 1992 (amended up to date) with CI grating, in slope around the mouth of Gulley Trap including provision for fixing of 2 nos. 110 mm dia PVC-U pipe etc. to connect a single inlet after connecting all the outlets of kitchen & bath & outlet of this chamber will connect to Chamber-2 or inspection chamber and the Chamber-2 with a provision for fixing of 2 nos. 110 mm dia PVC-U pipe etc. i.e. a single inlet after connecting all outlets of toilet & WC of premises to exiting Inspection chamber, Emptying of septic tank/soakage well etc. disposing of sludge within a lead of 5 Km and taking out the sewage, Bypass of septic tank/soakage well by providing, laying, jointing of 110 mm dia PVC-U pipes for all length from inlet to outlet, including PVC coupler, MS clamp and dismantling, repairing, making good the holes etc, Making connection with 110 mm dia PVC-U pipe with exiting inspection chamber (including making holes in Inspection Chamber) for pipes coming out from inside property and Chamber 1/2, making and repairing holes with CM in 1:4, repairing of floor and road with CC M-30 grade same as original thickness of floor and road, watering, backfilling, compaction and disposal of all surplus material and sewage etc. to a suitable location with all lead and lift, repairing of underground utilities, if damaged, Complete job to connect a dwelling premises to sewer network including all material, labour, taxes, charges etc. as per Specifications, drawing and directions of Engineer In-charge		
17.73.1	Length up to 5 m	each	8,450.00
17.73.2	Length more than 5 m and upto 10 m	each	10,900.00
17.73.3	Length more than 10 m and upto 15 m	each	13,600.00
17.74	Temporary bypassing of sewer including Plugging the mouth of pipe/s inside sewer manhole using suitable plugging system and installation of bypass arrangement for bypassing the sewage flow, including, but not limited, to pumps, pipes, connections, couplings, electrical accessories, support traffic diversions arrangements etc. including desilting of manholes, disposal of debris as per the instructions of Engineer-in-Charge and keeping the manhole free		

Code No	Description	Unit	Rate Rs.
	from seepage and removal of bypass by de-plugging the mouth of pipe inside sewer manhole and removal of by pass system and making the sewer system operational including all labour, Machinery, material, taxes etc. as per the specifications and directions of the Engineer.		
17.74.1	For manholes of pipes upto 1200 mm dia	per manhole	64,800.00
17.74.2	For Manholes of above pipes from 1200 mm dia and upto 1500 mm dia	per manhole	1,04,200.00
17.74.3	For manholes of pipes above 1500 mm dia and upto 1800 mm	per manhole	1,27,600.00
17.75	Raising circular brick/RR stone masonry manhole with circular opening 560mm dia and frame slab to required level including dismantling existing slab, taking out the existing CI frame & cover of manhole and raising it upto ground/ road level, refixing of frame and cover in M15 (1:2:4) concrete all around the frame, including making good the damage, form work, curing, complete as directed by Engineer. (Brick work / RR stone work of raising depth of manhole to be paid separately)	each	610.00
17.76	Raising circular inspection chamber with circular cover 450mm dia and frame slab to required level including dismantling existing slab, taking out the existing CI frame & cover of inspection chamber and raising it upto ground/ road level, refixing of frame and cover in M15 (1:2:4) concrete all around the frame, including making good the damage, form work, curing, complete as directed by Engineer. (Brick/ concrete work of raising depth of manhole to be paid separately)	each	349.00
17.77	Raising precast circular manhole cover and frame by taking out existing precast frame and cover, providing and fixing precast SFRC circular spacer of required height, re-fixing existing manhole cover frame and cover with cement sand mortar (1:3), including making good the damage, complete as directed by Engineer.	each	1,955.00
17.78	Lowering of circular brick / RR stone masonry manhole with circular opening 560mm dia and frame slab to required level including dismantling existing slab and manhole wall, taking out the existing CI frame & cover of manhole and lowering it upto ground/ road level, refixing of frame and cover in M15 (1:2:4) concrete all around the frame, including making good the damage, form work, curing, complete as directed by Engineer. (Dismantling of brick work / RR stone work depth of manhole to be paid separately)	each	610.00
17.79	Lowering of circular inspection chamber with circular cover 450mm dia and frame slab to required level including dismantling existing slab and inspection chamber wall, taking out the existing CI frame & cover of inspection chamber and lowering it upto ground/ road level, refixing of frame and cover in M15 (1:2:4) concrete all around the frame, including making good the damage, form work, curing, complete as directed by Engineer. (Dismantling of brick/ concrete work depth of manhole to be paid separately)	each	349.00

Code No	Description	Unit	Rate Rs.
17.80	Supplying & fixing 560mm dia opening SFRC manhole frame & cover as per IS : 12592-2002 in existing manholes including grouting the frame in PCC M-15 complete in all respect as directed by the Engineer.		
17.80.1	HD-20	each	2,675.00
17.80.2	EHD-35	each	2,990.00
17.81	Supplying & fixing 560mm opening dia SFRC manhole cover as per IS : 12592-2002 in existing manholes frame complete in all respect as directed by the Engineer.		
17.81.1	HD-20	each	1,389.00
17.81.2	EHD-35	each	1,698.00
17.82	Supplying and fixing of 560 mm opening dia Ductile Iron manhole frame & cover, Hinged Type, Heavy Duty with test load of 400 KN, class D-400 as per BS EN 124, in existing manholes including grouting the frame in PCC M-15 complete in all respect as directed by the Engineer.	set	7,000.00
17.83	Extra for supplying and fixing of 560 mm opening dia Ductile Iron manhole frame & cover, Hinged Type, Heavy Duty with test load of 400 KN, class D-400 as per BS EN 124, in place of RCC/ SFRC manhole frame & cover (ED/EHD) in manhole.	each	4,235.00
17.84	Supplying and fixing of approved brand composite fiberglass reinforced polymer manhole cover with frame 560mm opening Dia (circular) confirming to BSEN – 124 : 1994 of specified load capacity including grouting. Top shall have abrasion resistant layer of decorative grey granite finish. It shall also confirm “permanent Set” criterion as per BSEN 24. Product should be tested MSME accredited test lab for load capacity and permanent set as per IS - 1726.		
17.84.1	HD - 20 Ton	each	7,840.00
17.84.2	EHD - 35 Ton	each	9,450.00
17.85	Emptying of domestic septic tank/ soakage well etc, disposing of sludge within a lead of 5km and taking out sewage by mechanical means including refilling with local earth, ramming and compaction in layers, cleaning of site.	each	4,930.00
17.86	Emptying of septic tank/ soakage well etc, disposing of sludge within a lead of 5km and taking out sewage & sludge	each	1,506.00
17.87	Supply and Pushing of MS casing pipe of specified thickness by trenchless method adopting micro-tunnelling or any suitable mechanical technology or technology approved by Railway below ground at all depth under running traffic condition as per railway standard including carrying out survey work at the job site for determining underground cable trenches like telephone, cable, water & sanitary lines and resistivity test for finding the soil strata using necessary equipment's for completion of works, mobilizing of		

Code No	Description	Unit	Rate Rs.
	machineries and specialized crew at the job site complete in all respect, including excavation of driven pit and exit pit (upto 3 metre depth) with proper protection at three sites with shoring sheets and ISMB's. Providing MS cutting edges for front shield and Constructing thrust bed at designated level. Necessary de-watering and providing concrete foundation at the base of the driven pit, PVC/Rubber saddle as per the requirement of Railway Authority, crane for handing of pipe and any other machinery, tools, and tackles required, construction of temporary works as per requirement and as per approved by railway authorities, specification and the direction of the Engineer. (Protective coating/ lining if done that will be paid extra) Note- 1. Manual Pipe jacking is not permitted for workmen safety reasons. 2. Length of pipe shall be measured in between the outer wall of two manholes / Inspection chambers. Pipe in the manhole/inspection chamber's wall shall deemed to be included in the item of manhole/inspection chamber shall not be payable.		
17.87.1	In all type of soils		
17.87.1.1	600 mm dia 12 mm thick casing pipe	metre	66,900.00
17.87.1.2	700 mm dia 12 mm thick casing pipe	metre	95,600.00
17.87.1.3	800 mm dia 12 mm thick casing pipe	metre	1,00,200.00
17.87.1.4	900 mm dia 12 mm thick casing pipe	metre	1,04,900.00
17.87.1.5	1000 mm dia 14 mm thick casing pipe	metre	1,35,200.00
17.87.1.6	1100 mm dia 16mm thick casing pipe	metre	1,49,400.00
17.87.1.7	1200 mm dia 16mm thick casing pipe	metre	1,55,700.00
17.87.1.8	1400 mm dia 20mm thick casing pipe	metre	2,10,000.00
17.87.1.9	1600 mm dia 22 mm thick casing pipe	metre	2,40,600.00
17.87.1.10	1800 mm dia 22 mm thick casing pipe	metre	2,82,500.00
17.87.1.11	2000 mm dia 22 mm thick casing pipe	metre	2,99,600.00
17.87.2	In Rock		
17.87.2.1	600 mm dia 12 mm thick casing pipe	metre	2,48,800.00
17.87.2.2	700 mm dia 12 mm thick casing pipe	metre	2,82,800.00
17.87.2.3	800 mm dia 12 mm thick casing pipe	metre	2,87,500.00
17.87.2.4	900 mm dia 12 mm thick casing pipe	metre	2,92,200.00
17.87.2.5	1000 mm dia 14 mm thick casing pipe	metre	3,48,800.00
17.87.2.6	1100 mm dia 16mm thick casing pipe	metre	3,63,000.00
17.87.2.7	1200 mm dia 16mm thick casing pipe	metre	3,69,300.00
17.87.2.8	1400 mm dia 20mm thick casing pipe	metre	4,81,600.00
17.87.2.9	1600 mm dia 22 mm thick casing pipe	metre	5,18,300.00
17.87.2.10	1800 mm dia 22 mm thick casing pipe	metre	6,00,700.00
17.87.2.11	2000 mm dia 22 mm thick casing pipe	metre	6,17,800.00

Code No	Description	Unit	Rate Rs.
17.88	Providing, laying and jointing RCC NP4 jacking pipe (with steel pushing collar) with suitable leak proof joints (with using 12mm MDF sheets etc.) with compliance for maintaining slope as per design by trenchless method adopting Micro tunnelling method or any suitable mechanical technology below ground at all depth under running traffic condition including carrying out survey work at the job site for determining underground cable trenches like telephone, power cable, water & sanitary lines and resistivity tests for finding the soil strata using necessary equipment's for completion of work, mobilizing of machineries and specialized crew at the job site, etc. complete in all respects, including excavation of drive pit and exit pit (upto 3 metre depth) with proper protection at the three sides, providing and casting of MS cutting edges for front shield and constructing thrust bed at designed level as directed by the Engineer, necessary de-watering and providing concrete foundations at the base of the Drive pit, crane for handling of pipes, and any other machinery, tool & tackles required, construction of temporary works as per requirement complete in all respect (all depths) with all lead and lifts, as per specification and the direction of the Engineer. Note- 1. Manual Pipe jacking is not permitted for workmen safety reasons. 2. Length of pipe shall be measured in between the outer wall of two manholes / Inspection chambers. Pipe in the manhole/inspection chamber's wall shall deemed to be included in the item of manhole/inspection chamber shall not be payable.		
17.88.1	In all type of soils including mixed strata / soil		
17.88.1.1	150 mm dia RCC pipe	metre	28,500.00
17.88.1.2	200 mm dia RCC pipe	metre	28,900.00
17.88.1.3	250 mm dia RCC pipe	metre	29,700.00
17.88.1.4	300 mm dia RCC pipe	metre	30,600.00
17.88.1.5	350 mm dia RCC pipe	metre	33,700.00
17.88.1.6	400 mm dia RCC pipe	metre	34,400.00
17.88.1.7	450 mm dia RCC pipe	metre	35,400.00
17.88.1.8	500 mm dia RCC pipe	metre	44,700.00
17.88.1.9	600 mm dia RCC pipe	metre	46,300.00
17.88.1.10	700 mm dia RCC pipe	metre	72,400.00
17.88.1.11	800 mm dia RCC pipe	metre	75,300.00
17.88.1.12	900 mm dia RCC pipe	metre	76,700.00
17.88.1.13	1000 mm dia RCC pipe	metre	96,000.00
17.88.1.14	1100 mm dia RCC pipe	metre	98,200.00
17.88.1.15	1200 mm dia RCC pipe	metre	1,00,800.00
17.88.1.16	1400 mm dia RCC pipe	metre	1,28,000.00

Code No	Description	Unit	Rate Rs.
17.88.1.17	1600 mm dia RCC pipe	metre	1,35,400.00
17.88.1.18	1800 mm dia RCC pipe	metre	1,70,500.00
17.88.1.19	2000 mm dia RCC pipe	metre	1,84,900.00
17.88.2	In Rock	metre	
17.88.2.1	150 mm dia RCC pipe	metre	1,20,000.00
17.88.2.2	200 mm dia RCC pipe	metre	1,20,500.00
17.88.2.3	250 mm dia RCC pipe	metre	1,21,300.00
17.88.2.4	300 mm dia RCC pipe	metre	1,22,200.00
17.88.2.5	350 mm dia RCC pipe	metre	1,53,700.00
17.88.2.6	400 mm dia RCC pipe	metre	1,54,400.00
17.88.2.7	450 mm dia RCC pipe	metre	1,55,500.00
17.88.2.8	500 mm dia RCC pipe	metre	2,26,600.00
17.88.2.9	600 mm dia RCC pipe	metre	2,28,200.00
17.88.2.10	700 mm dia RCC pipe	metre	2,59,600.00
17.88.2.11	800 mm dia RCC pipe	metre	2,62,600.00
17.88.2.12	900 mm dia RCC pipe	metre	2,64,000.00
17.88.2.13	1000 mm dia RCC pipe	metre	3,09,600.00
17.88.2.14	1100 mm dia RCC pipe	metre	3,11,800.00
17.88.2.15	1200 mm dia RCC pipe	metre	3,14,400.00
17.88.2.16	1400 mm dia RCC pipe	metre	3,99,700.00
17.88.2.17	1600 mm dia RCC pipe	metre	4,13,100.00
17.88.2.18	1800 mm dia RCC pipe	metre	4,88,700.00
17.88.2.19	2000 mm dia RCC pipe	metre	5,03,000.00
17.89	Providing, jointing, laying, testing and commissioning of HDPE PE-100/PN-6 (suitable for pulling method for jointing) pipes for sewer line as per IS-14333 (amended upto date) with compliance for maintaining slope as per design by trenchless adopting HDD method (Horizontal Directional Drilling) below ground at all depth including carriage etc. complete in all respect, construction of thrust pit and receiving pit of required size upto 3 metre depth and soil investigation, making suitable arrangement for barricading of pits, traffic diversion, lights, traffic permission from relevant authority (though department will assist in getting the permission), refilling of pits in compacted layers of 150 mm including disposal of surplus material with all lift and lead upto 50 metre as per specification and the direction of the Engineer. Note-1 Length of pipe shall be measured in between the outer wall of two manholes / Inspection chambers, Pipe in the manhole/inspection chamber's wall shall deemed to be included in the item of manhole/inspection chamber shall not be payable. Note- 2. Manual Pipe jacking is not permitted		

Code No	Description	Unit	Rate Rs.
	for workmen safety reasons.		
17.89.1	In all types of soil including mixed strata		
17.89.1.1	200 mm outer dia	metre	5,020.00
17.89.1.2	225 mm outer dia	metre	6,990.00
17.89.1.3	250 mm outer dia	metre	7,690.00
17.89.1.4	315 mm outer dia	metre	9,300.00
17.89.1.5	400 mm outer dia	metre	15,800.00
17.89.1.6	450 mm outer dia	metre	17,600.00
17.89.1.7	500 mm outer dia	metre	31,500.00
17.89.1.8	630 mm outer dia	metre	38,100.00
17.89.1.9	800 mm outer dia	metre	58,600.00
17.89.1.10	900 mm outer dia	metre	66,300.00
17.89.1.11	1000 mm outer dia	metre	74,900.00
17.89.2	In all types of rock		
17.89.2.1	200 mm outer dia	metre	15,100.00
17.89.2.2	225 mm outer dia	metre	19,050.00
17.89.2.3	250 mm outer dia	metre	19,750.00
17.89.2.4	315 mm outer dia	metre	21,300.00
17.89.2.5	400 mm outer dia	metre	51,000.00
17.89.2.6	450 mm outer dia	metre	52,800.00
17.89.2.7	500 mm outer dia	metre	89,600.00
17.89.2.8	630 mm outer dia	metre	96,200.00
17.89.2.9	800 mm outer dia	metre	1,31,500.00
17.89.2.10	900 mm outer dia	metre	1,39,200.00
17.89.2.11	1000 mm outer dia	metre	1,47,900.00
17.90	Extra for excavation of driven pit/ exit pit / intermediate pit beyond 3 metre depth, required for pushing/ pulling of MS/HDPE/RCC pipe in trenchless technology, with proper protection at three sides with shoring sheets/ wooden planks and ISMB's, maintaining during pushing/ pulling of pipe, back filling, necessary de-watering including all machinery, tools, and tackles required as per specification and the direction of the Engineer		
17.90.1	In all types of soil	per pit per metre depth	32,500.00
17.90.2	In rocks	per pit per metre depth	65,000.00

Code No	Description	Unit	Rate Rs.
17.91	Cleaning of RCC / SW / DWC / HDPE pipes and intermediate manholes which includes removal of vegetation, garbage, muck, brick and stone pieces or any type of trash etc. and Flow Test of already laid but not commissioned (including cost and conveyance of water to site, Manpower and machineries deployed) complete by mechanical means in all respect as per direction of Engineer-In-Charge.		
17.91.1	150 mm dia	metre	47.50
17.91.2	200 mm dia	metre	63.00
17.91.3	250 mm dia	metre	64.50
17.91.4	300 mm dia	metre	70.00
17.91.5	400 mm dia	metre	93.00
17.91.6	450 mm dia	metre	99.50
17.91.7	500 mm dia	metre	114.00
17.91.8	600 mm dia	metre	121.00
17.91.9	700 mm dia	metre	171.00
17.91.10	800 mm dia	metre	208.00
17.91.11	900 mm dia	metre	231.00
17.91.12	1000 mm dia	metre	255.00
17.92	Operation & maintenance of sewerage collection & conveyance system (RCC/ HDPE/HDPE DWC pipes) from consumer point to STP complete. (line between property chamber and sewer manhole will not be measured for payment purpose).	Km per month	4,583.00
17.93	Desilting the sewer lines through jetting and suction machines including cleaning, barricading, and reconstruction of manholes for section isolation by plugging and flow stoppage, setting up the over-pumping arrangements, traffic management jetting and dislodging of accumulated silt from the pipelines, removal of silt through suction hose, disposal of removed silt upto a distance of 20 Km, necessary temporary repairs of sewers to stop locational collapses, ingress of ground water in the desilted section of the pipelines all complete as per the specifications and direction of Engineer. Evaluation pipeline condition through inline Closed Circuit Television survey to assess the internal condition and material of the buried pipelines including accurate measurement of the length & diameter / cross section, invert levels and other physical attributes of buried pipelines, identification of all defects, joints and connections, measurement and recording of their location / position, sizes, & conditions of such pipelines including provision of survey report and records of the conditions, both through video recording in PAL format on a new VHS cassette as well as a report on the structural condition of the pipelines as per the specifications and direction of Engineer.		
17.93.1	200 mm dia sewer	metre	349.50

Code No	Description	Unit	Rate Rs.
17.93.2	300 mm dia sewer	metre	654.00
17.93.3	350 mm dia sewer	metre	993.00
17.93.4	450 mm dia sewer	metre	1,239.00
17.93.5	600 mm dia sewer	metre	1,668.00
17.93.6	800 mm dia sewer	metre	2,054.00
17.93.7	900 mm dia sewer	metre	2,423.00
17.93.8	1000 mm dia sewer	metre	2,785.00
17.93.9	1200 mm dia sewer	metre	3,235.00
17.94	Locating buried manholes through magnetic tracking process / appropriate technology in all types of soil conditions by the use of universal precision cable & manhole locator including marking the estimated findings on the plan of the area & making recommendations for related work execution location as per the specifications and direction of Engineer.	each	237.00
17.95	Rehabilitation of existing sewer pipeline by Cured-in-Place Pipe CIPP/ Machine Wound Spiral Lining (MWSL) method including site survey, plugging and flow diversion, cleaning, pre-lining CCTV survey, repair of defects, pre-lining measurements, designing, site preparatory work, installation of impregnated liner/ MWSL Liner, curing of liner using hot water/ steam recirculation, jointing, grouting, post-lining CCTV survey and measurement, commissioning and restoration of roads and services all inclusive.		
17.95.1	Above 200 upto 500 mm	metre	32,900.00
17.95.2	Above 500 upto 750 mm	metre	42,800.00
17.95.3	Above 750 upto 1000 mm	metre	52,900.00
17.95.4	Above 1000 upto 1250 mm	metre	63,400.00
17.95.5	Above 1250 upto 1500 mm	metre	73,200.00
17.95.6	Above 1500 upto 1750 mm	metre	83,200.00
17.95.7	Above 1750 upto 2000 mm	metre	93,000.00
17.96	Replacement of pipelines through Pneumatic / Static Pipe Bursting process including making of bursting tool entry pits, all related civil works for site preparation, like excavation, shoring/ strutting, maintaining the pits (upto 3 m depth), traffic management etc., flow stoppage by the appropriate stinking methods, bypass pumping, installing the HDPE PE 100 PN-6 pipe, restoring the manholes after replacement pipe installation etc., completion and service reconnection as per the specifications and direction of Engineer(Extra 30% on above for executing under water table)		
17.96.1	200 mm	metre	14,250.00
17.96.2	250 mm	metre	16,450.00
17.96.3	300 mm	metre	18,900.00

Code No	Description	Unit	Rate Rs.
17.96.4	350 mm	metre	19,700.00
17.96.5	400 mm	metre	26,300.00
17.96.6	450 mm	metre	33,600.00
17.96.7	500 mm	metre	36,400.00
17.96.8	600 mm	metre	44,600.00
17.97	Smart Manhole Monitoring System – Providing and installation of smart manhole device with battery powered, LDR and cable float switch water level sensor-based device capable for providing data over GSM/GPRS network to the management system. Device should be capable for continuous monitor of sewer water level in the manhole.	each	35,400.00
17.98	AMC of smart manhole monitoring system per month including change of battery as required excluding cost of replacement of any defective part after warranty period.	each	1,062.00
17.99	Supply, delivery and commissioning of advanced “Robot” for cleaning of manholes/machine holes having expandable robotic arm of 4 degree of freedom with multipurpose end effector for shovelling and picking action and 4 Robotic legs with wheels for self-stability inside manhole/machine holes, containing bucket system having minimum bucket capacity 12 litres, gas sensor for detection of Methane, Carbon Monoxide, Hydrogen Sulphide and Ammonia, 4 nos. of IP68 cameras(1camera on outside stand unit for monitoring entry and exit of robot in to manhole/machine holes and 3 cameras on robotic unit which go inside the manhole/machine hole) which shall go deeper up to 8 mtr. depth and can lift up to 125 kg/cycle, compatible for hard rocks, sand, silk,sludge, non bio degradable wastes etc. minimum 90% of the actuators of the robot should be using pneumatic power. The robot is equipped with a display of 13.3 inch IPS screen full HD with 4 channel video output having 10.1 inch interactive touch screen and switches for the user interface to operate the robot. It should have a “ built in” tutorials software to learn the operations of the robot. Compressor(2 HP,8 bar outlet pressure with 50 litre tank capacity) and required DG set (rated output 2.8 KVA,230 volt/50 Hz) for working of robot is also to be supplied with accessories Pneumatic hose, extension box, power connector, tray, and rain coat. O&M of robots by providing the skilled technical operator to operate the machine as well as training of the line agencies staff for a period of one year.	each	44,00,000.00

18.0 STP (Sewage Treatment Plant)

Code No	Description	Unit	Rate Rs.
18.1	Supply delivery at site with necessary packing, receiving, unloading, shifting, storing, installation, testing and commissioning of Non clog submersible pumping set of 2% Ni Cl Cascading, Impeller CF 8M ,Shaft SS 410,mechanical seal with 10M Power & Control cable , 5M Galvanized Chain,,10M, 50mm MS galvanized Guide pipe, Duck Foot Bend, with Guide wire SS 304 etc. complete with all respect as per specification		
18.1.1	Discharge 36 cum/hr and head 8 to 10 M	each	1,51,700.00
18.1.2	Discharge 36 cum/hr and head 11 to 15 M	each	1,51,700.00
18.1.3	Discharge 36 cum/hr and head 16 to 20 M	each	1,51,700.00
18.1.4	Discharge 75 cum/hr and head 8 to 10 M	each	1,63,600.00
18.1.5	Discharge 75 cum/hr and head 11 to 15 M	each	1,63,600.00
18.1.6	Discharge 75 cum/hr and head 16 to 20 M	each	1,63,600.00
18.1.7	Discharge 90 cum/hr and head 8 to 10 M	each	1,68,200.00
18.1.8	Discharge 90 cum/hr and head 11 to 15 M	each	1,68,200.00
18.1.9	Discharge 90 cum/hr and head 16 to 20 M	each	1,68,200.00
18.1.10	Discharge 110 cum/hr and head 8 to 10 M	each	1,68,200.00
18.1.11	Discharge 110 cum/hr and head 11 to 15 M	each	1,68,200.00
18.1.12	Discharge 110 cum/hr and head 16 to 20 M	each	2,78,800.00
18.1.13	Discharge 110 cum/hr and head 21 to 25 M	each	2,78,800.00
18.1.14	Discharge 110 cum/hr and head 26 To 30 M	each	2,78,800.00
18.1.15	Discharge 110 cum/hr and head 31 To 35 M	each	3,84,000.00
18.1.16	Discharge 160 cum/hr and head 8 to 10 M	each	1,68,200.00
18.1.17	Discharge 160 cum/hr and head 11 TO 15 M	each	3,05,800.00
18.1.18	Discharge 160 cum/hr and head 16 TO 20 M	each	3,05,800.00
18.1.19	Discharge 160 cum/hr and head 21 to 25 M	each	3,84,000.00
18.1.20	Discharge 160 cum/hr and head 26 to 30 M	each	4,24,500.00
18.1.21	Discharge 160 cum/hr and head 31 To 35 M	each	6,79,400.00
18.1.22	Discharge 220 cum/hr and head 8 to 10 M	each	3,13,700.00
18.1.23	Discharge 220 cum/hr and head 11 TO 15 M	each	3,43,700.00
18.1.24	Discharge 220 cum/hr and head 16 TO 20 M	each	3,89,300.00
18.1.25	Discharge 220 cum/hr and head 21 TO25 M	each	4,24,500.00
18.1.26	Discharge 220 cum/hr and head 26 to 30 M	each	4,24,500.00

Code No	Description	Unit	Rate Rs.
18.1.27	Discharge 220 cum/hr and head 31 To 35 M	each	6,79,400.00
18.1.28	Discharge 320 cum/hr and head 8 TO 10 M	each	3,43,700.00
18.1.29	Discharge 320 cum/hr and head 11 TO 15 M	each	3,89,300.00
18.1.30	Discharge 320 cum/hr and head 16 TO 20 M	each	4,24,500.00
18.1.31	Discharge 320 cum/hr and head 21 TO 25 M	each	6,79,400.00
18.1.32	Discharge 320 cum/hr and head 26 To 30 M	each	7,11,300.00
18.1.33	Discharge 320 cum/hr and head 31 To 35 M	each	7,86,000.00
18.1.34	Discharge 420 cum/hr and head 8 TO 10 M	each	3,89,300.00
18.1.35	Discharge 420 cum/hr and head 11 TO 15 M	each	4,24,500.00
18.1.36	Discharge 420 cum/hr and head 16 TO 20 M	each	4,24,500.00
18.1.37	Discharge 420 cum/hr and head 21 TO 25 M	each	7,11,300.00
18.1.38	Discharge 420 cum/hr and head 26 To 30 M	each	7,86,000.00
18.1.39	Discharge 420 cum/hr and head 31 To 35 M	each	7,86,000.00
18.1.40	Discharge 490 cum/hr and head 8 TO 10 M	each	6,22,500.00
18.1.41	Discharge 490 cum/hr and head 11 TO 15 M	each	6,47,700.00
18.1.42	Discharge 490 cum/hr and head 16 TO 20 M	each	7,42,600.00
18.1.43	Discharge 490 cum/hr and head 21 TO 25 M	each	7,86,000.00
18.1.44	Discharge 490 cum/hr and head 26 To 30 M	each	7,86,000.00
18.1.45	Discharge 490 cum/hr and head 31 To 35 M	each	13,58,400.00
18.1.46	Discharge 630 cum/hr and head 8 TO 10 M	each	6,47,700.00
18.1.47	Discharge 630 cum/hr and head 11 TO 15 M	each	7,42,600.00
18.1.48	Discharge 630 cum/hr and head 16 TO 20 M	each	7,57,700.00
18.1.49	Discharge 630 cum/hr and head 21 TO 25 M	each	7,86,000.00
18.1.50	Discharge 630 cum/hr and head 26 To 30 M	each	13,58,400.00
18.1.51	Discharge 630 cum/hr and head 31 To 35 M	each	13,58,400.00
18.1.52	Discharge 710 cum/hr and head 8 TO 10 M	each	7,55,200.00
18.1.53	Discharge 710 cum/hr and head 11 TO 15 M	each	8,83,000.00
18.1.54	Discharge 710 cum/hr and head 16 TO 20 M	each	11,20,800.00
18.1.55	Discharge 710 cum/hr and head 21 TO 25 M	each	13,58,400.00
18.1.56	Discharge 710 cum/hr and head 26 To 35 M	each	15,90,600.00
18.1.57	Discharge 840 cum/hr and head 8 TO 10 M	each	7,55,200.00
18.1.58	Discharge 840 cum/hr and head 11 TO 15 M	each	7,55,200.00
18.1.59	Discharge 840 cum/hr and head 16 TO 20 M	each	7,86,000.00
18.1.60	Discharge 840 cum/hr and head 21 TO 25 M	each	13,23,500.00

Code No	Description	Unit	Rate Rs.
18.1.61	Discharge 840 cum/hr and head 26 To 30 M	each	13,93,500.00
18.1.62	Discharge 840 cum/hr and head 31 To 35 M	each	17,38,200.00
18.1.63	Discharge 1050 cum/hr and head 8 TO 10 M	each	8,66,700.00
18.1.64	Discharge 1050 cum/hr and head 11 TO 15 M	each	8,66,700.00
18.1.65	Discharge 1050 cum/hr and head 16 TO 20 M	each	14,71,000.00
18.1.66	Discharge 1050 cum/hr and head 21 TO 25 M	each	15,06,100.00
18.1.67	Discharge 1050 cum/hr and head 26 to 30 M	each	17,38,200.00
18.1.68	Discharge 1050 cum/hr and head 31 To 35 M	each	24,51,000.00
18.1.69	Discharge 1410 cum/hr and head 8 TO 10 M	each	17,29,900.00
18.1.70	Discharge 1410 cum/hr and head 11 TO 15 M	each	18,05,400.00
18.1.71	Discharge 1410 cum/hr and head 16 TO 20 M	each	21,76,100.00
18.1.72	Discharge 1410 cum/hr and head 21 TO 25 M	each	22,01,100.00
18.1.73	Discharge 1410 cum/hr and head 26 to 30 M	each	24,51,000.00
18.1.74	Discharge 1880 cum/hr and head 8 TO 10 M	each	19,44,400.00
18.1.75	Discharge 1880 cum/hr and head 11 TO 15 M	each	22,98,000.00
18.1.76	Discharge 1880 cum/hr and head 16 TO 20 M	each	23,28,500.00
18.1.77	Discharge 1880 cum/hr and head 21 TO 30 M	each	24,51,000.00
18.1.78	Discharge 2350 cum/hr and head 8 TO 10 M	each	22,98,000.00
18.1.79	Discharge 2350 cum/hr and head 11 TO 15 M	each	23,28,500.00
18.1.80	Discharge 2350 cum/hr and head 16 TO 20 M	each	24,51,000.00
18.1.81	Discharge 2350 cum/hr and head 21 TO 25 M	each	24,51,000.00
18.2	Supply, Installation, Testing and Commissioning of Grit Separator Mechanism including Classifier on one side in inclined position and Organic Return pump interconnection pipes, valves and accessories complete in all respect for following PEAK FLOW as per specification and direction of the of Engineer.		
18.2.1	Up to 5 MLD	set	19,02,500.00
18.2.2	5.1 MLD to 7.5 MLD	set	19,43,000.00
18.2.3	7.6 MLD to 10 MLD	set	19,43,000.00
18.2.4	11 MLD to 15 MLD	set	19,93,500.00
18.2.5	16 MLD to 20 MLD	set	19,93,500.00
18.2.6	21 MLD to 25 MLD	set	20,18,800.00
18.2.7	26 MLD to 30 MLD	set	20,18,800.00
18.2.8	31 MLD to 35 MLD	set	20,18,800.00
18.2.9	36 MLD to 40 MLD	set	21,04,900.00
18.2.10	41 MLD to 45 MLD	set	21,04,900.00

Code No	Description	Unit	Rate Rs.
18.2.11	46 MLD to 50 MLD	set	21,45,300.00
18.2.12	51 MLD to 55 MLD	set	21,45,300.00
18.2.13	56 MLD to 60 MLD	set	21,45,300.00
18.2.14	61 MLD to 65 MLD	set	21,75,700.00
18.2.15	66 MLD to 70 MLD	set	21,75,700.00
18.2.16	71 MLD to 75MLD	set	21,75,700.00
18.2.17	76 MLD to 80 MLD	set	21,75,700.00
18.2.18	81 MLD to 85 MLD	set	21,75,700.00
18.2.19	86 MLD to 90 MLD	set	22,76,900.00
18.2.20	91 MLD to 95 MLD	set	22,76,900.00
18.2.21	96 MLD to 100 MLD	set	22,76,900.00
18.3	Supply, fabrication, fixing and Testing of stainless steel (SS-316) Manual Coarse Bar screen with flat bar 50mm X 10mm, Spacing of bars 50mm suitable for mounting in channel of specified size with inclination not more than 45 degree and a movable covered containers of 1 cum capacity complete in all respect as per technical specification and the direction of the Engineer. Manually Raked Coarse Bar Screen with 50 mm clear opening for following PEAK FLOW and upto 3m channel depth.		
18.3.1	Up to 3 MLD	set	1,06,300.00
18.3.2	3.1 MLD to 5 MLD	set	1,06,300.00
18.3.3	5.1 MLD to 10 MLD	set	1,06,300.00
18.3.4	10.1 MLD to 15 MLD	set	1,11,300.00
18.3.5	15.1 MLD to 20 MLD	set	1,26,500.00
18.3.6	20.1 MLD to 25 MLD	set	1,36,600.00
18.3.7	25.1 MLD to 30 MLD	set	1,51,800.00
18.3.8	30.1 MLD to 35 MLD	set	1,56,900.00
18.3.9	35.1 MLD to 40 MLD	set	1,59,400.00
18.3.10	40.1 MLD to 45 MLD	set	1,61,900.00
18.3.11	45.1 MLD to 50 MLD	set	1,65,300.00
18.3.12	50.1 MLD to 55 MLD	set	1,81,800.00
18.3.13	55.1 MLD to 60 MLD	set	1,98,300.00
18.3.14	60.1 MLD to 65 MLD	set	1,98,300.00
18.3.15	65.1 MLD to 75 MLD	set	2,16,000.00
18.3.16	75.1 MLD to 85 MLD	set	2,16,000.00
18.3.17	85.1 MLD to 90 MLD	set	2,28,700.00
18.3.18	90.1 MLD to 95MLD	set	2,48,900.00

Code No	Description	Unit	Rate Rs.
18.3.19	95.1 MLD to 100MLD	set	2,48,900.00
18.3.20	Add extra for additional depth of channel in manual coarse bar screen beyond 3M depth	metre	8,100.00
18.4	Supply, fabrication and fixing of stainless steel (SS-316) Coarse Bar screen (mechanically raked) with flat bar 50mm X 10mm Spacing of bars 50mm suitable for mounting in channel of specified size with inclination not more than 75 degree complete in all respect as per technical specification and the direction of the Engineer for following PEAK FLOW and upto 3m channel depth.		
18.4.1	5 MLD to 10 MLD	set	16,03,900.00
18.4.2	10.1 MLD to 15 MLD	set	16,79,800.00
18.4.3	15.1 MLD to 20 MLD	set	17,40,600.00
18.4.4	20.1 MLD to 25 MLD	set	17,91,200.00
18.4.5	25.1 MLD to 30 MLD	set	19,27,800.00
18.4.6	30.1 MLD to 35 MLD	set	19,73,300.00
18.4.7	35.1 MLD to 40 MLD	set	20,64,400.00
18.4.8	40.1 MLD to 45 MLD	set	21,35,200.00
18.4.9	45.1 MLD to 50 MLD	set	21,75,700.00
18.4.10	50.1 MLD to 55 MLD	set	23,27,500.00
18.4.11	55.1 MLD to 60 MLD	set	28,10,200.00
18.4.12	60.1 MLD to 65 MLD	set	28,10,200.00
18.4.13	65.1 MLD to 75 MLD	set	28,10,200.00
18.4.14	75.1 MLD to 85 MLD	set	32,07,900.00
18.4.15	85.1 MLD to 90 MLD	set	34,20,400.00
18.4.16	90.1 MLD to 95 MLD	set	36,53,200.00
18.4.17	95.1 MLD to 100 MLD	set	38,70,700.00
18.4.18	Add extra for additional depth of channel in mechanical coarse bar screen beyond 3 m depth.	metre	52,000.00
18.5	Supply, Installation, Testing and Commissioning of stainless steel (SS-316) Fine Bar screen (Mechanical operated) with flat bar 50 mm X 2 mm with 6 mm spacing suitable for mounting in channel of specified size with suitable inclination complete in all respect as per technical specification, reputed make and direction of the Engineer inclusive of Banner Make Upstream Type Ultrasonic Level Sensor for following PEAK FLOW and length up to 3M.		
18.5.1	5 MLD to 7.5 MLD	set	7,79,200.00
18.5.2	7.6 MLD to 10 MLD	set	8,09,600.00
18.5.3	10.1 MLD to 15 MLD	set	10,12,000.00

Code No	Description	Unit	Rate Rs.
18.5.4	15.1MLD to 20MLD	set	11,18,200.00
18.5.5	20.1 MLD to 25 MLD	set	11,48,600.00
18.5.6	25.1 MLD to 30 MLD	set	14,77,500.00
18.5.7	30.1 MLD to 35 MLD	set	15,98,900.00
18.5.8	35.1 MLD to 40 MLD	set	16,69,700.00
18.5.9	40.1 MLD to 45 MLD	set	17,70,900.00
18.5.10	45.1 MLD to 55 MLD	set	18,62,000.00
18.5.11	55.1 MLD to 65 MLD	set	19,63,200.00
18.5.12	65.1 MLD to 75 MLD	set	21,04,900.00
18.5.13	75.1 MLD to 85 MLD	set	22,16,200.00
18.5.14	85.1 MLD to 95 MLD	set	23,68,000.00
18.5.15	95.1 MLD to 105 MLD	set	35,82,300.00
18.5.16	Add extra for additional depth of channel in Mechanical Fine bar screen beyond 3m length	metre	52,000.00
18.6	Supply, Installation, Testing and commissioning of CI Open Channel Sluice Gates, Manually operated, Rising Spindle type suitable for mounting in between two parallel walls of an Open Channel. Water sealing shall be provided at two vertical sides and bottom side of gate aperture by means of rubber seal, mounted on gate slide and having forced contact with gate aperture. The gate shall be designed in such a manner, so that it can be operated at 2 meter head. Gate frame & Shutter of CI Grade IS 210 FG 260, Head Stock IS 210 Grade FG 260, Hinge Pin SS ASTM A276, Yoke IS MS 2062, Flush Bottom Seal Support Bar of SS ASTM A276 , Stem Operating Nut ASTM A276., Duly tested for tensile strength, Chemical testing and tested Shop tested for overall dimensions as per approved GA drawing complete in all respect as per specification and direction of Engineer for following PEAK FLOW up to 3m channel depth.		
18.6.1	Up to 5 MLD	set	86,000.00
18.6.2	5.1 MLD to 7.5 MLD	set	86,000.00
18.6.3	7.6 MLD to 10 MLD	set	86,000.00
18.6.4	10.1 MLD to 15 MLD	set	99,800.00
18.6.5	15.1 MLD to 20 MLD	set	1,05,700.00
18.6.6	20.1MLD to 25MLD	set	1,18,900.00
18.6.7	25.1 MLD to 30 MLD	set	1,30,000.00
18.6.8	30.1 MLD to 35 MLD	set	1,36,200.00
18.6.9	35.1 MLD to 40 MLD	set	1,57,100.00
18.6.10	40.1 MLD to 45 MLD	set	1,64,800.00
18.6.11	45.1 MLD to 50 MLD	set	1,81,100.00

Code No	Description	Unit	Rate Rs.
18.6.12	50.1 MLD to 55 MLD	set	2,00,200.00
18.6.13	55.1 MLD to 60 MLD	set	2,19,300.00
18.6.14	60.1 MLD to 65 MLD	set	2,38,400.00
18.6.15	65.1 MLD to 70 MLD	set	2,57,500.00
18.6.16	70.1 MLD to 75 MLD	set	2,76,600.00
18.6.17	75.1 MLD to 80 MLD	set	2,95,700.00
18.6.18	80.1 MLD to 85 MLD	set	3,09,500.00
18.6.19	85.1 MLD to 90 MLD	set	3,28,300.00
18.6.20	90.1 MLD to 95MLD	set	3,58,800.00
18.6.21	95.1 MLD to 100MLD	set	3,65,900.00
18.6.22	100.1 MLD to 105MLD	set	3,65,900.00
18.6.23	Add extra for additional depth of open channel beyond 3m depth	metre	5,200.00
18.7	Supply, Installation, Testing and Commissioning of CI Thimble Mounted Sluice Gate, Manually operated, Rising Spindle type. Sluice gates are as per IS 13349 Including all taxes, Freight, loading, unloading, fitting in position including Sluice gates are upward opening wall thimble mounted suitable for isolating the flow of sewer into out of the opening in the wall. It consists Gate frame, wall thimble, gate slide, shutter, seating/sealing faces .The gates will be provided with pads on sides, top and bottom to mount the wedges. The gate shall be designed in such a manner, so that it can be operated at 2 meter head. Gate frame & Shutter of CI Grade IS 210 FG 260, Head Stock assembly bolts & SS ASTM A276 Type 316, Stem, Operating Nut SS ASTM A276 Type 316., Duly tested for tensile strength, Tested for overall dimensions as per approved GA drawing complete in all respect as per specification and direction of Engineer for following PEAK FLOW and depth up to 3M.		
18.7.1	Up to 5 MLD	set	1,10,600.00
18.7.2	5.1 MLD to 7.5 MLD	set	1,39,400.00
18.7.3	7.6 MLD to 10 MLD	set	1,69,900.00
18.7.4	10.1 MLD to 15 MLD	set	1,76,100.00
18.7.5	15.1 MLD to 20 MLD	set	1,78,400.00
18.7.6	20.1MLD to 25MLD	set	1,84,500.00
18.7.7	25.1 MLD to 30 MLD	set	2,25,400.00
18.7.8	30.1 MLD to 35 MLD	set	2,66,300.00
18.7.9	35.1 MLD to 40 MLD	set	2,85,900.00
18.7.10	40.1 MLD to 45 MLD	set	3,05,400.00
18.7.11	45.1 MLD to 50 MLD	set	3,24,900.00
18.7.12	50.1 MLD to 55 MLD	set	3,49,300.00

Code No	Description	Unit	Rate Rs.
18.7.13	55.1MLD to 60MLD	set	3,80,200.00
18.7.14	60.1 MLD to 65 MLD	set	4,04,900.00
18.7.15	65.1 MLD to 70 MLD	set	4,04,900.00
18.7.16	70.1 MLD to 75 MLD	set	4,34,800.00
18.7.17	75.1 MLD to 80 MLD	set	4,47,500.00
18.7.18	80.1 MLD to 85 MLD	set	4,47,500.00
18.7.19	85.1 MLD to 90 MLD	set	4,89,200.00
18.7.20	90.1 MLD to 95MLD	set	5,79,800.00
18.7.21	95.1 MLD to 100MLD	set	6,10,300.00
18.7.22	Add extra for additional depth beyond 3m depth.	metre	5,200.00
18.8	Supplying, erecting, testing & commissioning of Hand operated Travelling Crane (HOT) (single bridge girder carrying two wheels , complete with chain pulley block, load chain of welded construction of alloy steel as per IS:2429, hand chains for hoisting & traverse mechanism, totally encased Gears, trolley, trolley track wheels. Axle & shaft, swivel type lifting hook as per IS:3815, lock to prevent hook from swivelling, brakes for lifting gear, suitable for the above parameters and as per the direction of the Engineer.		
18.8.1	2 MT Capacity		
18.8.1.1	Span 3 M and Lift 3 M	set	2,87,100.00
18.8.1.2	Span 4 M and Lift 3 M	set	2,96,700.00
18.8.1.3	Span 5 M and Lift 3 M	set	3,15,500.00
18.8.1.4	Span 6 M and Lift 3 M	set	3,39,400.00
18.8.1.5	Span 7 M and Lift 3 M	set	3,66,500.00
18.8.1.6	Span 8 M and Lift 3 M	set	3,99,800.00
18.8.1.7	Span 9 M and Lift 3 M	set	4,19,700.00
18.8.2	3 MT Capacity		
18.8.2.1	Span 3 M and Lift 3 M	set	3,01,100.00
18.8.2.2	Span 4 M and Lift 3 M	set	3,16,800.00
18.8.2.3	Span 5 M and Lift 3 M	set	3,35,100.00
18.8.2.4	Span 6 M and Lift 3 M	set	3,61,300.00
18.8.2.5	Span 7 M and Lift 3 M	set	3,88,600.00
18.8.2.6	Span 8 M and Lift 3 M	set	4,23,800.00
18.8.2.7	Span 9 M and Lift 3 M	set	4,23,800.00
18.8.3	Add extra for additional per metre lift.	metre	1,094.00

Code No	Description	Unit	Rate Rs.
18.9	Supplying, erecting, testing & commissioning of Electrically Operated Travelling Crane (EOT) .Main girder & End Carriage fabricated from Rolled Steel Section, Gear Box for all motion, Electro Magnetic Friction Disc Type Brakes, all safety limit switches , LT wheels EN 9, Double Flanged 4No, with Sq. Cage motor of adequate rating (KW), duly painted mechanical cleaning and one coat of primer and two coat of synthetic paint and as per the direction of the Engineer.		
18.9.1	2 MT Capacity		
18.9.1.1	Span 7 M and Lift 6 M	set	4,82,700.00
18.9.1.2	Span 9 M and Lift 6 M	set	5,55,100.00
18.9.2	3 MT Capacity		
18.9.2.1	Span 7 M and Lift 6 M	set	5,91,400.00
18.9.2.2	Span 9 M and Lift 6 M	set	6,73,000.00
18.9.3	5 MT Capacity		
18.9.3.1	Span 7 M and Lift 6 M	set	6,89,700.00
18.9.3.2	Span 9 M and Lift 6 M	set	7,55,700.00
18.9.4	Add extra for additional per metre lift.	metre	1,094.00
18.10	Supply, installation and commissioning of Mono Rail Single Girder Crane suitable for lift up to 9m with chain 9m pulley block and traveling trolley excluding cost of girder complete in all respect as per the direction of the Engineer.		
18.10.1	1 MT Capacity	set	31,900.00
18.10.2	2 MT Capacity	set	41,100.00
18.10.3	3 MT Capacity	set	50,500.00
18.10.4	Add extra for additional per metre lift.	metre	1,094.00
18.11	Providing, lowering, laying, aligning, fixing in position in pipe line, manually operated Knife Gate Valves of approved make for sewage applications of PN 10 class with valve Body of Cast Iron IS 210 FG 260 / Ductile Iron, Seal Retainer ring with Stainless Steel ASTM A743 type CF8, Inlet Seal / Rubber Seals of EPDM Rubber, Knife gate of Stainless Steel ASTM A 743 type 304, Bracket / Adaptor plate of Carbon Steel IS : 2062 grade A and packing of PTFE impregnated synthetic yarn of following dia complete in all respect (excluding jointing and jointing material) including all material, labour, testing and commissioning along with pipe line as per Technical Specifications and as per direction of Engineer.		
18.11.1	80 mm dia	each	10,050.00
18.11.2	100 mm dia	each	13,050.00
18.11.3	125 mm dia	each	16,050.00
18.11.4	150 mm dia	each	18,900.00

Code No	Description	Unit	Rate Rs.
18.11.5	200 mm dia	each	31,500.00
18.11.6	250 mm dia	each	41,000.00
18.11.7	300 mm dia	each	49,700.00
18.11.8	350 mm dia	each	74,600.00
18.11.9	400 mm dia	each	1,01,800.00
18.11.10	450 mm dia	each	1,40,500.00
18.11.11	500 mm dia	each	1,77,300.00
18.11.12	600 mm dia	each	2,41,100.00
18.11.13	700 mm dia	each	3,73,200.00
18.11.14	750 mm dia	each	4,13,300.00
18.11.15	800 mm dia	each	4,42,400.00
18.11.16	900 mm dia	each	5,75,600.00
18.11.17	1000 mm dia	each	6,93,500.00
18.11.18	1200 mm dia	each	9,37,600.00
18.12	Supply, installation, testing and commissioning of following capacity Air Blowers coupled with suitable capacity 415V 3 phase 50Hz AC induction motor complete with base frame, suction air filter, silencer, pressure relief valve, delivery non return valve complete with all required accessories with Technical Specifications.		
18.12.1	810 cum per hour	Set	4,00,700.00
18.12.2	1600 cum per hour	Set	6,17,200.00
18.12.3	2200 cum per hour	set	6,72,300.00
18.13	Supply and installation of Bio digester toilet system tank. Tank is made of FRP (Fibre Reinforced Plastic) with 7 mm thick sheet with inocolumn (bacteria). A specific high graded bacteria used to convert the facial matter into methane and water of pH value 6 to 9 only. (Excluding earth work and concrete base)		
18.13.1	325 liter tank capacity, 1000*1000*500 mm, 8 users	each	29,500.00
18.13.2	725 liter tank capacity, 1000*1000*725 mm, 18 users	each	55,600.00
18.13.3	1000 liter tank capacity, 1200*1000*1000 mm,25 users	each	76,000.00
18.13.4	2125 liter tank capacity, 2000*1500*725 mm,50 users	each	1,46,800.00
18.13.5	4350 liter tank capacity, 3000*2000*725mm, 110users	each	1,89,300.00
18.13.6	5000 liter tank capacity, 2600*1500*1300 mm,130 users	each	3,08,600.00
18.13.7	10000 liter tank capacity, 3000*1700*2000 mm, 250 users	each	4,71,200.00
18.14	Providing, installation of prefabricated septic tank made from Plastic with all accessories excluding earth work.		
18.14.1	800 liter	each	28,200.00

Code No	Description	Unit	Rate Rs.
18.14.2	1200 liter	each	34,000.00
18.14.3	1600 liter	each	44,100.00
18.14.4	1800 liter	each	50,800.00
18.14.5	2000 liter	each	57,500.00
18.14.6	3000 liter	each	84,300.00
18.14.7	4000 liter	each	1,09,400.00
18.14.8	5000 liter	each	1,36,200.00
18.14.9	6000 liter	each	1,61,300.00
18.15	Desludging of septage from soak wells/pits/ septic tanks and transporting and emptying at inlet of FSTP including operation and maintenance of the equipment with all accessories complete in all respect over the O&M period as per specification and direction of Engineer.		
18.15.1	O&M for 4000 liter truck	trip	800.00
18.15.2	O&M for 1000 liter truck	trip	500.00
18.16	Designing, providing, constructing, hydraulic testing, commissioning and giving satisfactory trials of STP for inlet Sewage parameters BOD=300, COD=600, TSS=600, TKN 55, pH= 6.5 to 7.5 based on SBR technology consisting of Inlet Chamber, Screen Chamber, Grit-Detritus Tanks and Biological CASP Basins, Chlorine Contact Tank, Chlorinator with Chlorinator shed & tonner Shed, Chemical Storage & Dosing shed with dosing Equipments, Sludge Sump, Gravity Sludge Thickener, Sludge dewatering system equipment and building, sludge storage shed, necessary piping work with required valves, gates, storm water drains and rain water harvesting system, bypass drains, roads & pathways, landscaping, Compound wall with gates, Administration Block cum Laboratory, Laboratory Equipments, staff quarters, Tools and Plants, Spare Parts, ESR and Tanker Filling points, Metering Room, Guard Room etc. complete as turnkey job with all involved civil, electrical, instrumentation and mechanical works inclusive of following items, units as per detailed specification for civil, electrical, instrumentation and mechanical components with all duties and taxes, etc. complete to achieve BOD < 10 ppm, COD < 100 ppm, TSS < 10 ppm, to get reusable quality of water for industrial / agricultural purposes. outlet parameters shall also include TN < 10 ppm, Nh3N < 2 ppm and TP < 1 ppm) with full automation including PLC-SCADA and Instrumentation, reuse arrangement (storage - GLR, OHSR and pumps) and treated effluent disposal line for treated water 1 KM as per specifications. (Rates are in Lacs)		
18.16.1	Capacity 1 MLD, Area 0.16 Hectare, 2 No of basins	LS	400.00
18.16.2	Capacity 2 MLD, Area 0.20 Hectare, 2 No of basins	LS	641.00
18.16.3	Capacity 5 MLD, Area 0.40 Hectare, 2 No of basins	LS	1,440.00

Code No	Description	Unit	Rate Rs.
18.16.4	Capacity 10 MLD, Area 0.70 Hectare, 2 No of basins	LS	2,500.00
18.16.5	Capacity 15 MLD, Area 0.75 Hectare, 2 No of basins	LS	3,375.00
18.16.6	Capacity 20 MLD, Area 0.80 Hectare, 4 No of basins	LS	4,500.00
18.17	Designing, providing, constructing, hydraulic testing, commissioning and giving satisfactory trials of STP for inlet Sewage parameters BOD=300, COD=600, TSS=600, TKN 55, pH= 6.5 to 7.5 based on SBR technology consisting of Inlet Chamber, Screen Chamber, Grit-Detritus Tanks, Distribution Chamber, Primary Clarifier and Biological CASP Basins, Chlorine Contact Tank, Chlorinator with Chlorinator shed & tonner Shed, Chemical Storage & Dosing shed with dosing Equipments, Sludge Sump, Gravity Sludge Thickener, Sludge dewatering system equipment and building and sludge storage shed, necessary piping work with required valves, gates, sludge digesters, power generation unit based on gas generated including gas holder, scrubber, generator, gas flaring system, storm water drains and rain water harvesting system, bypass drains, roads & pathways, landscaping, Compound wall with gates, Administration Block cum Laboratory, Laboratory Equipments, staff quarters, Tools and Plants, Spare Parts, ESR and Tanker Filling points, Metering Room, Guard Room etc. complete as turnkey job with all involved civil, electrical, instrumentation and mechanical works inclusive of following items, units as per detailed specification for civil, electrical, instrumentation and mechanical components with all duties and taxes, etc. complete to achieve BOD < 10 ppm, COD < 100 ppm, TSS < 10 ppm, to get reusable quality of water for industrial / agricultural purposes. (In Case Cyclic activated sludge plant is designed for N, P outlet parameters shall also include TN < 10 ppm, Nh3N < 2 ppm and TP < 1 ppm) with full automation including PLC-SCADA and Instrumentation, reuse arrangement (storage - GLR, OHSR and pumps) and treated effluent disposal line for treated water 1 KM as per specifications. (Rates are in Lacs)		
18.17.1	Capacity 30 MLD, Area 1.2 Hectare, 4 No of basins	LS	6,750.00
18.17.2	Capacity 40 MLD, Area 1.6 Hectare, 4 No of basins	LS	9,000.00
18.17.3	Capacity 50 MLD, Area 1.75 Hectare, 4 No of basins	LS	10,000.00
18.17.4	Capacity 60 MLD, Area 1.9 Hectare, 4 No of basins	LS	12,000.00
18.17.5	Capacity 75 MLD, Area 2.25 Hectare, 4 No of basins	LS	13,125.00
18.17.6	Capacity 100 MLD, Area 2.40 Hectare, 6 No of basins	LS	17,500.00
18.18	Designing, providing, constructing, hydraulic testing, commissioning and giving satisfactory trials of STP based on SBR technology consisting of Inlet Chamber, Screen Chamber, Detritus Tanks, Distribution Chamber and prefabricated with SS 306 lining Biological CASP Basins, Sludge Sump, Chlorine Contact Tank, Chlorinator Room/Shed, Sludge Centrifuge necessary piping work with required valves, gates, drains, pathways Administration Block cum Laboratory, Laboratory Equipments, Tools and Plants, Spare Parts,		

Code No	Description	Unit	Rate Rs.
	etc. complete as turnkey job with all involved civil, electrical, Instrumentation and mechanical works inclusive of following items, units as per detailed specification for civil, electrical, Instrumentation and mechanical components with all duties and taxes, etc. complete to achieve BOD < 10 ppm, COD < 100 ppm, TSS < 10 ppm, to get recyclable quality of water for industrial / agricultural purposes. (In Case Cyclic activated sludge plant is designed for N, P outlet parameters shall also include TN < 10 ppm, Nh3N < 2 ppm and TP < 1 ppm) with full automation, reuse arrangement (storage - GLR, OHSR and pumps) and disposal line for treated water 1 KM as per specifications. (Rates in Lacs)		
18.18.1	Capacity 1 MLD, Area 0.16 Hectare, 2 No of basins	LS	330.00
18.18.2	Capacity 2 MLD, Area 0.20 Hectare, 2 No of basins	LS	440.00
18.18.3	Capacity 5 MLD, Area 0.40 Hectare, 2 No of basins	LS	693.00
18.19	Designing, providing, constructing, hydraulic testing, commissioning and giving satisfactory trials of Sewage Treatment Plant based on Hybrid Sub Surface Constructed Wetland process with raw sewage Inlet Parameters as BOD: 250, COD:550, TSS :500, TKN : 55 & Total P:6 mg/ltr. The scope of work starts from the Primary Settling Tank followed by Constructed Wetland Bed. This excludes primary treatment units and disinfection units as well as disposal facilities. The design norms and hydraulic detention calculation shall be as per the CPHEEO/ Ministry of Urban Development / US EPA technology document. The scope also includes providing & administering all required chemicals, bio consortia & plants to achieve the desired outlet norms as per CPCB/MoEF Guidelines/ NGT order dated 30/04/2019. The water retaining structures shall be constructed in RCC M30 adhering to the IS:3370 (Latest Amended) The steel reinforcement shall be Fe 550D TMT bars only as per the specifications and directions of the Engineer. (Rates in Lacs)		
18.19.1	Upto 0.5 MLD	LS	107.50
18.19.2	For Extra Capacity above 0.5 MLD upto 1.0 MLD	MLD	202.50
18.19.3	For Extra Capacity above 1.0 MLD upto 3.0 MLD	MLD	197.00
18.19.4	For Extra Capacity above 3.0 MLD upto 5.0 MLD	MLD	192.00
18.20	Design & Approval, Civil, Erection, electromechanical works & commissioning of Upgradation of existing Waste Stabilization Sewage Treatment Plant having design outlet parameters as BOD:100, COD:250 & TSS :100 mg/ltr based on Hybrid Sub Surface Constructed Wetland process. The scope of work includes construction of: a. Inlet Chamber b. Distribution Launder cum Weir c. Hybrid Sub Surface Constructed Wetland Bed (complete with filling and placement of bed with filter media and administering root zone enhancing chemicals, bio consortia & plantation) d. Outlet Collection Channel		

Code No	Description	Unit	Rate Rs.
	e. Interconnecting Pipeline in DI K7 The design norms and hydraulic detention calculation shall be as per the CPHEEO/ Ministry of Urban Development / US EPA technology document. The Upgradation STP shall be designed as per the CPCB/MoEF Guidelines/ NGT order dated 30/04/2019. (Rates in Lacs)		
18.20.1	Upto 5.0 MLD	LS	400.00
18.20.2	For Extra capacity 5.0-10 MLD	MLD	65.00
18.20.3	For Extra capacity 10-15 MLD	MLD	52.50
18.20.4	For Extra capacity above 15 MLD	MLD	48.00
18.21	Design & Approval, Civil, Erection, electromechanical works & commissioning of Upgradation of existing Conventional Activated Sludge / UASB Sewage Treatment Plant having design outlet parameters as BOD:30, COD:150 & TSS :50 mg/ltr based on Hybrid Sub Surface Constructed Wetland process. The scope of work includes construction of: a. Inlet Chamber b. Distribution Launder cum Weir c. Hybrid Sub Surface Constructed Wetland Bed (complete with filling and placement of bed with filter media and administering root zone enhancing chemicals, bio consortia & plantation) d. Outlet Collection Channel e. Interconnecting Pipeline in DI K7 The design norms and hydraulic detention calculation shall be as per the CPHEEO/ Ministry of Urban Development / US EPA technology document. The Upgradation STP shall be designed as per the CPCB/MoEF Guidelines/ NGT order dated 30/04/2019. (Rates in Lacs)		
18.21.1	Upto 5.0 MLD	LS	350.00
18.21.2	For Extra capacity 5.0-10 MLD	MLD	58.00
18.21.3	For Extra capacity 10-15 MLD	MLD	51.00
18.21.4	For Extra capacity above 15 MLD	MLD	42.00
18.22	IFAS - Design & Approval, Civil, Erection, electromechanical works & commissioning of Upgradation of existing Conventional Activated Sludge Sewage Treatment Plant having design outlet parameters as BOD:30, COD:150 & TSS :50 mg/ltr based on introduction of fixed film bio carriers, combination of pre anoxic / post anoxic nitrification – denitrification with Internal Liquor recirculation aiming at nutrient removal followed by excess biomass solids removal-disposal & disinfection units. The scope of work includes construction of a. Pre-Anoxic Denitrification Unit b. Nitrifying Biological Unit c. DE Aeration Tank d. Post Anoxic Denitrification Unit e. Filter feed Tank		

Code No	Description	Unit	Rate Rs.
	f. Multigrade Filter Unit (Surface Flow rate of <12 m³/m³/hr, fully automated backwashing provisions with atleast 50% buffer hydraulic capacity to ensure uninterrupted forward operations during backwash cycle. The forward and backwash operations shall be fully automated using electrically actuated butterfly valves interlocked with the PLC of the Upgradation STP. The backwash effluent shall be recycled to the inlet chamber of the existing STP. The Biocarriers to be filled inside the Biological and denitrification units shall be required to be of only Virgin Polypropylene or HDPE or Thermosetting resin and not shall be of recycled material. The design norms and hydraulic detention calculation shall be as per the CPHEEO/ Ministry of Urban Development / US EPA technology document. The Upgradation STP shall be designed as per the CPCB/MoEF Guidelines/ NGT order dated 30/04/2019. (Rates in Lacs)		
18.22.1	Upto 5.0 MLD	LS	390.00
18.22.2	For Extra capacity 5.0-10 MLD	MLD	73.00
18.22.3	For Extra capacity 10-15 MLD	MLD	69.50
18.22.4	For Extra capacity above 15 MLD	MLD	67.00
18.23	IFAS - Design & Approval, Civil, Erection, electromechanical works & commissioning of Upgradation of existing Conventional Activated Sludge Sewage Treatment Plant having existing design outlet parameters as BOD:30, COD:150 & TSS :50 mg/ltr. The upgradation of the effluent from the existing CAS STP shall involve retrofitting of the existing STP based on introduction of fixed film bio carriers, creating or augmenting existing civil structures with combination of pre anoxic / post anoxic nitrification – denitrification reactors with Internal Liquor recirculation aiming at nutrient removal followed by excess biomass solids removal-disposal & disinfection units. The scope of work includes construction of: a. Pre-Anoxic Denitrification Unit b. Nitrifying Biological Unit c. De-Aeration Tank d. Post Anoxic Denitrification Unit e. Filter feed Tank f. Multigrade Filter Unit (Surface Flow rate of <12 m³/m³/hr, fully automated backwashing provisions with atleast 50% buffer hydraulic capacity to ensure uninterrupted forward operations during backwash cycle. The forward and backwash operations shall be fully automated using electrically actuated butterfly valves interlocked with the PLC of the Upgradation STP. The backwash effluent shall be recycled to the inlet chamber of the existing STP. The above units shall be utilized in adjacent to the existing secondary clarifier which is having ideal surface overflow rate, solids loading rate and weir overflow rate as per CPHEEO guidelines and peak flow. The Biocarriers to be filled inside the Biological and denitrification units shall be required to be of only Virgin Polypropylene or HDPE or		

Code No	Description	Unit	Rate Rs.
	Thermosetting resin and not shall be of recycled material. The design norms and hydraulic detention calculation shall be as per the CPHEEO/ Ministry of Urban Development / US EPA technology document. The Upgradation STP shall be designed as per the CPCB/MoEF Guidelines/ NGT order dated 30/04/2019. (Rates in Lacs)		
18.23.1	Upto 5.0 MLD	LS	325.00
18.23.2	For Extra capacity 5.0-10 MLD	MLD	59.50
18.23.3	For Extra capacity 10-15 MLD	MLD	57.00
18.23.4	For Extra capacity above 15 MLD	MLD	55.00
18.24	Complete online monitoring of Sewage Treatment Plant through Artificial Intelligence including complete online monitoring system (analyser at Inlet and outlet), DO analysers and Hydrostatic level sensor, DLT, Other necessary instrumentation like flow meter, pressure gauge and accessories to run the complete system in automation, AI System, 10 days services as per specifications and direction of Engineer. (Rates in Lacs)		
18.24.1	Above 1 upto 5 MLD	LS	68.44
18.24.2	Above 5 upto 20 MLD	LS	74.93
18.24.3	Above 20 upto 50 MLD	LS	89.68
18.24.4	Above 50 to 100 MLD	LS	98.94
18.25	Odor Control - Designing, providing, constructing, hydraulic testing, commissioning and giving satisfactory trials of Odour Control Unit. The free air volume above the Top Water Level and between Plinth Level shall determine the filtration rate to be considered for design of Odour Control Unit. The system flow rate shall be designed for 6 times the Free Air Volume above the water level and between the plinth level of the sewage retaining structure. The Scope of the unit involves constructing an air tight canopy above the sewage retaining unit and creating a suction manifold which will then pass through Suspended particular filter, then through demister and then via the centrifugal fan is passed through the Multi Media filter filled with Sodium or Potassium impregnated Activated Carbon and finally escaping into the atmosphere. The Multi-media filter to be used shall be non-combustible & fireproof type to avoid any fire hazards during peak summers adhering to IS 2752(1995). The Empty Bed Residence Time of the Multi- media Filter shall not be less than 3 secs. For large flow rates, more than one Multi-media filters shall be provided to ensure structural strength and safety of the Odour controlling tower . The Odour Control Unit shall be designed to bring down the VOCs, Mercaptans & Hydrogen Sulphide gases to below 0.1 ppm at the outlet of the Vent stack of the Filter. The material to be used for forming air tight canopy shall be of Fibre Reinforced Plastic as per ISO 18319:2015. Multimedia filter tower shall have arrangement for charging of fresh media from the top using fized platform made in Mil Steel and coated with corrosion resistance		

Code No	Description	Unit	Rate Rs.
	paint. Multimedia filter flushing arrangements using fresh feed water and discharge back to raw sewage sump shall be made appropriately. The interconnecting pipeline of the Odour control unit shall be in uPVC of PE1.6 pressure rating and appropriate nominal dia. The Odour Control Unit shall be made provision to be interlocked with the centralized PLC SCADA of the STP. The air-line shall be equipped with pressure indicator transmitter and temperature sensors as well Differential pressure transmitters at the upstream & downstream of the Multimedia filter, all of them interlocked with the central PLC of the STP. All the electromechanical components shall be provided with stand by option as well. The above scope includes all the civil foundation works necessary as per the dimensions of the Odour Control Unit to operate smoothly. (Rates in Lacs)		
18.25.1	Upto 3000 cum/hr	LS	33.60
18.25.2	Above 3000 upto 6000 cum/hr	LS	45.65
18.25.3	Above 6000 upto 9000 cum/ hr	LS	56.75
18.25.4	Above 9000 upto 12000 cum/hr	LS	64.25
18.25.5	Above 12000 upto 15000 cum/hr	LS	75.15
18.26	Design & Approval, Civil, Erection, electromechanical works & commissioning of Pressure Sand Filter and Activated Carbon filters of suitable flow rates with following components: 1. Filter Feed Tank of minimum 40 min Retention time at average flow after equalization. 2. Filter Feed Pumps: 100% standby VFD operated centrifugal pumps with minimum Head of 25 mtrs. 3. Pressure Sand Filter & Activated Carbon Assembly Comprising of Sand Filter Towers & Activated Carbon Vessels distributed based on maximum dia of 3 m and Surface Flow Rate to be less than 12 m³/hr/m². Side Water Depth of each filter shall be around 2-2.5 m with filter media filled up to 50% height to address bed expansion during backwashing. The backwashing cycle shall be PLC controlled and each pressure sand filter & Activated Carbon Vessels shall be operated and backwashed without interrupting the average forward operations. VFD operated pumps shall ensure that 1 filter is undergoing backwash while others are forward operating and electrically actuated butterfly valves carry out the backwashing sequence smoothly. The backwashing shall be automatically initiated sensed by differential pressure transmitter at the upstream and downstream of header of sand & carbon filter units as well as time based sequence, interlocked with the main STP PLC. 4. Backwashing Pumps: Backwash pumps capacity shall be of minimum 2 times the filtration rate of each sand filter & carbon vessel. The head of the backwashing pumps shall be adequate to fluidize the filter bed and achieve critical upward velocity and also accommodate the frictional and other losses in the backwash line.		

Code No	Description	Unit	Rate Rs.
	100% of the backwash pumps shall be provided interlocked with the main PLC. Make of Construction of Vessels as per IS 8419-1(1977):The Vessels shall be constructed in Mild Steel of minimum of 8 mm thinness for shell and 12 mm thinness for dish end for flow rates above 200 m cube /hr. Epoxy coating shall be provided inside and outside to prevent corrosion. Manholes shall be provided for inspection and regular maintenance. The interconnecting pipeline shall be provided in DI K9 with necessary fittings for pumps also in Ductile Iron. (Rates in Lacs)		
18.26.1	0-100 cum/hr	LS	52.50
18.26.2	100-200 cum/hr	LS	67.00
18.26.3	200-300 cum/hr	LS	75.00
18.26.4	300-400 cum/hr	LS	88.00
18.26.5	400-500 cum/hr	LS	99.15
18.26.6	500-600 cum/hr	LS	116.50
18.27	Design, manufacture, Supply, Installation, testing and commissioning including trial run of Faecal sludge receiving chamber mechanical unit for 30 KLD (for Screening and Organic material removal from septic tank sludge) with one spare electric motor of required capacity. This includes all required material ,specials, screw, motor with required RPM, electric panel compatible with PLC and running on solar power complete and as per specification, data sheet and directions of Engineer.	LS	15,75,040.00
18.28	Design, manufacture, Supply, Installation, testing and commissioning including trial run of Faecal sludge dewatering mechanical unit (for separation of sludge) with one spare electric motor of required capacity. This includes all required material ,flocculator, agitator, inbuilt poly dosing system, screw, motor with required RPM, electric panel compatible with PLC and running on solar power, including polyelectrolyte dosing system complete, including dosing pump, if required- complete and as per specification, data sheet and directions of Engineer.		
18.28.1	Upto 10 KLD	LS	10,67,200.00
18.28.2	Above 10 upto 30 KLD	LS	16,23,616.00
18.29	Design, manufacture, Supply, Installation, testing and commissioning including trial run of Faecal dewatered sludge electric dryer (from 20% to 85%) unit with one spare electric motor of required capacity, with one day storage at inlet SS 304 upto 30 KLD. This includes all required material, silo, vibro motor, electric dryer unit ,churning arms motor with gear box for required RPM, electric panel compatible with PLC and running on solar power complete and as per specification and data sheet and direction of Engineer.	No	8,68,480.00
18.30	Supply, installation and commissioning of FRP dual media filter, activated carbon filter and UV disinfection unit with necessary accessories such as multiport valves and piping. To include all	No	6,69,760.00

Code No	Description	Unit	Rate Rs.
	installations, testing and commissioning of the set up as per specifications and directions of Engineer.		
18.31	"RUIDP Technology – WWTP" Design, supply, erection, installation, jointing, testing, trial run, commissioning and operation & Maintenance for 5 years, including Defect Liability period of one year, of prefabricated micro Sewage Treatment Plants based on RUIDP Technology for inlet parameters (pH-6.5-7.5; BOD5@ 20-degreeC - 300 mg/l; COD-650 mg/l; TSS - 600 mg/l; TKN-55 mg/l) and outlet parameters (pH - 6.5 - 9.0; BOD5@20 degree C - < 10 mg/l; COD - <= 50 mg/l; TSS - <=20 mg/l; N-Total - <= 10 mg/l & Fecal Coliform - <100 MPN/100 ml) complete in all respect as per specifications and following components: - (A) Integrated Pretreatment Unit (IPU): Comprising Coarse & Fine Screens and Grit Separator units. The fine screen - 2 Nos. (1W+1S) installed in sequence shall be made in SS-316 using flat bars of 3 mm thick, 50 mm wide and spacing of 5 mm, tear shape and dimensions of the bar screen as per design. The grit separation unit shall also be provided in SS -316 with interconnecting pipeline made of adequate dia. of HDPE PE-100 PN-6 as per IS 14333 (amended up to date), necessary fittings while maintaining the hydraulic levels with capacity of removing grease, oil and grit particles. B) Primary Treatment Unit (PTU): Shallow settling unit consisting of stacked offset trays of Tubes of hexagonal chevron shape, assembled and installed within a Tank made of Mild Steel sheet conforming to IS 1730, 2004(latest version) of required thickness (not less than 5mm) & MS Angle (min. 8mm thick) frame conforming to IS 800, 2007 (latest version) with FRP lining from inside and epoxy corrosion resistance paint on the outer surface having dimensions as per standard design & drawing with necessary support elements for support of the Tube Deck Media. A conical section with adequate slope (1: 10) for sludge to settle and flow down into the sludge storage tank shall be provided. Detention time in PTU shall be minimum 45 min., angle of inclination of Tube Deck – 55 to 60 degree. (C) Secondary cum Biological Treatment Unit: Secondary cum Biological Treatment Unit in Mild Steel sheet / plate of designed thickness (not less than 5mm) conforming to IS 1730, 2004 (latest version) & MS Angle (min 8mm thick) frame conforming to IS 800, 2007 (latest version) with FRP lining from inside and epoxy corrosion resistance paint on the outer surface having designed dimensions with baffled compartment or units in series including safety rails and walking platform etc. complete. The arrangement of bio reactor shall be divided in three zones (Aerobic, Anoxic and Anaerobic). 1. Floating rafts of appropriate size as per the provided drawing made of natural materials like bamboo or buoyant material with hydrophytic plantation on top to be installed in the upper most layer		

Code No	Description	Unit	Rate Rs.
	Bulrush, Water Arun, Pickerelweed, Marsh Hibiscus, Narrow leaved Cattails, Flag Iris etc. of required quantity / numbers.		
	2. Middle Layer comprising of non-organic media support immobilized with aerobic bacteria. The media for support shall be alumina or ceramic based of cylindrical or spherical shapes with minimum 50% porosity to allow favorable bacteria for immobilization and colony formation. Total Depth of the middle layer shall be as per design with percentage fill of the media ranging between 35-50% depending on the hydraulic conductivity of the packed bed media column to cater to the peak flow. The average mean diameter of the media elements shall range between 5- 20 mm. The total depth shall be minimum 900 mm. Also supply and placing of approved non-organic media in three layers of required depth, with supporting arrangement and UPVC / FRP lined MS grating separator for media etc. complete as per direction of Engineer.		
	3. Bottom Most Layer: The media has infinitesimal shapes and a protected surface area of not less than 900 m ² /m ³ . Comprising of thermosetting resin polymer media with infinitesimal shape. Minimum % fill of 35% and the Middle and Bottom layer shall be separated using retractable strainers made in UPVC or FRP lined MS grating for providing support for middle layer media the same support shall be provided for the bottom most layer. Manual Micro Screen 1mm (1W +1S) in SS-316 at the outlet of secondary unit.		
	(D) Tertiary Treatment Unit of Reed Bed (Vegetative Filter – Horizontal Flow Wetland): Design, supply and erection of precast concrete Reed Bed of required size and depth with partitions opening from top and bottom & gravel filter media packing to allow sinusoidal flow and planting / placing of hydrophyte plants of required quantity / number as per design & drawing. The tank shall have partitions opening from top and bottom in alternate arrangement to provide sinusoidal flow. A drain valve arrangement shall be provided to collect the wash out sludge during any maintenance event. Filter Media: - Filter media of required distribution and proportion to be filled in the Tertiary Treatment Unit (as per design requirement to fill to the top water level), required hydrophytic plantation & impregnating inside the Tertiary Treatment Filter Bed. (Umbrella Palm & Canna Indica) Bio consortium media comprising of Bacillus sp, bacteriofaciens sp, Phosphatidis sp, Nitrobacter sp, and other Nutrient removing species in wetland systems.		
	Note:-The design norms and hydraulic detention calculation shall be as per the CPHEEO/ Ministry of Urban Development / US EPA technology document. The STP shall be designed as per the latest CPCB/MoEF Guidelines/ NGT order.		
	(E) Sludge Storage Tank: Design, supply and installation of HDPE Sludge Storage Tank of required capacity as per design & drawing for holding primary and secondary sludge including sludge recirculation arrangement to Secondary Unit and disposal to		

Code No	Description	Unit	Rate Rs.
	Mechanical Volute Press for dewatering etc. complete as per design & drawing.		
	(F) UV Disinfection System: Design, supply and installation of required number of online UV disinfection system of required intensity & saturation rating of at least 60,000 uw sec / cm ² to achieve guaranteed fecal coliform in outlet less than 100MPN/100ml.		
	(G) Treated Waste Water Tank: Design, supply and installation of HDPE tank of required capacity for holding treated waste water for reuse in gardening, pavement / street washing etc. as specified in Rajasthan Sewerage Policy 2016.		
	(H) Sludge Dewatering System: Design, supply and installation of Mechanical Volute Screw Press of SS-316 of required capacity for sludge dewatering system and solid sludge converted to cakes and stored in bags. The unit shall be installed as per Vendor specification.		
	(I) Electro-Mechanical-Instrumentation System: Design, supply, installation, erection trail run etc. of duty conditions with piping arrangements as per design & drawing for continuous pumping all types of sewage from nearby manhole / sump to Integrated Pre Treatment Unit.		
	1. Integrated Pre-Treatment Unit: One no. of integrated PTU of required capacity and as per standard design & drawing for screening & grit separation. The unit shall be installed and erected as per Vendor specification.		
	2. Sludge Re-cycling / Transfer Pump: Two nos. (1W + 1S) Vertical Submersible non-clog, single stage, bottom suction type driven by single speed submersible motor of required duty conditions with piping arrangements as per design & drawing for pumping of sewage sludge from sludge storage tank for recirculation to pre-treatment unit and to mechanical dewatering system through piping network with timer switch operated motorized valve.		
	3. Sludge Dewatering Machine: One unit of required capacity as and as per design & drawing of Volute Type Screw Press of SS-316. The unit shall be installed and erected as per Vendor specification.		
	4. Supernatant Recycling Pump: Two nos. (1W + 1S) Vertical Submersible non-clog, single stage, bottom suction type driven by single speed submersible motor of required duty conditions with piping arrangements as per design & drawing for pumping and transfer of supernatant from Dewatering Unit to Integrated PTU.		
	5. Treated Effluent Pump: Two nos. (1W + 1S) Vertical Submersible non-clog, single stage, bottom suction type driven by single speed submersible motor of required duty conditions with piping arrangements as per design & drawing for pumping of treated effluent / wastewater to Drip Irrigation for gardening / horticulture or to pavement / street washing system etc.		

Code No	Description	Unit	Rate Rs.
	(J) Pipelines & Valves: All pipelines for the WWTP shall be of HDPE PE100 & PN6 grade as per IS 14333:2022 (with latest amendment) of required size and length and all Valves made of CI/DI, either motorized or normal of required size as per design & drawing.		
	(K) Electrical Units: Design, supply and installation complete in all respect - Source of Power preferably from existing nearby power supply point equipped with 415 Volts, 3 Phase, 4 Wire power supply to meet up the WWTP requirement by establishment of electrical system to cater needs of various process units and other requirements. Following electrical & Instrumentation equipment are envisaged ,– LV Switchboards, Starters, Solar Panels, Cables, Cable Trays, Lighting, Earthing, PLC, Effluent Quality Monitoring Instruments (OCEMS) at Outlet as per CPCB / SPCB norms etc. Sludge Valves and Pumps shall be automated with micro PLC and shall have 10 DI, 3 DO and 5 nos. of AI and programmed in manufacture's Workshop.		
	(L) Solar Power System: Design, Supply, Fabrication, Installation, Testing and Commissioning of Solar Power Unit, MNRE approved of required capacity including all electrical, peripheral and mounting accessories etc. complete in all respect as per direction of Engineer.		
	(M) Camouflaging with Fiber Sheets: The camouflaging of the MS (Mild Steel) sheet unit involving the concealment of this unit (pre-fab units) with specialized camouflaging sheets as per the project-specific requirements. The process includes precise installation of the camouflaging sheets, and maintenance to ensure the longevity of the camouflaging with safety and environmental regulations.		
	(N) Pavement across the WWTP Campus for access with M30 interlocking tiles minimum width 1000 mm width.		
	(O) Operation & Maintenance: Wastewater Treatment Plant (WWTP) with specific tasks:		
	Backwashing: Regular backwashing of filtration systems to remove accumulated solids and maintain their efficiency.		
	Media Replacement (Bio Reactor and Reed Bed): Scheduled replacement of media in the bio reactor and reed bed as required, typically every three weeks, to ensure proper wastewater treatment.		
	Media Maintenance: Routine inspection and maintenance of media in bio reactor and reed bed, including cleaning, aeration, and adjustments to maintain performance.		
	Electromechanical Item Maintenance: Comprehensive maintenance of all electromechanical equipment, including pumps, motors, control systems, and instrumentation. This covers preventive maintenance, troubleshooting, and repairs.		
	Disposal of Sludge: Proper handling and disposal of sludge generated during the treatment process, adhering to all environmental regulations.		

Code No	Description	Unit	Rate Rs.
	Operational Hours: Operation and maintenance services shall be provided during regular working hours, with provisions for on-call and emergency response services as needed.		
	Duration: The duration of the operation and maintenance contract will be defined in the project agreement and may include ongoing services.		
	Reporting: The service provider shall submit regular progress reports, maintenance logs, effluent quality reports etc and incident reports to the project stakeholders.		
	Documentation: Maintain comprehensive records of all maintenance activities, effluent quality monitoring reports, including schedules, service reports, equipment manuals, and compliance with regulatory requirements.		
	Training: If necessary, provide training to project personnel on the safe and efficient operation of equipment and systems.		
	Compliance: Ensure strict adherence to all relevant laws, regulations, and standards governing wastewater treatment, maintenance, and environmental compliance.		
	Performance Standards: Performance standards and Key Performance Indicators (KPIs) to be evaluated the quality and effectiveness of the operation and maintenance services.		
	Review: Periodic reviews and assessments of the operation and maintenance services to ensure ongoing efficiency, improvements, and compliance		
	(P) Other Ancillary works: Comprising following units;		
	Note: Boundary wall with gate of premises, Access Road to STP with Drains and Admin-cum-control-cum-laboratory-cum-office with toilet block building construction cost will not be the part of this work. But these shall be considered as per the actual site requirement and shall be the part of project.		
	Capacity of WWTP:		
18.31.1	Upto 25 KLD	LS	68,76,000.00
18.31.2	26-50 KLD	LS	93,96,000.00
18.31.3	51-100 KLD	LS	1,07,16,000.00
18.31.4	101-150 KLD	LS	1,14,36,000.00
18.31.5	151-200 KLD	LS	1,33,56,000.00
18.31.6	201-250 KLD	LS	1,50,36,000.00
18.31.7	251-300 KLD	LS	1,70,76,000.00
18.31.8	301-350 KLD	LS	1,80,36,000.00
18.31.9	351-400 KLD	LS	1,86,36,000.00
18.31.10	401-450 KLD	LS	2,05,56,000.00

Code No	Description	Unit	Rate Rs.
18.31.11	451-500 KLD	LS	2,34,36,000.00
18.32	Design, Supply, installation testing and commissioning of vacuum sewage pumping system with all civil, electrical, mechanical, instrumentation works including but not limited to following components - Horizontal vacuum tank with Vacuum pumps, pneumatically mechanical controlled controller operated Interface valves with collection chambers. isolation and non-return valves, discharge pumps, piping system, float valve, motor control centre, LPBS, cables, trays, conduit etc. including loading, unloading, installation, freight, taxes, tests, third party inspection & certificates if required along with Fittings & Connections for Pressure gauge, Pressure and level transmitter/switch, sight glass, cradels, vacuum main. Also accessories are included. 1. Horizontal Vacuum Tank as per design 2. Vacuum pumps :Required Set as per design 3. Sewage Discharge Pumps :Required Set as per design 4. DI Isolation Valve: as per design 5. DI Non Return Valve (NRV): as per design		
18.32.1	Up to 300 houses	Lot	15,00,000.00
18.32.2	301 to 500 houses	Lot	20,00,000.00
18.32.3	501 to 1000 houses	Lot	35,00,000.00

19.0 WATER SUPPLY

Code No	Description	Unit	Rate Rs.
19.1	Providing, lowering, laying in trenches, aligning, fixing in position and jointing socketed rubber gasket type ISI marked uPVC pipes of Class III (6 Kg/sqcm) suitable for potable water with rubber ring joints (as per IS 4985-2000) of following outer dia with all accessories (excluding specials) complete including all material, labour, hydraulic testing and commissioning as per Technical Specifications and as per direction of Engineer. Note : E/w to be measured and paid separately.		
19.1.1	90 mm dia	metre	204.00
19.1.2	110 mm dia	metre	296.50
19.1.3	125mm dia	metre	383.00
19.1.4	140 mm dia	metre	472.50
19.1.5	160 mm dia	metre	605.00
19.1.6	180mm dia	metre	769.00
19.1.7	200mm dia	metre	949.00
19.1.8	225 mm dia	metre	1,190.00
19.1.9	250 mm dia	metre	1,474.00
19.1.10	280 mm dia	metre	1,856.00
19.1.11	315 mm dia	metre	2,374.00
19.2	Providing, lowering, laying in trenches, aligning, fixing in position and jointing uPVC pipe fittings/ accessories of class III (6 Kg/sqcm) confirming to IS:7834 suitable for potable water with rubber rings joints in uPVC pipe line at all levels/ depth including all material, labour, hydraulic testing and commissioning as per Technical Specifications and as per direction of Engineer.		
19.2.1	Equal Tee (Moulded) welded with socket		
19.2.1.1	90 mm dia	each	487.00
19.2.1.2	110 mm dia	each	767.00
19.2.1.3	125mm dia	each	888.00
19.2.1.4	140 mm dia	each	1,309.00
19.2.1.5	160 mm dia	each	1,917.00
19.2.1.6	180mm dia	each	2,496.00
19.2.1.7	200mm dia	each	3,125.00
19.2.1.8	225 mm dia	each	4,935.00
19.2.1.9	250 mm dia	each	6,240.00

Code No	Description	Unit	Rate Rs.
19.2.2	Equal Tee (Fabricated)		
19.2.2.1	280 mm dia	each	6,840.00
19.2.2.2	315 mm dia	each	7,660.00
19.2.3	Unequal Tee (Moulded) welded with socket		
19.2.3.1	125 X 110 mm dia	each	1,066.00
19.2.3.2	140 X 110 mm dia	each	1,174.00
19.2.3.3	140 X 125 mm dia	each	1,186.00
19.2.3.4	160 X 110 mm dia	each	1,439.00
19.2.3.5	160 X 125 mm dia	each	1,616.00
19.2.3.6	160 X 140 mm dia	each	1,985.00
19.2.3.7	180 X 110 mm dia	each	1,796.00
19.2.3.8	180 X 125 mm dia	each	2,695.00
19.2.3.9	180 X 140 mm dia	each	2,770.00
19.2.3.10	180 X 160 mm dia	each	2,955.00
19.2.3.11	200 X 110 mm dia	each	2,810.00
19.2.3.12	200 X 125 mm dia	each	2,910.00
19.2.3.13	200 X 140 mm dia	each	2,935.00
19.2.3.14	200 X 160 mm dia	each	2,955.00
19.2.3.15	200 X 180 mm dia	each	3,015.00
19.2.3.16	225 X 110 mm dia	each	2,980.00
19.2.3.17	225 X 125 mm dia	each	3,155.00
19.2.3.18	225 X 140 mm dia	each	3,300.00
19.2.3.19	225 X 160 mm dia	each	3,665.00
19.2.3.20	225 X 180 mm dia	each	3,765.00
19.2.3.21	225 X 200 mm dia	each	3,820.00
19.2.3.22	250 X 110 mm dia	each	3,020.00
19.2.3.23	250 X 125 mm dia	each	3,125.00
19.2.3.24	250 X 140 mm dia	each	3,710.00
19.2.3.25	250 X 160 mm dia	each	3,870.00
19.2.3.26	250 X 180 mm dia	each	4,010.00
19.2.3.27	250 X 200 mm dia	each	4,235.00
19.2.3.28	250 X 225 mm dia	each	4,435.00
19.2.4	Unequal Tee (Fabricated)		
19.2.4.1	280 X 110 mm dia	each	3,020.00

Code No	Description	Unit	Rate Rs.
19.2.4.2	280 X 125 mm dia	each	3,745.00
19.2.4.3	280 X 140 mm dia	each	4,080.00
19.2.4.4	280 X 160 mm dia	each	4,105.00
19.2.4.5	280 X 180 mm dia	each	4,115.00
19.2.4.6	280 X 200 mm dia	each	4,250.00
19.2.4.7	280 X 225 mm dia	each	4,475.00
19.2.4.8	280 X 250 mm dia	each	4,760.00
19.2.4.9	315 X 110 mm dia	each	5,260.00
19.2.4.10	315 X 125 mm dia	each	5,270.00
19.2.4.11	315 X 140 mm dia	each	5,380.00
19.2.4.12	315 X 160 mm dia	each	5,470.00
19.2.4.13	315 X 180 mm dia	each	6,080.00
19.2.4.14	315 X 200 mm dia	each	6,130.00
19.2.4.15	315 X 225 mm dia	each	6,360.00
19.2.4.16	315 X 250 mm dia	each	6,460.00
19.2.4.17	315 X 280 mm dia	each	6,790.00
19.2.5	Reducer (Fabricated)		
19.2.5.1	125 X 110 mm dia	each	439.50
19.2.5.2	140 X 110 mm dia	each	551.00
19.2.5.3	140 X 125 mm dia	each	551.00
19.2.5.4	160 X 110 mm dia	each	784.00
19.2.5.5	160 X 125 mm dia	each	825.00
19.2.5.6	160 X 140 mm dia	each	867.00
19.2.5.7	180 X 110 mm dia	each	815.00
19.2.5.8	180 X 125 mm dia	each	835.00
19.2.5.9	180 X 140 mm dia	each	925.00
19.2.5.10	180 X 160 mm dia	each	938.00
19.2.5.11	200 X 110 mm dia	each	1,206.00
19.2.5.12	200 X 125 mm dia	each	1,301.00
19.2.5.13	200 X 140 mm dia	each	1,435.00
19.2.5.14	200 X 160 mm dia	each	1,446.00
19.2.5.15	200 X 180 mm dia	each	1,572.00
19.2.5.16	225 X 110 mm dia	each	1,361.00
19.2.5.17	225 X 125 mm dia	each	1,481.00

Code No	Description	Unit	Rate Rs.
19.2.5.18	225 X 140 mm dia	each	1,495.00
19.2.5.19	225 X 160 mm dia	each	1,504.00
19.2.5.20	225 X 180 mm dia	each	1,567.00
19.2.5.21	225 X 200 mm dia	each	1,602.00
19.2.5.22	250 X 110 mm dia	each	1,451.00
19.2.5.23	250 X 125 mm dia	each	1,574.00
19.2.5.24	250 X 140 mm dia	each	1,698.00
19.2.5.25	250 X 160 mm dia	each	1,739.00
19.2.5.26	250 X 180 mm dia	each	1,852.00
19.2.5.27	250 X 200 mm dia	each	1,982.00
19.2.5.28	250 X 225 mm dia	each	2,058.00
19.2.5.29	280 X 110 mm dia	each	1,714.00
19.2.5.30	280 X 125 mm dia	each	1,841.00
19.2.5.31	280 X 140 mm dia	each	1,980.00
19.2.5.32	280 X 160 mm dia	each	2,043.00
19.2.5.33	280 X 180 mm dia	each	2,072.00
19.2.5.34	280 X 200 mm dia	each	2,215.00
19.2.5.35	280 X 225 mm dia	each	2,284.00
19.2.5.36	280 X 250 mm dia	each	2,289.00
19.2.5.37	315 X 110 mm dia	each	2,477.00
19.2.5.38	315 X 125 mm dia	each	2,605.00
19.2.5.39	315 X 140 mm dia	each	2,715.00
19.2.5.40	315 X 160 mm dia	each	2,780.00
19.2.5.41	315 X 180 mm dia	each	2,820.00
19.2.5.42	315 X 200 mm dia	each	2,945.00
19.2.5.43	315 X 225 mm dia	each	2,955.00
19.2.5.44	315 X 250 mm dia	each	3,075.00
19.2.5.45	315 X 280 mm dia	each	3,210.00
19.2.6	Double/Single socketed 90 degree long bend (single piece welded with socket)		
19.2.6.1	90 mm dia	each	334.00
19.2.6.2	110 mm dia	each	537.00
19.2.6.3	125mm dia	each	728.00
19.2.6.4	140 mm dia	each	977.00
19.2.6.5	160 mm dia	each	1,379.00

Code No	Description	Unit	Rate Rs.
19.2.6.6	180mm dia	each	1,878.00
19.2.6.7	200mm dia	each	2,695.00
19.2.6.8	225 mm dia	each	3,805.00
19.2.6.9	250 mm dia	each	5,030.00
19.2.6.10	280 mm dia	each	7,560.00
19.2.6.11	315 mm dia	each	11,050.00
19.2.7	Double/Single socketed 45/22.5/11.25 degree long bend (single piece welded with socket)		
19.2.7.1	90 mm dia	each	275.50
19.2.7.2	110 mm dia	each	422.50
19.2.7.3	125mm dia	each	560.00
19.2.7.4	140 mm dia	each	738.00
19.2.7.5	160 mm dia	each	1,024.00
19.2.7.6	180mm dia	each	1,414.00
19.2.7.7	200mm dia	each	1,949.00
19.2.7.8	225 mm dia	each	2,675.00
19.2.7.9	250 mm dia	each	3,630.00
19.2.7.10	280 mm dia	each	5,060.00
19.2.7.11	315 mm dia	each	7,660.00
19.2.8	uPVC End Cap		
19.2.8.1	90 mm dia	each	91.30
19.2.8.2	110 mm dia	each	107.00
19.2.8.3	125mm dia	each	195.50
19.2.8.4	140 mm dia	each	234.00
19.2.8.5	160 mm dia	each	255.50
19.2.8.6	180mm dia	each	293.00
19.2.8.7	200mm dia	each	316.00
19.2.8.8	225 mm dia	each	711.00
19.2.8.9	250 mm dia	each	742.00
19.2.8.10	280 mm dia	each	1,445.00
19.2.8.11	315 mm dia	each	1,536.00
19.3	Providing, lowering, laying in trenches, aligning, fixing in position and jointing ISI marked uPVC pipe fittings/ accessories of class IV (8 Kg/sqcm) suitable for potable water with rubber rings joints in uPVC pipe line at all levels/ depth including all material, labour, hydraulic testing and commissioning as per Technical Specifications and as per direction of Engineer.		

Code No	Description	Unit	Rate Rs.
19.3.1	Equal Tee (Moulded) welded with socket		
19.3.1.1	90 mm dia	each	652.00
19.3.1.2	110 mm dia	each	801.00
19.3.1.3	125mm dia	each	1,242.00
19.3.1.4	140 mm dia	each	1,515.00
19.3.1.5	160 mm dia	each	2,227.00
19.3.1.6	180mm dia	each	2,770.00
19.3.1.7	200mm dia	each	3,820.00
19.3.1.8	225 mm dia	each	4,960.00
19.3.1.9	250 mm dia	each	6,950.00
19.3.2	Equal Tee (Fabricated)		
19.3.2.1	280 mm dia	each	8,740.00
19.3.2.2	315 mm dia	each	13,400.00
19.3.3	Unequal Tee (Moulded) welded with socket		
19.3.3.1	125 X 110 mm dia	each	1,535.00
19.3.3.2	140 X 110 mm dia	each	1,922.00
19.3.3.3	140 X 125 mm dia	each	2,114.00
19.3.3.4	160 X 110 mm dia	each	2,605.00
19.3.3.5	160 X 125 mm dia	each	2,635.00
19.3.3.6	160 X 140 mm dia	each	2,660.00
19.3.3.7	180 X 110 mm dia	each	3,080.00
19.3.3.8	180 X 125 mm dia	each	3,380.00
19.3.3.9	180 X 140 mm dia	each	3,470.00
19.3.3.10	180 X 160 mm dia	each	3,775.00
19.3.3.11	200 X 110 mm dia	each	3,550.00
19.3.3.12	200 X 125 mm dia	each	3,770.00
19.3.3.13	200 X 140 mm dia	each	3,800.00
19.3.3.14	200 X 160 mm dia	each	3,820.00
19.3.3.15	200 X 180 mm dia	each	5,180.00
19.3.3.16	225 X 110 mm dia	each	5,620.00
19.3.3.17	225 X 125 mm dia	each	5,900.00
19.3.3.18	225 X 140 mm dia	each	5,970.00
19.3.3.19	225 X 160 mm dia	each	6,710.00
19.3.3.20	225 X 180 mm dia	each	7,460.00

Code No	Description	Unit	Rate Rs.
19.3.3.21	225 X 200 mm dia	each	9,100.00
19.3.3.22	250 X 110 mm dia	each	6,580.00
19.3.3.23	250 X 125 mm dia	each	6,720.00
19.3.3.24	250 X 140 mm dia	each	6,970.00
19.3.3.25	250 X 160 mm dia	each	6,720.00
19.3.3.26	250 X 180 mm dia	each	7,100.00
19.3.3.27	250 X 200 mm dia	each	7,450.00
19.3.3.28	250 X 225 mm dia	each	7,730.00
19.3.4	Unequal Tee (Fabricated)		
19.3.4.1	280 X 110 mm dia	each	7,810.00
19.3.4.2	280 X 125 mm dia	each	7,890.00
19.3.4.3	280 X 140 mm dia	each	7,980.00
19.3.4.4	280 X 160 mm dia	each	8,060.00
19.3.4.5	280 X 180 mm dia	each	8,140.00
19.3.4.6	280 X 200 mm dia	each	8,220.00
19.3.4.7	280 X 225 mm dia	each	8,510.00
19.3.4.8	280 X 250 mm dia	each	9,230.00
19.3.4.9	315 X 110 mm dia	each	7,790.00
19.3.4.10	315 X 125 mm dia	each	7,830.00
19.3.4.11	315 X 140 mm dia	each	7,880.00
19.3.4.12	315 X 160 mm dia	each	8,500.00
19.3.4.13	315 X 180 mm dia	each	8,580.00
19.3.4.14	315 X 200 mm dia	each	8,990.00
19.3.4.15	315 X 225 mm dia	each	9,250.00
19.3.4.16	315 X 250 mm dia	each	9,520.00
19.3.4.17	315 X 280 mm dia	each	10,650.00
19.3.5	Reducer (Fabricated)		
19.3.5.1	125 X 110 mm dia	each	449.50
19.3.5.2	140 X 110 mm dia	each	705.00
19.3.5.3	140 X 125 mm dia	each	728.00
19.3.5.4	160 X 110 mm dia	each	948.00
19.3.5.5	160 X 125 mm dia	each	1,002.00
19.3.5.6	160 X 140 mm dia	each	1,027.00
19.3.5.7	180 X 110 mm dia	each	1,175.00

Code No	Description	Unit	Rate Rs.
19.3.5.8	180 X 125 mm dia	each	1,196.00
19.3.5.9	180 X 140 mm dia	each	1,286.00
19.3.5.10	180 X 160 mm dia	each	1,301.00
19.3.5.11	200 X 110 mm dia	each	1,358.00
19.3.5.12	200 X 125 mm dia	each	1,386.00
19.3.5.13	200 X 140 mm dia	each	1,552.00
19.3.5.14	200 X 160 mm dia	each	1,629.00
19.3.5.15	200 X 180 mm dia	each	1,745.00
19.3.5.16	225 X 110 mm dia	each	1,898.00
19.3.5.17	225 X 125 mm dia	each	2,092.00
19.3.5.18	225 X 140 mm dia	each	2,116.00
19.3.5.19	225 X 160 mm dia	each	2,233.00
19.3.5.20	225 X 180 mm dia	each	2,369.00
19.3.5.21	225 X 200 mm dia	each	2,496.00
19.3.5.22	250 X 110 mm dia	each	2,710.00
19.3.5.23	250 X 125 mm dia	each	2,795.00
19.3.5.24	250 X 140 mm dia	each	2,915.00
19.3.5.25	250 X 160 mm dia	each	3,055.00
19.3.5.26	250 X 180 mm dia	each	3,080.00
19.3.5.27	250 X 200 mm dia	each	3,205.00
19.3.5.28	250 X 225 mm dia	each	3,255.00
19.3.5.29	280 X 110 mm dia	each	2,725.00
19.3.5.30	280 X 125 mm dia	each	2,755.00
19.3.5.31	280 X 140 mm dia	each	2,925.00
19.3.5.32	280 X 160 mm dia	each	3,110.00
19.3.5.33	280 X 180 mm dia	each	3,275.00
19.3.5.34	280 X 200 mm dia	each	3,375.00
19.3.5.35	280 X 225 mm dia	each	3,405.00
19.3.5.36	280 X 250 mm dia	each	3,600.00
19.3.5.37	315 X 110 mm dia	each	4,100.00
19.3.5.38	315 X 125 mm dia	each	4,215.00
19.3.5.39	315 X 140 mm dia	each	4,340.00
19.3.5.40	315 X 160 mm dia	each	4,385.00
19.3.5.41	315 X 180 mm dia	each	4,480.00

Code No	Description	Unit	Rate Rs.
19.3.5.42	315 X 200 mm dia	each	4,575.00
19.3.5.43	315 X 225 mm dia	each	4,715.00
19.3.5.44	315 X 250 mm dia	each	4,855.00
19.3.5.45	315 X 280 mm dia	each	4,875.00
19.3.6	Double/Single socketed 90 degree long bend (single piece welded with socket)		
19.3.6.1	90 mm dia	each	498.00
19.3.6.2	110 mm dia	each	809.00
19.3.6.3	125mm dia	each	1,165.00
19.3.6.4	140 mm dia	each	1,576.00
19.3.6.5	160 mm dia	each	2,286.00
19.3.6.6	180mm dia	each	3,660.00
19.3.6.7	200mm dia	each	4,505.00
19.3.6.8	225 mm dia	each	6,450.00
19.3.6.9	250 mm dia	each	8,700.00
19.3.6.10	280 mm dia	each	11,900.00
19.3.6.11	315 mm dia	each	18,650.00
19.3.7	Double/Single socketed 45/22.5/11.25 degree long bend (single piece welded with socket)		
19.3.7.1	90 mm dia	each	394.00
19.3.7.2	110 mm dia	each	645.00
19.3.7.3	125mm dia	each	867.00
19.3.7.4	140 mm dia	each	1,162.00
19.3.7.5	160 mm dia	each	1,658.00
19.3.7.6	180mm dia	each	2,295.00
19.3.7.7	200mm dia	each	3,200.00
19.3.7.8	225 mm dia	each	4,460.00
19.3.7.9	250 mm dia	each	6,060.00
19.3.7.10	280 mm dia	each	9,100.00
19.3.7.11	315 mm dia	each	12,800.00
19.3.8	uPVC End Cap		
19.3.8.1	90 mm dia	each	144.00
19.3.8.2	110 mm dia	each	230.00
19.3.8.3	125mm dia	each	280.00
19.3.8.4	140 mm dia	each	352.50

Code No	Description	Unit	Rate Rs.
19.3.8.5	160 mm dia	each	572.00
19.3.8.6	180mm dia	each	651.00
19.3.8.7	200mm dia	each	1,198.00
19.3.8.8	225 mm dia	each	1,282.00
19.3.8.9	250 mm dia	each	1,379.00
19.3.8.10	280 mm dia	each	1,691.00
19.3.8.11	315 mm dia	each	2,610.00
19.4	Providing, lowering, laying, aligning, fixing in position at and jointing at all level/ depths ISI marked HDPE pipes of PE-100 grade & PN-6 for potable water as per IS 4984 (amended upto date) in trenches complete with all accessories like Bend, Tee, Reducer, Stub end, End cap etc including all material, labour, testing and commissioning as per Technical Specifications and as per direction of Engineer. Note : E/w to be measured and paid separately.		
19.4.1	75 mm dia	metre	209.00
19.4.2	90 mm dia	metre	294.00
19.4.3	110 mm dia	metre	438.50
19.4.4	125mm dia	metre	537.00
19.4.5	140 mm dia	metre	669.00
19.4.6	160 mm dia	metre	874.00
19.4.7	180mm dia	metre	1,097.00
19.4.8	200mm dia	metre	1,357.00
19.4.9	225 mm dia	metre	1,719.00
19.4.10	250 mm dia	metre	2,119.00
19.4.11	280 mm dia	metre	2,635.00
19.4.12	315 mm dia	metre	3,505.00
19.5	Providing, lowering, laying and jointing in trenches, standard lengths HDPE ISI marked Pipes as per IS-4984: 1995 (amended upto date) with anti rodent food graded Material with necessary jointing material like mechanical connectors, i.e. thread/ insert joint/ quick release coupler joint/ compression fitting joint or flanged joint and specials jointing pipe by electro fusion welding method, including all taxes , transportation and freight charges, inspection charges, loading/ unloading charges, stacking of pipes, including cost of labour and material, specials (Tee, bend etc.), satisfactory hydraulic testing, disinfection, commissioning etc. complete as per technical specifications and direction of Engineer-in-charge of following class and diameter. (excluding earth work) . Note : Providing and fixing of all requisite specials as per drawing, design and layout are inclusive in RM measurement of the item and shall not be paid separately. Supply may be in coil or straight length in 6		

Code No	Description	Unit	Rate Rs.
	M/12 M.		
19.5.1	HDPE PE-100 PN-10 (In coils or piece)		
19.5.1.1	90 mm dia	metre	409.50
19.5.1.2	110 mm dia	metre	540.00
19.5.2	HDPE PE-100 PN-10		
19.5.2.1	125 mm dia	metre	715.00
19.5.2.2	140 mm dia	metre	879.00
19.5.2.3	160 mm dia	metre	1,199.00
19.5.2.4	180 mm dia	metre	1,494.00
19.5.2.5	200 mm dia	metre	1,867.00
19.5.2.6	225 mm dia	metre	2,360.00
19.6	Providing, lowering, laying, aligning, fixing in position at and jointing at all level/ depths ISI marked HDPE pipes of PE-100 grade & PN-6 for potable water as per IS 4984 (amended upto date) in trenches in complete including all material, labour, testing and commissioning as per Technical Specifications and as per direction of Engineer. Note : E/w to be measured and paid separately.		
19.6.1	75 mm dia	metre	196.50
19.6.2	90 mm dia	metre	276.50
19.6.3	110 mm dia	metre	412.00
19.6.4	125mm dia	metre	505.00
19.6.5	140 mm dia	metre	630.00
19.6.6	160 mm dia	metre	822.00
19.6.7	180mm dia	metre	1,032.00
19.6.8	200mm dia	metre	1,276.00
19.6.9	225 mm dia	metre	1,616.00
19.6.10	250 mm dia	metre	1,992.00
19.6.11	280 mm dia	metre	2,481.00
19.6.12	315 mm dia	metre	3,290.00
19.6.13	355 mm dia	metre	4,180.00
19.6.14	400 mm dia	metre	5,320.00
19.6.15	450 mm dia	metre	6,790.00
19.7	Providing, lowering, laying, aligning, fixing in position at and jointing at all level/ depths HDPE pipe accessories/ fittings of PE-100 grade & PN-6 for potable water as per IS 8360/ IS 8008 for fabricated/ moulded (amended upto date) within pipe line in trenches complete including all material, labour, testing and commissioning as per Technical Specifications and as per direction of Engineer.		

Code No	Description	Unit	Rate Rs.
19.7.1	Equal Tee		
19.7.1.1	75 mm dia	each	291.00
19.7.1.2	90 mm dia	each	378.00
19.7.1.3	110 mm dia	each	658.00
19.7.1.4	125mm dia	each	876.00
19.7.1.5	140 mm dia	each	1,043.00
19.7.1.6	160 mm dia	each	1,402.00
19.7.1.7	180mm dia	each	1,956.00
19.7.1.8	200mm dia	each	2,515.00
19.7.1.9	225 mm dia	each	3,520.00
19.7.1.10	250 mm dia	each	4,860.00
19.7.1.11	280 mm dia	each	6,700.00
19.7.1.12	315 mm dia	each	7,910.00
19.7.1.13	355 mm dia	each	11,100.00
19.7.1.14	400 mm dia	each	15,900.00
19.7.1.15	450 mm dia	each	22,500.00
19.7.2	90 degree bend		
19.7.2.1	75 mm dia	each	304.00
19.7.2.2	90 mm dia	each	385.00
19.7.2.3	110 mm dia	each	466.50
19.7.2.4	125mm dia	each	611.00
19.7.2.5	140 mm dia	each	779.00
19.7.2.6	160 mm dia	each	1,073.00
19.7.2.7	180mm dia	each	1,484.00
19.7.2.8	200mm dia	each	1,953.00
19.7.2.9	225 mm dia	each	2,710.00
19.7.2.10	250 mm dia	each	3,710.00
19.7.2.11	280 mm dia	each	5,030.00
19.7.2.12	315 mm dia	each	7,170.00
19.7.2.13	355 mm dia	each	9,950.00
19.7.2.14	400 mm dia	each	14,450.00
19.7.2.15	450 mm dia	each	20,500.00
19.7.3	End Cap		
19.7.3.1	75 mm dia	each	209.50

Code No	Description	Unit	Rate Rs.
19.7.3.2	90 mm dia	each	229.50
19.7.3.3	110 mm dia	each	284.00
19.7.3.4	125mm dia	each	309.50
19.7.3.5	140 mm dia	each	348.00
19.7.3.6	160 mm dia	each	459.50
19.7.3.7	180mm dia	each	503.00
19.7.3.8	200mm dia	each	668.00
19.7.3.9	225 mm dia	each	810.00
19.7.3.10	250 mm dia	each	999.00
19.7.3.11	280 mm dia	each	1,195.00
19.7.3.12	315 mm dia	each	1,329.00
19.7.3.13	355 mm dia	each	1,773.00
19.7.3.14	400 mm dia	each	2,595.00
19.7.3.15	450 mm dia	each	3,205.00
19.8	Providing, lowering, laying, aligning, fixing in position at and jointing at all level/ depths HDPE Stub End (Long neck pipe end) of PE-100 grade & PN-6 (moulded/ machined) for potable water with MS galvanised flange as per to BS-10 table D/IS:1538 within pipeline in trenches complete including all material, labour, testing and commissioning as per Technical Specifications and as per direction of Engineer.		
19.8.1	110mm HDPE Stub End (LNPE) with MS Galvanised Slip on flange Suitable for connecting Valve of 100mm dia	each	1,014.00
19.8.2	140/160 mm HDPE Stub End (LNPE) with MS Galvanised Slip on flange Suitable for connecting Valve of 125mm dia	each	1,092.00
19.8.3	200mm HDPE Stub End (LNPE) with MS Galvanised Slip on flange Suitable for connecting Valve of 200mm dia	each	1,302.00
19.8.4	250mm HDPE Stub End (LNPE) with MS Galvanised Slip on flange Suitable for connecting Valve of 250mm dia	each	1,473.00
19.8.5	315 mm HDPE Stub End (LNPE) with MS Galvanised Slip on flange Suitable for connecting Valve of 300mm dia	each	1,607.00
19.9	Providing, lowering, laying in trenches, aligning, fixing in position and jointing Ductile Iron (DI) ISI marked K-7 grade S&S pipes as per IS:8329-2000 (amended upto date), with internal cement mortar lining for potable water with rubber ring (EPDM/SBR) joints as per IS: 5382-1985 (excluding special accessories) complete including all material, labour, hydraulic testing and commissioning as per Technical Specifications and as per direction of Engineer. Note : E/w to be measured and paid separately.		
19.9.1	80mm	metre	1,657.00

Code No	Description	Unit	Rate Rs.
19.9.2	100 mm	metre	1,749.00
19.9.3	150mm	metre	2,375.00
19.9.4	200mm	metre	3,410.00
19.9.5	250mm	metre	3,790.00
19.9.6	300mm	metre	4,825.00
19.9.7	350 mm	metre	5,840.00
19.9.8	400 mm	metre	7,070.00
19.9.9	450 mm	metre	8,260.00
19.9.10	500 mm	metre	10,050.00
19.9.11	600mm	metre	13,100.00
19.9.12	700mm	metre	17,400.00
19.9.13	800mm	metre	22,100.00
19.9.14	900mm	metre	27,100.00
19.9.15	1000mm	metre	32,300.00
19.9.16	1100mm	metre	38,200.00
19.10	Providing, lowering, laying in trenches, aligning, fixing in position and jointing Ductile Iron (DI) ISI marked K-9 grade S&S pipes as per IS:8329-2000 (amended upto date), with internal cement mortar lining for potable water with rubber ring (EPDM/SBR) joints as per IS: 5382-1985 (excluding special accessories) complete including all material, labour, hydraulic testing and commissioning as per Technical Specifications and as per direction of Engineer. Note : E/w to be measured and paid separately.		
19.10.1	100mm	metre	1,888.00
19.10.2	150mm	metre	2,580.00
19.10.3	200mm	metre	3,485.00
19.10.4	250mm	metre	4,565.00
19.10.5	300mm	metre	5,760.00
19.10.6	350 mm	metre	6,980.00
19.10.7	400 mm	metre	8,440.00
19.10.8	450 mm	metre	9,980.00
19.10.9	500 mm	metre	11,900.00
19.10.10	600mm	metre	15,500.00
19.10.11	700mm	metre	19,550.00
19.10.12	800mm	metre	23,900.00
19.10.13	900mm	metre	29,100.00
19.10.14	1000mm	metre	35,000.00

Code No	Description	Unit	Rate Rs.
19.10.15	1100mm	metre	42,000.00
19.10.16	1200 mm	metre	48,700.00
19.11	Providing, lowering, laying in trenches, aligning, fixing in position and jointing Ductile Iron (DI) ISI marked K-9 grade Double Chambered Restrained Joint pipes as per IS:8329-2000 and ISO:10804-2018 (amended up to date), with rubber ring (EPDM) joints as per IS: 5382-1985 (excluding special accessories), locking rings and locking bars complete including all material, labour, hydraulic testing and commissioning as per technical specifications and as per direction of Engineer in pipeline bends with designed restraining length of Double Chambered Restrained Joint pipes in place of thrust blocks. Note : E/w to be measured and paid separately.		
19.11.1	100mm	metre	2,825.00
19.11.2	150mm	metre	3,915.00
19.11.3	200mm	metre	5,010.00
19.11.4	250mm	metre	6,620.00
19.11.5	300mm	metre	8,390.00
19.11.6	350 mm	metre	10,250.00
19.11.7	400 mm	metre	12,400.00
19.11.8	450 mm	metre	14,750.00
19.11.9	500 mm	metre	17,750.00
19.11.10	600mm	metre	23,200.00
19.11.11	700mm	metre	30,400.00
19.11.12	800mm	metre	33,500.00
19.11.13	900mm	metre	36,700.00
19.11.14	1000mm	metre	44,600.00
19.11.15	1100mm	metre	52,500.00
19.12	Providing, lowering, laying in trenches, aligning, fixing in position and jointing at all level/ depths DI K-12 standard, Ductile Iron Double Chambered Restrained Joint sends of 90°, 45°, 22.5° and 11.25° with rubber ring (EPDM) joints as per IS: 5382-1985, locking rings and locking bars within trenches in DI Restrained Joint pipe line complete including all material, labour, testing and commissioning along with pipe line and as per technical specifications and as per direction of Engineer.		
19.12.1	Specials Double Chambered Restrained joint DI K-12		
19.12.1.1	Upto 600 mm dia	kg	397.00
19.12.1.2	Above 600 mm dia	kg	465.50

Code No	Description	Unit	Rate Rs.
19.13	Providing, lowering, laying in trenches, aligning, fixing in position and double flanged (welded) centrifugally (spun) Ductile iron ISI marked K-9 grade pipes as per IS:8329-2000 (amended upto date), (including jointing and jointing material) complete including all material, labour, hydraulic testing and commissioning as per Technical Specifications and as per direction of Engineer. Note : E/w to be measured and paid separately.		
19.13.1	100mm	metre	2,860.00
19.13.2	150mm	metre	3,695.00
19.13.3	200mm	metre	4,985.00
19.13.4	250mm	metre	6,580.00
19.13.5	300mm	metre	8,120.00
19.13.6	350 mm	metre	10,450.00
19.13.7	400 mm	metre	12,800.00
19.13.8	450 mm	metre	16,050.00
19.13.9	500 mm	metre	19,150.00
19.13.10	600mm	metre	25,300.00
19.13.11	700mm	metre	33,100.00
19.13.12	800mm	metre	39,600.00
19.13.13	900mm	metre	48,900.00
19.13.14	1000mm	metre	56,800.00
19.13.15	1100mm	metre	70,500.00
19.14	Providing, lowering, laying, aligning, fixing in position at and jointing at all level/ depths DI K-12 standard specials with rubber ring (EPDM/SBR) joints as per IS: 5382-1985 such as tees, bends, tapers, caps etc. within trenches in DI pipe line complete including all material, labour, testing and commissioning along with pipe line as per Technical Specifications and as per direction of Engineer. Note : E/w to be measured and paid separately.		
19.14.1	Specials S&S DI K-12		
19.14.1.1	Upto 300mm dia	kg	155.50
19.14.1.2	Above 300mm dia and upto 600mm dia	kg	164.00
19.14.1.3	Above 600mm dia and upto 900mm dia	kg	197.00
19.14.1.4	Above 900mm dia	kg	211.50
19.14.2	Specials flanged DI K-12		
19.14.2.1	Upto 300mm	kg	158.50
19.14.2.2	Above 300mm dia and upto 600mm dia	kg	170.00
19.14.2.3	Above 600mm dia and upto 900mm dia	kg	205.50

Code No	Description	Unit	Rate Rs.
19.14.2.4	Above 900mm dia	kg	228.50
19.15	Providing, lowering, laying, aligning, fixing in position at all level/ depths CI Class - B double flanged pipes of standard length of 2.75m as per IS : 7181 in trenches complete (including jointing and jointing material) including all material, labour, testing and commissioning along with pipe line as per Technical Specifications and as per direction of Engineer. Note : E/w to be measured and paid separately.		
19.15.1	100mm	metre	3,245.00
19.15.2	125mm	metre	4,195.00
19.15.3	150mm	metre	5,140.00
19.15.4	200mm	metre	7,350.00
19.15.5	250mm	metre	9,840.00
19.15.6	300mm	metre	12,550.00
19.15.7	350 mm	metre	15,500.00
19.15.8	400 mm	metre	19,150.00
19.15.9	450 mm	metre	23,100.00
19.15.10	500 mm	metre	27,000.00
19.15.11	600mm	metre	36,200.00
19.15.12	700mm	metre	46,800.00
19.15.13	750mm	metre	52,800.00
19.15.14	800mm	metre	59,000.00
19.15.15	900mm	metre	70,900.00
19.15.16	1000mm	metre	84,700.00
19.16	Providing, lowering, laying, aligning, fixing in position at all level/ depths CI Class - B double flanged specials as per IS : 7181 in trenches complete (excluding jointing) including all material, labour, testing and commissioning along with pipe line as per Technical Specifications and as per direction of Engineer. Note : E/w to be measured and paid separately.		
19.16.1	Standard specials	kg	125.50
19.16.2	Non-standard specials	kg	130.00
19.17	Fabrication, supply of flanged/ plain ended MS pipe made from MS sheet strips of relevant IS specification of approved thickness by welding, lowering, laying, aligning, fixing in position at all level/ depths in trenches complete (excluding flanged jointing wherever required) including all material, labour, testing and commissioning along with pipe line as per Technical Specifications and as per direction of Engineer. Note : E/w to be measured and paid separately.		

Code No	Description	Unit	Rate Rs.
19.17.1	MS pipe upto 600mm dia (with minimum 5mm thickness sheet)	kg	153.00
19.17.2	MS pipe above 600mm dia (with minimum 6.3mm thickness sheet)	kg	156.00
19.18	Fabrication, supply of flanged/ plain ended MS pipe made from MS sheet strips of relevant IS specification of approved thickness by welding, lowering, laying, aligning, fixing in position at all level/ depths in trenches complete (excluding flanged jointing wherever required) including all material, labour, testing and commissioning along with pipe line as per Technical Specifications and as per direction of Engineer. Note : E/w to be measured and paid separately.		
19.18.1	MS pipe specials upto 600mm dia (with minimum 5mm thickness sheet)	kg	156.00
19.18.2	MS pipe specials above 600mm dia (with minimum 6.3mm thickness sheet)	kg	159.50
19.19	Providing and applying following Coating to the External surface of MS pipes, including preparation of surface by cleaning as per ISO 8502-3/ SSPC-SP10/ NACE No.2 near white blast cleaning and abrasive blasting to a finish to SA 2.5 as per ISO: 8501-1 and surface profile / anchor profile of 50-75 / 75-100 microns as per ISO: 8503-2, including field joint coating at site complete as per Technical specifications and direction of Engineer –in-charge: 3 LPE (3 Layer Polyethylene) / DFBE (Dual Layer Fusion Bonded Epoxy)/ PU (Polyurethane)/ Polyolefin Tape coating .	sqm	1,361.00
19.20	Providing and applying Solvent free, two pack liquid epoxy lining to internal surface of M.S. Pipe as per BS 6920:2000 and AWWA C210 standard including preparation of internal surface of pipe by cleaning and abrasive blasting including field joints coating at site complete as per technical specification and direction of Engineer in-charge. Liquid Epoxy shall be NSF/WARS approved for drinking water	sqm	676.00
19.21	Providing and applying 100% Solids, Rigid, DTM Polyurethane Coating to internal surface of M.S. Pipe as per AWWA C222 standard including preparation of internal surface of pipe by cleaning and abrasive blasting including field joints coating at site complete as per technical specification and direction of Engineer in-charge. Polyurethane Coating shall be NSF/WARS/SS-375 approved for drinking water.	sqm	719.00
19.22	Providing and making inner cement mortar lining to M.S. Pipes with mechanical devices in cement mortar 1:1 proportion , including cost of all materials, labour, special sand required, machinery, power generation, all equipments, including carrying out "C" value performance test of pipeline, including field joints at site complete as per technical specification and direction of Engineer in-charge.	sqm	
19.22.1	9 mm thick for pipes upto 700 mm dia	sqm	445.00
19.22.2	12 mm thick for pipes above 700 mm dia	sqm	487.50
19.23	Providing and making flanged joints to double flanged C.I./ D.I. pipes		

Code No	Description	Unit	Rate Rs.
	and specials such as tees, bends, tapers, caps etc. at all level/ depths within trenches complete including all material i.e. rubber insertions, bolts & nuts etc, labour, testing of joint, commissioning along with pipe line as per Technical Specifications and as per direction of Engineer.		
19.23.1	100mm	each	417.00
19.23.2	125mm	each	418.50
19.23.3	150mm	each	570.00
19.23.4	200mm	each	651.00
19.23.5	250mm	each	965.00
19.23.6	300mm	each	976.00
19.23.7	350 mm	each	1,407.00
19.23.8	400 mm	each	2,282.00
19.23.9	450 mm	each	2,845.00
19.23.10	500 mm	each	3,155.00
19.23.11	600mm	each	4,220.00
19.23.12	700mm	each	5,490.00
19.23.13	800mm	each	5,550.00
19.23.14	900mm	each	6,400.00
19.23.15	1000mm	each	6,410.00
19.23.16	1100mm	each	7,500.00
19.24	Providing and making house service connections including dismantling, earth work etc from water supply distribution HDPE pipe line upto water meter chamber inside the property using HDPE (Class-PE 80) PN 6 composite pipes for upto 5 metre length. The item consisting of composite pipes of HDPE pipe below the ground level and GI class B pipe above the ground level including supply and fixing of ferrules, electro fusion saddle, clamps, rubber sheets, tapping, compression fittings etc, complete including all material, labour, testing and commissioning as per Technical Specifications and as per direction of Engineer.		
19.24.1	20 mm Diameter HDPE below the ground & 15 mm GI pipe class B above the ground	each	1,582.00
19.24.2	25 mm Diameter HDPE below the ground & 20 mm GI pipe class B above the ground	each	1,709.00
19.24.3	32 mm Diameter HDPE below the ground & 25 mm GI pipe class B above the ground	each	1,901.00
19.25	Providing and making house service connections including dismantling, earth work etc from water supply distribution uPVC/ DI/ CI pipe line upto water meter chamber inside the property using MDPE/ HDPE (Class-PE 80) PN 6 composite pipes for upto 5 metre		

Code No	Description	Unit	Rate Rs.
	length. The item consisting of composite pipes of MDPE/ HDPE pipe below the ground level and GI class B pipe above the ground level including supply and fixing of ferrules, clamps, rubber sheets, tapping, compression fittings etc, complete including all material, labour, testing and commissioning as per Technical Specifications and as per direction of Engineer.		
19.25.1	With MDPE pipe		
19.25.1.1	20 mm Diameter MDPE below the ground & 15 mm GI pipe class B above the ground	each	836.00
19.25.1.2	25 mm Diameter MDPE below the ground & 20 mm GI pipe class B above the ground	each	1,044.00
19.25.1.3	32 mm Diameter MDPE below the ground & 25 mm GI pipe class B above the ground	each	1,326.00
19.25.2	With HDPE pipe		
19.25.2.1	20 mm Diameter HDPE below the ground & 15 mm GI pipe class B above the ground	each	852.00
19.25.2.2	25 mm Diameter HDPE below the ground & 20 mm GI pipe class B above the ground	each	1,064.00
19.25.2.3	32 mm Diameter HDPE below the ground & 25 mm GI pipe class B above the ground	each	1,362.00
19.26	Providing, lowering, laying & jointing MDPE/ HDPE pipes (Class-PE 80) PN 12.5 composite pipes for extra length for house service connections as per drawing and specifications complete including all material, labour, testing and commissioning as per Technical Specifications and as per direction of Engineer.		
19.26.1	With MDPE pipe		
19.26.1.1	20 mm dia service pipe	metre	44.00
19.26.1.2	25 mm dia service pipe	metre	59.80
19.26.1.3	32 mm dia service pipe	metre	91.00
19.26.2	With HDPE pipe		
19.26.2.1	20 mm dia service pipe	metre	50.00
19.26.2.2	25 mm dia service pipe	metre	67.50
19.26.2.3	32 mm dia service pipe	metre	104.00
19.27	Providing, lowering, laying, aligning, fixing in position in pipe line, manually operated CI D/F Sluice valves of approved make (IS: 14846 amended upto date) PN 1.0 class of following dia complete (including jointing and jointing material) including all material, labour, testing and commissioning along with pipe line as per Technical Specifications and as per direction of Engineer.		
19.27.1	80 mm dia	each	5,130.00
19.27.2	100 mm dia	each	6,820.00

Code No	Description	Unit	Rate Rs.
19.27.3	125 mm dia	each	9,180.00
19.27.4	150 mm dia	each	10,950.00
19.27.5	200 mm dia	each	18,150.00
19.27.6	250 mm dia	each	28,000.00
19.27.7	300 mm dia	each	35,100.00
19.27.8	350 mm dia	each	53,300.00
19.27.9	400 mm dia	each	68,000.00
19.27.10	450 mm dia	each	83,700.00
19.27.11	500 mm dia	each	1,04,800.00
19.27.12	600 mm dia	each	1,54,400.00
19.27.13	700 mm dia	each	2,88,500.00
19.27.14	750 mm dia	each	3,20,900.00
19.27.15	800 mm dia	each	3,90,300.00
19.27.16	900 mm dia	each	5,10,700.00
19.27.17	1000 mm dia	each	7,83,900.00
19.28	Providing, lowering, laying, aligning, fixing in position in pipe line, manually operated DI D/F Sluice valves of approved make PN 1.0 class of following dia complete (including jointing and jointing material) including all material, labour, testing and commissioning along with pipe line as per Technical Specifications and as per direction of Engineer.		
19.28.1	80 mm dia	each	7,980.00
19.28.2	100 mm dia	each	10,250.00
19.28.3	125 mm dia	each	12,100.00
19.28.4	150 mm dia	each	14,100.00
19.28.5	200 mm dia	each	21,900.00
19.28.6	250 mm dia	each	38,200.00
19.28.7	300 mm dia	each	50,600.00
19.28.8	350 mm dia	each	68,000.00
19.28.9	400 mm dia	each	75,100.00
19.28.10	450 mm dia	each	1,31,900.00
19.28.11	500 mm dia	each	1,34,200.00
19.28.12	600 mm dia	each	1,90,200.00
19.28.13	700 mm dia	each	3,96,000.00
19.28.14	750 mm dia	each	4,79,100.00
19.28.15	800 mm dia	each	5,00,100.00

Code No	Description	Unit	Rate Rs.
19.28.16	900 mm dia	each	8,58,800.00
19.28.17	1000 mm dia	each	9,13,700.00
19.29	Providing, lowering, laying, aligning, fixing in position in pipe line, Resilient Seated D/F DI Sluice valves of approved make & design standard of following dia complete (including jointing & jointing material) including all material, labour, testing and commissioning along with pipe line as per Technical Specification & as per direction of Engineer.		
19.29.1	Manually operated class PN 1.0		
19.29.1.1	80 mm dia	each	8,090.00
19.29.1.2	100 mm dia	each	10,450.00
19.29.1.3	125 mm dia	each	16,350.00
19.29.1.4	150 mm dia	each	17,000.00
19.29.1.5	200 mm dia	each	25,200.00
19.29.1.6	250 mm dia	each	38,500.00
19.29.1.7	300 mm dia	each	47,800.00
19.29.1.8	350 mm dia	each	72,700.00
19.29.1.9	400 mm dia	each	93,800.00
19.29.1.10	450 mm dia	each	1,18,000.00
19.29.1.11	500 mm dia	each	1,53,300.00
19.29.1.12	600 mm dia	each	2,21,900.00
19.29.2	Manually Operated Class PN 1.6		
19.29.2.1	80 mm dia	metre	9,400.00
19.29.2.2	100 mm dia	metre	11,900.00
19.29.2.3	125 mm dia	metre	17,150.00
19.29.2.4	150 mm dia	metre	18,800.00
19.29.2.5	200 mm dia	metre	27,800.00
19.29.2.6	250 mm dia	metre	42,700.00
19.29.2.7	300 mm dia	metre	53,700.00
19.29.2.8	350 mm dia	metre	86,800.00
19.29.2.9	400 mm dia	metre	1,11,900.00
19.29.2.10	450 mm dia	metre	1,43,400.00
19.29.2.11	500 mm dia	metre	1,88,000.00
19.29.2.12	600 mm dia.	metre	2,76,100.00
19.29.3	Manually Operated with gear Class PN 1.6		
19.29.3.1	700 mm dia.	metre	7,84,600.00

Code No	Description	Unit	Rate Rs.
19.29.3.2	800 mm dia.	metre	10,90,100.00
19.29.3.3	900 mm dia.	metre	14,91,300.00
19.29.3.4	1000 mm dia.	metre	19,69,400.00
19.29.4	Electrically Operated & SCADA Compatible class PN 1.0		
19.29.4.1	80 mm dia	each	75,800.00
19.29.4.2	100 mm dia	each	78,100.00
19.29.4.3	125 mm dia	each	84,000.00
19.29.4.4	150 mm dia	each	84,700.00
19.29.4.5	200 mm dia	each	1,15,700.00
19.29.4.6	250 mm dia	each	1,29,100.00
19.29.4.7	300 mm dia	each	1,38,400.00
19.29.4.8	350 mm dia	each	2,03,500.00
19.29.4.9	400 mm dia	each	2,24,600.00
19.29.4.10	450 mm dia	each	2,48,900.00
19.29.4.11	500 mm dia	each	2,84,200.00
19.29.4.12	600 mm dia	each	3,52,800.00
19.29.5	Electrically Operated & SCADA Compatible class PN 1.6		
19.29.5.1	80 mm dia	each	77,100.00
19.29.5.2	100 mm dia	each	79,600.00
19.29.5.3	125 mm dia	each	85,300.00
19.29.5.4	150 mm dia	each	87,400.00
19.29.5.5	200 mm dia	each	1,20,900.00
19.29.5.6	250 mm dia	each	1,40,900.00
19.29.5.7	300 mm dia	each	1,54,700.00
19.29.5.8	350 mm dia	each	2,51,200.00
19.29.5.9	400 mm dia	each	2,88,600.00
19.29.5.10	450 mm dia	each	3,41,300.00
19.29.5.11	500 mm dia	each	4,01,700.00
19.29.5.12	600 mm dia	each	5,28,900.00
19.30	Providing, lowering, aligning, fixing in position in pipe line, DI D/F resilient seated (soft seated) short body pattern type double eccentric Butterfly valves of approved make of following class & dia complete confirming to BS EN 593/ BS 5155/ IS 13095/1991 amended up to date and of following specifications: Body, disc and end cover of Ductile cast iron of grade GGG40/GGG50 as per DIN 1693 or GR SG-400/12 as per IS 1865 or equivalent grade as per IS :3896-part2-1985 and subsequent revisions, Face to face		

Code No	Description	Unit	Rate Rs.
	dimensions as per DIN 3202 F4/ IS 13095 Drilled as per IS:1538. Electrostatic Epoxy Powder(EP-P) / Fusion Bonded Epoxy (Non-Toxic & suitable for drinking water) coated with minimum thickness of 250 micron applied on both body and disc inside and outside. Disc seal ring of EPDM/ Neoprene (food grade quality) and disc seal retaining ring of SS/CS. Shaft of SS- AISI- 304/316 & shaft bearings-bronze/ PTET or Teflon with EPDM/NBR "O "ring seal, Nut-Bolt confirming to IS:1363 and IS: 1367 (Galvanised steel) Insertion rubber of black EPDM 6mm thick. Suitable support structure as per directions of EIC including jointing & jointing material, labour, testing and commissioning along with pipeline as per Technical Specification & as per direction of Engineer-in-charge. Note: Rates are exclusive of tail piece/ dismantling joints and earth work.		
19.30.1	Class PN 1.6, Manually Operated without Gear		
19.30.1.1	100 mm dia	each	18,000.00
19.30.1.2	150 mm dia	each	35,300.00
19.30.1.3	200 mm dia	each	52,600.00
19.30.1.4	250 mm dia	each	69,700.00
19.30.1.5	300 mm dia	each	87,200.00
19.30.1.6	350 mm dia	each	1,04,900.00
19.30.1.7	400 mm dia	each	1,22,900.00
19.30.1.8	450 mm dia	each	1,40,600.00
19.30.1.9	500 mm dia	each	1,58,200.00
19.30.1.10	600 mm dia	each	1,76,400.00
19.30.1.11	700 mm dia	each	1,93,600.00
19.30.1.12	800 mm dia.	each	2,10,800.00
19.30.1.13	900 mm dia.	each	2,27,900.00
19.30.1.14	1000 mm dia.	each	2,45,100.00
19.30.2	Class PN 1.6 Manually Operated With Gear		
19.30.2.1	100 mm dia	each	33,500.00
19.30.2.2	150 mm dia	each	50,800.00
19.30.2.3	200 mm dia	each	74,100.00
19.30.2.4	250 mm dia	each	91,200.00
19.30.2.5	300 mm dia	each	1,10,400.00
19.30.2.6	350 mm dia	each	1,41,400.00
19.30.2.7	400 mm dia	each	1,59,400.00
19.30.2.8	450 mm dia	each	1,77,100.00
19.30.2.9	500 mm dia	each	1,94,800.00

Code No	Description	Unit	Rate Rs.
19.30.2.10	600 mm dia	each	2,14,700.00
19.30.2.11	700 mm dia.	each	2,43,700.00
19.30.2.12	800 mm dia.	each	2,60,800.00
19.30.2.13	900 mm dia.	each	2,77,900.00
19.30.2.14	1000 mm dia.	each	3,24,300.00
19.30.3	Class PN 1.0, Motorised Operated		
19.30.3.1	700 mm dia	each	1,93,600.00
19.30.3.2	800 mm dia.	each	2,10,800.00
19.30.3.3	900 mm dia.	each	2,27,900.00
19.30.3.4	1000 mm dia.	each	2,45,100.00
19.30.4	Class PN 1.6, Motorised Operated		
19.30.4.1	700 mm dia.	each	1,93,600.00
19.30.4.2	800 mm dia.	each	2,10,800.00
19.30.4.3	900 mm dia.	each	2,27,900.00
19.30.4.4	1000 mm dia.	each	2,45,100.00
19.31	Providing, lowering, aligning, fixing in position in pipe line, DI resilient seated (soft seated) Concentric Wafer type, Butterfly valves of approved make of following Pressure rating & dia complete confirming to BS EN 593/ BS 5155/ IS 13095/1991 amended up to date and of following specifications: Body- Ductile cast iron of grade GGG40/GGG50 as per DIN 1693 or GR SG-400/12 as per IS 1865 or equivalent grade as per IS :3896-part2-1985 and subsequent revisions, Disc - DI (same as body material) / CS, Face to face dimensions as per DIN 3202 F4/ IS 13095 , Flanges Drilled as per IS:1538 ,Electrostatic Epoxy Powder(EP-P) / Fusion Bonded Epoxy (Non-Toxic & suitable for drinking water) coated with minimum thickness of 250 micron applied on both body and disc inside and outside . Liner & Disc seal - EPDM/ Neoprene (food grade quality) ,Shaft of SS- AISI- 410/420 & shaft bearings- bronze/ PTET or Teflon with EPDM/NBR "O "ring seal , Nut-Bolt confirming to IS:1363 and IS: 1367/ Galvanised steel, Insertion rubber of black EPDM 6mm thick ,Suitable support structure as per directions of EIC including jointing & jointing material, labour, testing and commissioning along with pipeline as per Technical Specification & as per direction of Engineer-in-charge. Note: Rates are exclusive of tail piece/ dismantling joints and earth work.		
19.31.1	Class PN 1.6		
19.31.1.1	80 mm (Lever Operated)	each	10,900.00
19.31.1.2	100 mm (Lever Operated)	each	13,200.00
19.31.1.3	125 mm (Lever Operated)	each	22,200.00
19.31.1.4	150 mm (Lever Operated)	each	24,200.00

Code No	Description	Unit	Rate Rs.
19.31.1.5	200 mm (with Gear)	each	36,500.00
19.31.1.6	250 mm (with Gear)	each	47,000.00
19.31.1.7	300 mm (with Gear)	each	52,200.00
19.32	Providing, lowering, laying, aligning, fixing in position C.I. D/F manually operated long body butterfly valves (IS: 13095) PN-1.0 class of following dia complete (including jointing and jointing material) including all material, labour, testing along with pipe line and commissioning as per Technical Specifications and as per direction of Engineer		
19.32.1	80 mm dia	each	4,840.00
19.32.2	100 mm dia	each	5,820.00
19.32.3	125 mm dia	each	7,840.00
19.32.4	150 mm dia	each	8,990.00
19.32.5	200 mm dia	each	15,800.00
19.32.6	250 mm dia	each	21,400.00
19.32.7	300 mm dia	each	26,100.00
19.32.8	350 mm dia	each	40,000.00
19.32.9	400 mm dia	each	53,300.00
19.32.10	450 mm dia	each	57,500.00
19.32.11	500 mm dia	each	59,900.00
19.32.12	600 mm dia	each	96,500.00
19.32.13	700 mm dia	each	1,55,100.00
19.32.14	750 mm dia	each	1,82,800.00
19.32.15	800 mm dia	each	1,94,300.00
19.32.16	900 mm dia	each	2,48,900.00
19.32.17	1000 mm dia	each	3,19,100.00
19.33	Providing, lowering, laying, aligning, fixing in position D.I. D/F manually operated long body butterfly valves PN-1.0 class of following dia complete (including jointing and jointing material) including all material, labour, testing along with pipe line and commissioning as per Technical Specifications and as per direction of Engineer		
19.33.1	80 mm dia	each	6,570.00
19.33.2	100 mm dia	each	7,870.00
19.33.3	125 mm dia	each	10,650.00
19.33.4	150 mm dia	each	12,200.00
19.33.5	200 mm dia	each	21,600.00
19.33.6	250 mm dia	each	29,300.00

Code No	Description	Unit	Rate Rs.
19.33.7	300 mm dia	each	35,800.00
19.33.8	350 mm dia	each	54,800.00
19.33.9	400 mm dia	each	72,800.00
19.33.10	450 mm dia	each	78,400.00
19.33.11	500 mm dia	each	81,600.00
19.33.12	600 mm dia	each	1,31,800.00
19.33.13	700 mm dia	each	2,26,200.00
19.33.14	750 mm dia	each	2,62,400.00
19.33.15	800 mm dia	each	2,77,000.00
19.33.16	900 mm dia	each	3,60,400.00
19.33.17	1000 mm dia	each	4,74,300.00
19.34	Providing, lowering, laying, aligning, fixing in position in pipe line, Resilient Seated D/F DI Butterfly valves of approved make & design standard of following dia. complete (including jointing & jointing material) including all material, labour, testing and commissioning along with pipeline as per Technical Specification & as per direction of Engineer.		
19.34.1	Manually operated (PN 1.0 class)		
19.34.1.1	80 mm dia	each	9,940.00
19.34.1.2	100 mm dia	each	12,050.00
19.34.1.3	125 mm dia	each	15,500.00
19.34.1.4	150 mm dia	each	18,450.00
19.34.1.5	200 mm dia	each	29,500.00
19.34.1.6	250 mm dia	each	37,400.00
19.34.1.7	300 mm dia	each	52,600.00
19.34.1.8	350 mm dia	each	58,700.00
19.34.1.9	400 mm dia	each	82,300.00
19.34.1.10	450 mm dia	each	1,03,100.00
19.34.1.11	500 mm dia	each	1,17,300.00
19.34.1.12	600 mm dia	each	1,43,600.00
19.34.2	Electrically Operated & SCADA Compatible (PN 1.0 class)		
19.34.2.1	80 mm dia	each	77,600.00
19.34.2.2	100 mm dia	each	79,700.00
19.34.2.3	125 mm dia	each	83,200.00
19.34.2.4	150 mm dia	each	86,100.00
19.34.2.5	200 mm dia	each	1,20,100.00

Code No	Description	Unit	Rate Rs.
19.34.2.6	250 mm dia	each	1,28,000.00
19.34.2.7	300 mm dia	each	1,43,100.00
19.34.2.8	350 mm dia	each	1,89,600.00
19.34.2.9	400 mm dia	each	2,13,200.00
19.34.2.10	450 mm dia	each	2,34,000.00
19.34.2.11	500 mm dia	each	2,48,100.00
19.34.2.12	600 mm dia	each	2,74,500.00
19.34.3	Manually operated (PN 1.6 class)		
19.34.3.1	80 mm dia	each	13,250.00
19.34.3.2	100 mm dia	each	17,950.00
19.34.3.3	125 mm dia	each	22,300.00
19.34.3.4	150 mm dia	each	25,500.00
19.34.3.5	200 mm dia	each	32,100.00
19.34.3.6	250 mm dia	each	41,100.00
19.34.3.7	300 mm dia	each	55,300.00
19.34.3.8	350 mm dia	each	78,000.00
19.34.3.9	400 mm dia	each	1,09,000.00
19.34.3.10	450 mm dia	each	1,34,100.00
19.34.3.11	500 mm dia	each	1,88,500.00
19.34.3.12	600 mm dia	each	2,41,700.00
19.34.4	Electrically Operated & SCADA Compatible (PN 1.6 class)		
19.34.4.1	80 mm dia	each	80,900.00
19.34.4.2	100 mm dia	each	85,600.00
19.34.4.3	125 mm dia	each	89,900.00
19.34.4.4	150 mm dia	each	93,100.00
19.34.4.5	200 mm dia	each	1,22,700.00
19.34.4.6	250 mm dia	each	1,31,700.00
19.34.4.7	300 mm dia	each	1,45,900.00
19.34.4.8	350 mm dia	each	2,08,900.00
19.34.4.9	400 mm dia	each	2,39,900.00
19.34.4.10	450 mm dia	each	2,64,900.00
19.34.4.11	500 mm dia	each	3,19,300.00
19.34.4.12	600 mm dia	each	3,72,600.00
19.35	Providing, lowering, laying, aligning, fixing in position jointing in pipeline following dia D/F DI Plunger valve (Flow Control Valve) PN		

Code No	Description	Unit	Rate Rs.
	1.6 class with electrical actuator suitable for SCADA compatibility complete (including jointing & jointing material) including all material, labour, testing and commissioning as per Technical Specification & as per direction of Engineer.		
19.35.1	80mm diameter	each	3,58,400.00
19.35.2	100mm diameter	each	3,94,100.00
19.35.3	125mm diameter	each	4,38,600.00
19.35.4	150mm diameter	each	4,85,000.00
19.35.5	200mm diameter	each	5,78,300.00
19.35.6	250mm diameter	each	6,97,400.00
19.35.7	300mm diameter	each	8,44,800.00
19.35.8	350mm diameter	each	9,44,300.00
19.35.9	400mm diameter	each	11,85,900.00
19.35.10	450mm diameter	each	12,49,800.00
19.35.11	500mm diameter	each	16,39,200.00
19.35.12	600mm diameter	each	20,88,200.00
19.35.13	700mm diameter	each	33,73,300.00
19.35.14	800mm diameter	each	43,27,600.00
19.35.15	900mm diameter	each	59,49,400.00
19.35.16	1000mm diameter	each	61,73,100.00
19.36	Providing, Supplying and fixing of D/F DI Pressure Reducing Valve in pipe line including jointing etc. complete as per standard/ technical specification and direction of Engineer-in-Charge.		
19.36.1	100mm diameter	each	68,500.00
19.36.2	150mm diameter	each	92,000.00
19.36.3	200mm diameter	each	1,30,200.00
19.36.4	250mm diameter	each	1,86,500.00
19.36.5	300mm diameter	each	2,43,700.00
19.36.6	350mm diameter	each	4,01,200.00
19.36.7	400mm diameter	each	5,13,400.00
19.37	Supply, installation, testing & commissioning of self-powered multifunction network controller for dynamically reconfigurable DMAs including an energy harvester (e-Power), a vortex flow meter (e-Flow) and a modulating type actuator for position control, an Infra Sense TS for continuous high-speed (128 S/s) time-synchronized (5 ms) sampling, and retrofitted with a PRV with the developed multifunction network controller.	each	35,00,000.00

Code No	Description	Unit	Rate Rs.
19.38	Supply, installation, testing & commissioning of Artificial Intelligence platform to monitor and modulate the instruments in real time for dynamically reconfigurable DMAs.	each	1,15,00,000.00
19.39	Providing, lowering, laying, aligning, fixing in position jointing in pipeline following dia D/F DI diaphragm type (Flow Control Valve) PN 1.6 class with Electrical actuator valve, suitable for SCADA compatibility complete (including jointing & jointing material) including all material, labour, testing and commissioning as per Technical Specification & as per direction of Engineer.		
19.39.1	40mm diameter	each	2,03,300.00
19.39.2	50mm diameter	each	2,06,700.00
19.39.3	65mm diameter	each	2,18,300.00
19.39.4	80mm diameter	each	2,32,500.00
19.39.5	100mm diameter	each	2,42,000.00
19.39.6	125mm diameter	each	2,45,000.00
19.39.7	150mm diameter	each	2,77,800.00
19.39.8	200mm diameter	each	3,20,100.00
19.39.9	250mm diameter	each	4,24,800.00
19.39.10	300mm diameter	each	5,81,100.00
19.39.11	350mm diameter	each	7,67,600.00
19.39.12	400mm diameter	each	8,93,300.00
19.39.13	450mm diameter	each	12,52,600.00
19.39.14	500mm diameter	each	14,51,800.00
19.39.15	600mm diameter	each	19,99,500.00
19.40	Providing, lowering, laying, aligning, fixing in position jointing in pipeline following dia D/F DI solenoid operated diaphragm type (Flow Control Valve) PN 1.6 class valve, suitable for SCADA compatibility complete (including jointing & jointing material) including all material, labour, testing and commissioning as per Technical Specification & as per direction of Engineer		
19.40.1	40mm diameter	each	1,25,400.00
19.40.2	50mm diameter	each	1,32,800.00
19.40.3	65mm diameter	each	1,40,400.00
19.40.4	80mm diameter	each	1,50,700.00
19.40.5	100mm diameter	each	1,61,100.00
19.40.6	125mm diameter	each	1,67,100.00
19.40.7	150mm diameter	each	1,76,300.00
19.40.8	200mm diameter	each	2,11,100.00

Code No	Description	Unit	Rate Rs.
19.40.9	250mm diameter	each	3,28,100.00
19.40.10	300mm diameter	each	4,34,600.00
19.40.11	350mm diameter	each	5,92,400.00
19.40.12	400mm diameter	each	7,20,900.00
19.40.13	450mm diameter	each	8,95,400.00
19.40.14	500mm diameter	each	12,75,000.00
19.40.15	600mm diameter	each	17,62,300.00
19.41	Providing, lowering, aligning and fixing in position DI D/F Diaphragm type Pressure Reducing / Flow Control Valve of approved make of following Pressure rating & dia complete and of following specifications: Body & Bonnet - Ductile cast iron of grade GGG40/GGG50 as per DIN 1693 or ASTM A 536, Diaphragm and Resilient seal disc - Flexible, non-wicking nylon fabric reinforced synthetic elastomer -Buna-N / EPDM (FDA / WRAS approved), Body Seat Ring - Cast stainless steel ASTM- A 351 GR. CF8M / AISI- 316, raised, replaceable inline & onsite Stem - Stainless Steel, AISI-316, raised, replaceable inline & onsite Spring & Bearing bush- Stainless Steel, AISI-316 ,Disc guide, disc retainer & diaphragm washer - Stainless Steel, AISI-304/ 316/Bronze ,Seal- EPDM/ NBR ,Pilot Body- Stainless Steel, AISI-304/ CF8 or Brass Tubing - Stainless Steel, AISI-304 / Copper ,Solenoid Valve- Stainless Steel, AISI-316 ,Throttling plug - Stainless Steel, AISI-304, Nut- Bolts - SS Face to Face- as per ANSI B 16.1/ EN 558-1 and Flange ends should be as per ANSI B-16.5, Class 150 and Class 300/ EN-1092-2. Rubber insertion of black EPDM 6mm thick Electrostatic Epoxy Powder(EP-P) / Fusion Bonded Epoxy (Non-Toxic & suitable for drinking water) coated with minimum thickness of 250 micron applied both inside and outside. Suitable support structure as per directions of EIC including jointing & jointing material, labour, testing and commissioning as per Technical Specification & as per direction of Engineer-In- Charge. (Note: Rates are exclusive of tail piece/ dismantling joints and earth work.)		
19.41.1	Pilot operated SCADA Compatible (Class PN 1.6)		
19.41.1.1	80 mm dia	each	1,12,100.00
19.41.1.2	100 mm dia	each	1,24,100.00
19.41.1.3	125 mm dia	each	1,47,400.00
19.41.1.4	150 mm dia	each	1,60,400.00
19.41.1.5	200 mm dia	each	1,87,700.00
19.41.1.6	250 mm dia	each	2,69,900.00
19.41.1.7	300 mm dia	each	3,75,000.00
19.41.1.8	350 mm dia	each	5,12,700.00
19.41.1.9	400 mm dia	each	9,09,500.00

Code No	Description	Unit	Rate Rs.
19.41.1.10	450 mm dia	each	12,56,000.00
19.41.1.11	500 mm dia	each	15,10,300.00
19.41.1.12	600 mm dia	each	22,11,200.00
19.42	Supply, installation, testing & commissioning of modulating type electric actuator resistant to high pressure and robust design, torque 7-2000 Nm, motion range 0-360°, voltage 24V DC, applicable for actuating multi-turn valves, with Case Body, Opening Mete, Inlet Wire Lock, Rubber Cover of Handle Shaft, No-Bracket Installation, Gear Box Cover, Electric Cover, Wiring Cover, Handle Shaft Cover, Output Shaft & Adapter.		
19.42.1	Size 80 mm to 150 mm	each	50,000.00
19.42.2	Size 200 mm to 300 mm	each	66,000.00
19.42.3	Size 350 mm to 600 mm	each	95,000.00
19.42.4	Size 700 mm to 900 mm	each	1,49,000.00
19.42.5	Size 1000 mm	each	2,11,500.00
19.43	Providing, lowering, laying, aligning, fixing in position and jointing in pipe line CI Kinetic Double Air Valves as per IS:14845 of following dia (including jointing and jointing material), including all material, labour, testing and commissioning as per Technical Specifications and as per direction of Engineer.		
19.43.1	50 mm dia	each	9,750.00
19.43.2	80 mm dia	each	10,800.00
19.43.3	100 mm dia	each	16,000.00
19.43.4	150 mm dia	each	33,800.00
19.43.5	200 mm dia	each	54,900.00
19.44	Providing, lowering, laying, aligning, fixing in position and jointing in pipe line DI Kinetic Double Air Valves of following dia (including jointing and jointing material), including all material, labour, testing and commissioning as per Technical Specifications and as per direction of Engineer.		
19.44.1	50 mm dia	each	10,700.00
19.44.2	80 mm dia	each	11,900.00
19.44.3	100 mm dia	each	17,600.00
19.44.4	150 mm dia	each	38,200.00
19.44.5	200 mm dia	each	41,200.00
19.45	Providing, lowering, aligning, fixing in position and Jointing in pipe line, DI Body Flanged End Tamper proof Kinetic Air Valve class PN 1.6 of approved makes of following pressure rating and dia and as per following specifications: Governing standard - AWWA C512/ IS:14845:2000(amended up to date) Body, High pressure cover ,		

Code No	Description	Unit	Rate Rs.
	Low pressure cover, Cowl and Joint support ring - Ductile cast iron of grade GGG40/GGG50 as per DIN 1693 or GR SG-400/12 as per IS 1865, Float- LP ball & HP ball : AISI 304 stainless Steel, Seat ring & Gasket - EPDM/NBR ,HP Orifice & HP orifice plug : Bronze/ SS ,Bush: Bronze ,Flanges as per IS/ BS, Drilled as per IS:1538. Electrostatic Epoxy Powder(EP-P) / Fusion Bonded Epoxy (Non-Toxic & suitable for drinking water) coated with minimum thickness of 250 micron applied on body & cover inside and outside fasteners - CS/ Galvanised steel, Outlet of big orifice will have a screen to prevent Tamper of float, with DI metal seated D/F Non rising stem Sluice Valves as per (IS: 14846 amended upto date) PN 1.6 ratings Valves including all material, labour, testing and commissioning as per Technical Specifications and as per direction of Engineer in-charge. Note: Rates are exclusive of connecting tee, pipe piece and earth work.		
19.45.1	40 mm dia	each	13,550.00
19.45.2	50 mm dia	each	13,950.00
19.45.3	80 mm dia	each	16,250.00
19.45.4	100 mm dia	each	24,200.00
19.45.5	150 mm dia	each	41,500.00
19.45.6	200 mm dia	each	56,900.00
19.46	Providing, lowering, aligning, fixing in position and Jointing in pipe line, combination Air Release Valve Kinetic type class PN 1.6 with single chamber housed Double orifice and have 3 functions, large Air exhaust, small Air venting and large air intake during vacuum of pipeline of approved makes of following pressure rating and dia and as per following specifications: Governing standard - AWWA C512 ,Body and bonnet of Ductile cast iron of grade GGG40/GGG50 as per DIN 1693 or GR SG-400/12 as per IS 1865,Float & internal trim: AISI 304 stainless Steel, Seat ring & Gasket - EPDM/NBR Drilled as per IS:1538. Electrostatic Epoxy Powder(EP-P) / Fusion Bonded Epoxy (Non-Toxic & suitable for drinking water) coated with minimum thickness of 250 micron applied on body & cover inside and outside Fasteners - CS/ Galvanised steel ,Outlet of big orifice will have a screen to prevent Tamper of float, Big orifice size should be equal or larger than the inlet flange bore, for fully comply with AWWA C512.), Valve including all material, labour, testing and commissioning as per Technical Specifications and as per direction of Engineer in-charge. Note: Rates are exclusive of connecting tee, pipe piece and earth work.		
19.46.1	50 mm dia	each	18,700.00
19.46.2	80 mm dia	each	24,000.00
19.46.3	100 mm dia	each	32,100.00
19.46.4	150 mm dia	each	51,200.00
19.46.5	200 mm dia	each	64,200.00

Code No	Description	Unit	Rate Rs.
19.47	Providing, lowering, laying, aligning, fixing in position and jointing in pipe line, CI screwed Air valves class PN-1.0 single ball of approved make, including screw down isolation valve of following dia including cost of all labour, jointing material i.e. bolts, nuts, rubber insertions etc. complete including all material, labour, testing and commissioning as per Technical Specifications and as per direction of Engineer.		
19.47.1	25mm dia screwed end.	each	1,829.00
19.47.2	50 mm dia screwed end.	each	2,975.00
19.48	Providing, lowering, laying, aligning, fixing in position CI Flanged ends single ball air valves in pipe line suitable for potable water as per API:602/ API:598 at all level/ depth including all material, labour, hydraulic testing and commissioning as per technical specifications and as per direction of Engineer for following sizes:		
19.48.1	80 mm dia	each	5,840.00
19.48.2	100 mm dia	each	8,100.00
19.48.3	150 mm dia	each	12,200.00
19.49	Providing, lowering, laying, aligning, fixing in position and jointing in pipe line, C.I. dual plate check valves as per API:594 and API:598 of PN 1.0 rating of following dia (including jointing and jointing material), including all material, labour, testing and commissioning as per Technical Specifications and as per direction of Engineer.		
19.49.1	CI PN 1.0		
19.49.1.1	80 mm dia	each	5,280.00
19.49.1.2	100 mm dia	each	6,260.00
19.49.1.3	125 mm dia	each	7,310.00
19.49.1.4	150 mm dia	each	9,420.00
19.49.1.5	200 mm dia	each	16,300.00
19.49.1.6	250 mm dia	each	22,000.00
19.49.1.7	300 mm dia	each	26,700.00
19.49.1.8	350 mm dia	each	40,700.00
19.49.1.9	400 mm dia	each	54,000.00
19.49.1.10	450 mm dia	each	58,300.00
19.49.1.11	500 mm dia	each	60,800.00
19.49.1.12	600 mm dia	each	97,400.00
19.49.1.13	700 mm dia	each	1,68,700.00
19.49.1.14	750 mm dia	each	1,93,300.00
19.49.1.15	800 mm dia	each	2,21,600.00
19.49.1.16	900 mm dia	each	3,08,200.00

Code No	Description	Unit	Rate Rs.
19.49.1.17	1000 mm dia	each	3,98,800.00
19.50	Providing, lowering, laying, aligning, fixing in position and jointing in pipe line, DI dual plate check valves of PN 1.0 rating of following dia (including jointing and jointing material), including all material, labour, testing and commissioning as per Technical Specifications and as per direction of Engineer.		
19.50.1	DI PN 1.0		
19.50.1.1	80 mm dia	each	6,760.00
19.50.1.2	100 mm dia	each	8,310.00
19.50.1.3	125 mm dia	each	10,200.00
19.50.1.4	150 mm dia	each	12,650.00
19.50.1.5	200 mm dia	each	22,100.00
19.50.1.6	250 mm dia	each	29,800.00
19.50.1.7	300 mm dia	each	36,300.00
19.50.1.8	350 mm dia	each	55,500.00
19.50.1.9	400 mm dia	each	73,500.00
19.50.1.10	450 mm dia	each	79,200.00
19.50.1.11	500 mm dia	each	82,500.00
19.50.1.12	600 mm dia	each	1,32,700.00
19.50.1.13	700 mm dia	each	3,46,200.00
19.50.1.14	750 mm dia	each	4,01,900.00
19.50.1.15	800 mm dia	each	4,24,400.00
19.50.1.16	900 mm dia	each	5,52,400.00
19.50.1.17	1000 mm dia	each	6,76,400.00
19.51	Providing, lowering, laying, aligning, fixing in position and jointing in pipe line, DI Resilient Seated Dual Plate Check Valves in accordance with BS EN 12334 of following dia (including jointing and jointing material), including material, labour, testing and commissioning as per Technical Specifications and as per direction of Engineer.		
19.51.1	Class PN 1.0		
19.51.1.1	100mm diameter	each	6,990.00
19.51.1.2	150mm diameter	each	10,950.00
19.51.1.3	200mm diameter	each	16,650.00
19.51.1.4	250mm diameter	each	26,700.00
19.51.2	Class PN 1.6		
19.51.2.1	100mm diameter	each	7,600.00

Code No	Description	Unit	Rate Rs.
19.51.2.2	150mm diameter	each	11,950.00
19.51.2.3	200mm diameter	each	18,200.00
19.51.2.4	250mm diameter	each	29,200.00
19.52	Providing, lowering, aligning, fixing in position in pipe line, DI D/F resilient seated (soft seated) Swing type Non Return Valve of approved make of following Pressure rating & dia complete, generally confirming to IS: 5312 (part -1)/ 2004 (amended up to date) and of following specifications: Body, Bonnet & disc of Ductile cast iron of grade GGG40/GGG50 as per DIN 1693 or GR SG-400/12 as per IS 1865 or equivalent grade as per IS :3896-part2-1985 and subsequent revisions, Face to face dimensions as per IS 5312 (part -1):2004 Drilled as per IS:1538. Electrostatic Epoxy Powder(EP-P) / Fusion Bonded Epoxy (Non-Toxic & suitable for drinking water) coated with minimum thickness of 250 micron applied on body, cover and disc inside and outside . Disc seal ring of EPDM/ Neoprene (food grade quality) and disc seal retaining ring of SS/CS. Shaft of SS- AISI- 410, Hinge SS AISI 316/410 ,Bonnet Gasket EPDM ,Bush- Brass with EPDM/NBR "O "ring seal Nut-Bolt confirming to IS:1363 and IS: 1367 (galvanised steel) Insertion rubber of black EPDM 6mm thick. Suitable support structure as per directions of EIC including jointing & jointing material, labour, testing and commissioning along with pipeline as per Technical Specification & as per direction of Engineer-in-charge. Note: Rates are exclusive of tail piece/ dismantling joints and earth work.		
19.52.1	Class PN 1.6		
19.52.1.1	80 mm dia	each	9,780.00
19.52.1.2	100 mm dia	each	12,950.00
19.52.1.3	125 mm dia	each	18,350.00
19.52.1.4	150 mm dia	each	22,600.00
19.52.1.5	200 mm dia	each	38,300.00
19.52.1.6	250 mm dia	each	58,000.00
19.52.1.7	300 mm dia	each	82,300.00
19.52.1.8	350 mm dia	each	1,32,700.00
19.52.1.9	400 mm dia	each	1,36,900.00
19.52.1.10	450 mm dia	each	2,21,800.00
19.52.1.11	500 mm dia	each	2,64,500.00
19.52.1.12	600 mm dia	each	3,49,100.00
19.53	Providing, lowering, aligning, fixing in position in pipe line, DI double flanged resilient seated Dual plate check valve of approved make of following Pressure rating & dia complete, as per API: 594/ API: 598 and of following specifications: Body & Bonnet of Ductile cast iron of grade GGG40/GGG50 as per DIN 1693 or GR SG-400/12 as per		

Code No	Description	Unit	Rate Rs.
	IS 1865 or equivalent grade as per IS :3896-part2-1985 and subsequent revisions, Disc / plates - SG-400/12 or CF-8M,Face to face dimensions as per API: 594 , Flanges Drilled as per IS:1538. Electrostatic Epoxy Powder(EP-P) / Fusion Bonded Epoxy (Non-Toxic & suitable for drinking water) coated with minimum thickness of 250 micron applied on body and cover inside and outside . Disc seal ring of EPDM/ Neoprene (food grade quality) and disc seal retaining ring of SS/CS. Shaft of SS- AISI- 304/410 , Hinge SS AISI 316/304, Spring SS AISI 316/304,Bonnet Gasket EPDM ,Bush-Brass with EPDM/NBR "O "ring seal, Nut-Bolt confirming to IS:1363 and IS: 1367 (galvanised steel) , Insertion rubber of black EPDM 6mm thick .Suitable support structure as per directions of EIC including jointing & jointing material, labour, testing and commissioning along with pipeline as per Technical Specification & as per direction of Engineer-in-charge. Note: Rates are exclusive of tail piece/ dismantling joints and earth work.		
19.53.1	Class PN 1.6		
19.53.1.1	80 mm dia	each	13,250.00
19.53.1.2	100 mm dia	each	13,500.00
19.53.1.3	125 mm dia	each	22,300.00
19.53.1.4	150 mm dia	each	28,000.00
19.53.1.5	200 mm dia	each	33,700.00
19.53.1.6	250 mm dia	each	51,600.00
19.53.1.7	300 mm dia	each	55,300.00
19.53.1.8	350 mm dia	each	78,000.00
19.53.1.9	400 mm dia	each	1,09,000.00
19.53.1.10	450 mm dia	each	1,34,100.00
19.53.1.11	500 mm dia	each	1,88,500.00
19.53.1.12	600 mm dia	each	1,79,900.00
19.54	Providing, laying and fixing float valve system of following dia of C.I. with internal parts of auxiliary valve of copper float ball, gunmetal ball cap, brass lever, brass split pin, gunmetal piston & piston cap, washer of nitrile rubber with gunmetal body including all material, labour, hydraulic testing and commissioning as per Technical Specifications and as per direction of Engineer.		
19.54.1	150mm dia.	each	14,300.00
19.54.2	200mm dia.	each	19,100.00
19.54.3	250mm dia.	each	30,000.00
19.54.4	300mm dia.	each	44,000.00
19.54.5	350mm dia	each	69,200.00
19.54.6	400mm dia	each	1,16,800.00

Code No	Description	Unit	Rate Rs.
19.55	Providing, lowering, laying, aligning, fixing in position and jointing CI Transition Coupling Joints for making connection between AC pipes and CI/DI pipes to match the outside diameter of following proposed pipe sizes for potable water including all jointing material as per manufacturer's specification, cost of all labour, testing and commissioning as per Technical Specifications and as per direction of Engineer.		
19.55.1	80 mm dia	each	1,653.00
19.55.2	100 mm dia	each	1,891.00
19.55.3	125 mm dia	each	2,191.00
19.55.4	150 mm dia	each	2,308.00
19.55.5	200 mm dia	each	2,865.00
19.55.6	250 mm dia	each	3,455.00
19.55.7	300 mm dia	each	3,980.00
19.55.8	350 mm dia	each	6,080.00
19.55.9	400 mm dia	each	6,890.00
19.55.10	450 mm dia	each	8,400.00
19.55.11	500 mm dia	each	10,000.00
19.56	Providing, lowering, laying, aligning, fixing in position and jointing CI dismantling joint (suitable for sluice valves etc.) as per IS specifications complete of the following sizes including all jointing material, cost of all labour, testing and commissioning as per Technical Specifications and as per direction of Engineer.		
19.56.1	80 mm dia PN-1.0	each	2,610.00
19.56.2	100 mm dia PN-1.0	each	2,870.00
19.56.3	125 mm dia PN-1.0	each	3,065.00
19.56.4	150 mm dia PN-1.0	each	4,505.00
19.56.5	200 mm dia PN-1.0	each	6,760.00
19.56.6	250 mm dia PN-1.0	each	9,380.00
19.56.7	300 mm dia PN-1.0	each	11,900.00
19.56.8	350 mm dia PN-1.0	each	14,450.00
19.56.9	400 mm dia PN-1.0	each	18,400.00
19.56.10	450 mm dia PN-1.0	each	20,400.00
19.56.11	500 mm dia PN-1.0	each	25,100.00
19.56.12	600 mm dia PN-1.0	each	37,600.00
19.56.13	700 mm dia PN-1.0	each	55,500.00
19.57	Providing, lowering, laying, aligning, fixing in position and jointing CI D- joint class-10 as per IS specifications complete of the following		

Code No	Description	Unit	Rate Rs.
	sizes including all jointing material, cost of all labour, testing and commissioning as per Technical Specifications and as per direction of Engineer.		
19.57.1	80 mm dia	each	762.00
19.57.2	100 mm dia	each	846.00
19.57.3	125 mm dia	each	940.00
19.57.4	150 mm dia	each	1,131.00
19.57.5	200 mm dia	each	1,486.00
19.57.6	250 mm dia	each	1,733.00
19.57.7	300 mm dia	each	2,102.00
19.57.8	350 mm dia	each	3,180.00
19.57.9	400 mm dia	each	3,825.00
19.57.10	450 mm dia	each	5,280.00
19.57.11	500 mm dia	each	6,690.00
19.57.12	600 mm dia	each	8,620.00
19.58	Providing, lowering, laying, aligning, fixing in position and jointing CI D- joint class-15 as per IS specifications complete of the following sizes including all jointing material, cost of all labour, testing and commissioning as per Technical Specifications and as per direction of Engineer.		
19.58.1	80 mm dia	each	794.00
19.58.2	100 mm dia	each	886.00
19.58.3	125 mm dia	each	940.00
19.58.4	150 mm dia	each	1,201.00
19.58.5	200 mm dia	each	1,581.00
19.58.6	250 mm dia	each	1,853.00
19.58.7	300 mm dia	each	2,261.00
19.58.8	350 mm dia	each	3,425.00
19.58.9	400 mm dia	each	4,140.00
19.58.10	450 mm dia	each	5,740.00
19.58.11	500 mm dia	each	7,270.00
19.58.12	600 mm dia	each	9,400.00
19.59	Providing, lowering, laying, aligning, fixing in position CI Duckfoot bend in pipe line as per IS:1538 (amended up to date) suitable for potable water at all level/ depth including all material, labour hydraulic testing and commissioning as per technical specifications and as per direction of Engineer for following sizes:		
19.59.1	80 mm dia	each	2,635.00

Code No	Description	Unit	Rate Rs.
19.59.2	100 mm dia	each	3,225.00
19.59.3	125 mm dia	each	4,125.00
19.59.4	150 mm dia	each	5,270.00
19.59.5	200 mm dia	each	7,900.00
19.59.6	250 mm dia	each	11,600.00
19.59.7	300 mm dia	each	15,700.00
19.59.8	350 mm dia	each	22,600.00
19.59.9	400 mm dia	each	29,100.00
19.60	Providing, lowering, laying, aligning, fixing in position DI Duckfoot bend in pipe line as per IS:1538 (amended up to date) suitable for potable water at all level/ depth including all material, labour hydraulic testing and commissioning as per technical specifications and as per direction of Engineer for following sizes:		
19.60.1	80 mm dia	each	2,835.00
19.60.2	100 mm dia	each	3,450.00
19.60.3	125 mm dia	each	4,415.00
19.60.4	150 mm dia	each	5,700.00
19.60.5	200 mm dia	each	8,570.00
19.60.6	250 mm dia	each	14,350.00
19.60.7	300 mm dia	each	17,850.00
19.60.8	350 mm dia	each	28,500.00
19.60.9	400 mm dia	each	38,300.00
19.61	Providing, lowering, laying, aligning, fixing in position CI Foot valves in pipe line as per IS:4038-1986 (amended upto date) suitable for potable water at all level/ depth including all material, labour hydraulic testing and commissioning as per technical specifications and as per direction of Engineer for following sizes:		
19.61.1	80 mm dia	each	2,585.00
19.61.2	100 mm dia	each	3,290.00
19.61.3	125 mm dia	each	4,705.00
19.61.4	150 mm dia	each	7,820.00
19.61.5	200 mm dia	each	14,650.00
19.61.6	250 mm dia	each	21,500.00
19.61.7	300 mm dia	each	24,200.00
19.61.8	350 mm dia	each	45,800.00
19.61.9	400 mm dia	each	59,400.00
19.61.10	450 mm dia	each	65,000.00

Code No	Description	Unit	Rate Rs.
19.61.11	500 mm dia	each	91,300.00
19.62	Providing and fixing Stain less steel AISI 304 Strainer Cylindrical type for out let, drain pipes of following sizes including all material labour as per Technical Specifications and as per direction of Engineer.		
19.62.1	150 mm dia	each	10,250.00
19.62.2	200 mm dia	each	16,400.00
19.62.3	250 mm dia	each	27,700.00
19.62.4	350 mm dia	each	38,000.00
19.62.5	400 mm dia	each	70,400.00
19.62.6	450 mm dia	each	75,900.00
19.62.7	500 mm dia	each	1,01,700.00
19.62.8	600 mm dia	each	1,20,400.00
19.63	Providing and fixing in position CI Puddle collar (approx. 1m length) inside the wall including all material labour as per Technical Specifications and as per direction of Engineer.		
19.63.1	80mm dia	each	4,595.00
19.63.2	100mm dia	each	5,250.00
19.63.3	125mm dia	each	6,290.00
19.63.4	150mm dia	each	7,540.00
19.63.5	200mm dia	each	10,600.00
19.63.6	250mm dia	each	13,700.00
19.63.7	300mm dia	each	17,400.00
19.63.8	350mm dia	each	22,500.00
19.63.9	400mm dia	each	27,000.00
19.63.10	450mm dia	each	32,800.00
19.63.11	500mm dia	each	39,800.00
19.64	Providing and fixing angle iron frame 25 x 25 x 3mm for ventilators fixed with 24 gauge square mesh of 14 gauge stainless steel wire including 10 mm square bars at interval of 100 mm welded to frame with metal beading of 20 x 3mm complete in all respect as per technical specifications and drawings as per technical specification and as per direction of Engineer.	sqm	144.00
19.65	Providing, installation, testing and commissioning of following Stain less steel AISI 304 Expansion bellows of 10/16 bar rating with tie rods as per technical specifications and layout drawings including jointing material like nuts, bolts, rubber gaskets etc. complete in all respect as per technical specification and as per direction of Engineer.		

Code No	Description	Unit	Rate Rs.
19.65.1	80 mm dia	each	7,770.00
19.65.2	100 mm dia	each	8,550.00
19.65.3	125 mm dia	each	9,800.00
19.65.4	150 mm dia	each	11,600.00
19.65.5	200 mm dia	each	14,850.00
19.65.6	250 mm dia	each	18,550.00
19.65.7	300 mm dia	each	20,400.00
19.65.8	350 mm dia	each	25,200.00
19.65.9	400 mm dia	each	36,900.00
19.65.10	450 mm dia	each	38,800.00
19.65.11	500 mm dia	each	53,200.00
19.65.12	600 mm dia	each	69,200.00
19.65.13	700 mm dia	each	99,400.00
19.65.14	800 mm dia	each	1,25,100.00
19.65.15	900 mm dia	each	1,50,500.00
19.65.16	1000 mm dia	each	1,90,500.00
19.66	Supply, fixing, testing and commissioning of Multi jet magnetic type domestic water meter Class-B confirming to IS:779-1996 / EEC/ MDIL with end coupling as per relevant technical specification and the direction of the Engineer		
19.66.1	15 mm size	each	1,702.00
19.66.2	20 mm size	each	2,520.00
19.66.3	25 mm size	each	3,780.00
19.66.4	32 mm size	each	9,050.00
19.66.5	50 mm size	each	11,650.00
19.67	Supplying and Replacing, testing and commissioning of existing Multi jet magnetic type domestic water meter Class-B confirming to IS:779-1996 / EEC/ MDIL with end coupling as per relevant technical specification and the direction of the Engineer.		
19.67.1	15 mm size	each	1,955.00
19.67.2	20 mm size	each	2,770.00
19.67.3	25 mm size	each	4,030.00
19.67.4	32 mm size	each	9,340.00
19.67.5	50 mm size	each	9,420.00
19.68	Supply, fixing, testing and commissioning of Orifice flow equalizer (Brass) for 15 mm domestic water meter with seal wire & seal complete set as per drawing. Weight of Orifice flow equalizer (Brass)		

Code No	Description	Unit	Rate Rs.
	complete set must be in 110 gm +/- 5% tolerance complete as per specification complete.		
19.68.1	To be fixed on new domestic water meter by replacing with nut and tail piece at delivery end	each	451.00
19.68.2	To be fixed on old existing domestic water meter	each	620.00
19.69	Supplying and Fixing water METER BOX- with Weather resistant PE/ GRP box, press fitted Lid fixing & locking and locked with built-in or external lock.	each	820.00
19.70	Providing, installation, testing and commissioning of Electromagnetic Flow Meter etc. including all materials (excluding CI/DI fittings) and making connection with existing pipeline required for Electromagnetic Flow Meter including cutting the existing pipe line etc. complete in all respect as per technical specification and as per direction of Engineer.		
19.70.1	EMF80 for DN 80 mm	each	1,21,700.00
19.70.2	EMF100 for DN 100 mm	each	1,29,800.00
19.70.3	EMF150 for DN 150 mm	each	1,52,200.00
19.70.4	EMF200 for DN 200 mm	each	1,68,200.00
19.70.5	EMF250 for DN 250 mm	each	2,46,700.00
19.70.6	EMF300 for DN 300 mm	each	2,77,500.00
19.70.7	EMF400 for DN 400 mm	each	6,15,000.00
19.70.8	EMF450 for DN 450 mm	each	6,42,000.00
19.70.9	EMF500 for DN 500 mm	each	7,70,100.00
19.70.10	EMF600 for DN 600 mm	each	8,12,600.00
19.71	Providing, installation, testing and commissioning of Bulk Flow Meter with removable mechanism class "B" confirming to ISO: 4064/1 including all materials (excluding CI/DI fittings) and making connection with existing pipeline required for Bulk Flow Meter including cutting the existing pipe line etc complete in all respect as per technical specification and as per direction of Engineer.		
19.71.1	BFM80 for DN 80 mm	each	13,900.00
19.71.2	BFM100 for DN 100 mm	each	18,900.00
19.71.3	BFM125 for DN 125 mm	each	25,500.00
19.71.4	BFM150 for DN 150 mm	each	26,900.00
19.71.5	BFM200 for DN 200 mm	each	38,100.00
19.71.6	BFM250 for DN 250 mm	each	62,800.00
19.71.7	BFM300 for DN 300 mm	each	1,08,000.00
19.71.8	BFM400 for DN 400 mm	each	1,53,200.00
19.71.9	BFM500 for DN 500 mm	each	1,91,500.00

Code No	Description	Unit	Rate Rs.
19.71.10	BFM600 for DN 600 mm	each	2,29,600.00
19.72	Construction of RCC valve chamber for different types of valves including earthwork excavation, 100 mm PCC M10 (1:3:6 i.e 1 Cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) as levelling course, RCC M20 grade (1:1½:3 i.e. 1 Cement : 1½ coarse sand : 3 graded stone aggregate 20 mm nominal) size for base slab, side wall & cover slab all 125 mm thick with C.I. surface box with hinged cover 100x100x75 mm (deep), including cost of steel reinforcement not less than 80 kg per cum CC, form work, proper curing of concrete work, complete in all respect as per standard specifications and drawings and as directed by Engineer-in-charge.		
19.72.1	1200 x 1200 x 1300 mm (depth) for 80/100/125/150 mm dia valve	each	11,450.00
19.72.2	1300 x 1300 x 1450 mm (depth) for 200/250/300 mm dia valve	each	19,350.00
19.72.3	1400 x 1600 x 1750 mm (depth) for 350/400/450/500/600 mm dia valve	each	26,400.00
19.73	Construction of brick masonry valve chamber for different type of valves with 75 class designation brick work in cement mortar 1:4 (1 cement : 4 coarse sand), wall 230 mm thick, top cover slab 150mm thick RCC M20 grade (1:1½:3 i.e. 1 Cement : 1½ coarse sand : 3 graded stone aggregate 20mm nominal size) with C.I. surface box with hinged cover 100x100x75mm (deep) including earthwork excavation, 100mm thick levelling course of PCC M10 (1:3:6 i.e. 1 Cement : 3 coarse sand : 6 graded stone aggregate 20mm nominal size) including cost of steel reinforcement not less than 80kg per cum CC, form work, proper curing complete in all respect as per standard specifications and drawings and as directed by Engineer.		
19.73.1	60cm x 60cm x 75cm (depth) for 80/100/125/150 mm dia valve	each	8,190.00
19.73.2	90cm x 90cm x 100cm (depth) for 200/250/300 mm dia valve	each	14,250.00
19.73.3	120cm x 120cm x 100cm (depth) for 350/400/450/500/600 mm dia valve	each	19,650.00
19.74	Disinfecting water mains by flushing with water containing bleaching powder at 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 :		
19.74.1	80 mm dia	metre	14.40
19.74.2	100 mm dia	metre	18.80
19.74.3	125 mm dia	metre	23.70
19.74.4	150 mm dia	metre	30.80
19.74.5	200 mm dia	metre	41.30
19.74.6	250 mm dia	metre	53.80
19.74.7	300 mm dia	metre	66.30

Code No	Description	Unit	Rate Rs.
19.74.8	350 mm dia	metre	79.70
19.74.9	400 mm dia	metre	93.80
19.74.10	450 mm dia	metre	109.00
19.74.11	500 mm dia	metre	124.50
19.74.12	600 mm dia	metre	158.50
19.74.13	700 mm dia	metre	199.00
19.74.14	750 mm dia	metre	247.00
19.74.15	800 mm dia	metre	298.50
19.74.16	900 mm dia	metre	357.50
19.74.17	1000 mm dia	metre	423.50
19.75	Extra for every operation of disinfecting the water main by flushing with water containing bleaching powder at 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 :		
19.75.1	80 mm dia	metre	5.50
19.75.2	100 mm dia	metre	6.95
19.75.3	125 mm dia	metre	8.85
19.75.4	150 mm dia	metre	11.30
19.75.5	200 mm dia	metre	14.80
19.75.6	250 mm dia	metre	19.70
19.75.7	300 mm dia	metre	22.50
19.75.8	350 mm dia	metre	26.50
19.75.9	400 mm dia	metre	29.90
19.75.10	450 mm dia	metre	37.70
19.75.11	500 mm dia	metre	41.60
19.75.12	600 mm dia	metre	54.20
19.75.13	700 mm dia	metre	67.80
19.75.14	750 mm dia	metre	82.40
19.75.15	800 mm dia	metre	98.10
19.75.16	900 mm dia	metre	119.00
19.75.17	1000 mm dia	metre	137.00
19.76	Supply of Chlorine Safety Equipment set comprising of the items Chlorine leak detector with two sensors, self contained compressed air breathing apparatus, safety shower with eye wash, emergency tonner repair kit, protective clothing such as PVC overall, gloves and rubber boots; complete as per detailed specifications & the directed of the Engineer.	set	3,37,200.00

Code No	Description	Unit	Rate Rs.
19.77	Supply, fabricating & fixing of anodised (20 to 25 micron) Aluminium ladder of 450mm wide with 2 nos rectangular section of 65 x 35 mm (3 mm thick) as vertical post and 25 mm bars steps at 300 mm c/c complete in all respect as per the specification and the direction of the Engineer.	metre	1,911.00
19.78	Providing, fabricating and erecting MS ladder of 450mm wide made of 65 x 65 x 6mm angle iron and 20mm MS bars for walkway to top of the OHSR including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer complete in all respect as per specifications and the direction of the Engineer.	metre	2,300.00
19.79	Providing, fabricating and erecting MS ladder (with MS cage) of 450mm wide made of 65 x 65 x 6mm angle iron, 20mm MS bars for walk way to top of the OHSR and for cage flat 3 Nos-75 x 8 as vertical member and flat 40 x 5 as horizontal member 300 c/c including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete as per specification and the direction of the Engineer.	metre	5,690.00
19.80	Providing, fabricating and erecting hand railing for walkway, top dome slab, balcony, staircase and landing consist of two rows (one at top and other at middle level) of 20 mm GI pipe class-B and 900 mm high vertical angle 65X65X6 mm at spacing 1.50 m c/c including welding, threading, applying a priming coat of approved steel primer and embedding in cement concrete floor complete in all respect as per specification and the direction of the Engineer.	metre	1,160.00
19.81	Providing, installation, testing and commissioning of vacuum Feed Gas Chlorinator system with all accessories and making connection with existing pipeline required including supply & installation of ejector unit, Vacuum chlorination unit, trunnion roller support, auxiliary container valve, flexible copper connector, manifold valve, tonner manifold pipes, chlorine Pressure gauge, Isolation valve, gas filter, pressure reducing valve, chlorine gas pipe with fittings, diffuser, lifting beam, load indicator, 25 NB PP diaphragm Valve on injector inlet & outlet, 32 OD uPVC pipe for chlorine solution, 25 NB GI pipe for pump suction & delivery, 25 NB GM gate valve on pump suction & delivery, 25 NB GM 'Y' type strainer on pump suction, 25 NB GM Check valve on pump delivery, pressure gauge with Isolated valve on pump delivery and chlorine booster pump with motor of required capacity including safety equipment complete in all respect as per specification and the direction of the Engineer.		
19.81.1	1 kg/hr capacity	each	6,22,800.00
19.81.2	2 kg/hr capacity	each	6,35,200.00
19.81.3	3 kg/hr capacity	each	6,41,400.00
19.82	Supply of Chlorine Tonner as per specifications with rollers complete in all respect as per the direction of Engineer.	each	1,67,900.00
19.83	Providing, installation, testing and commissioning of Fiber Reinforced Plastic made hoods for each chlorine tonner along with		

Code No	Description	Unit	Rate Rs.
	necessary leak proof piping connected to air blowers for forced ventilation during probable chlorine tonner leakage completely interlocked with Chlorine Gas leak detector to main PLC. The scope includes FRP hood for all connected tonners, interconnecting piping, air blower of adequate capacity (working and stand by) and ancillary electrical works capacity complete in all respect as per specification and the direction of the Engineer.		
19.83.1	1 kg/hr capacity	each	1,21,250.00
19.83.2	2 kg/hr capacity	each	1,34,500.00
19.83.3	3 kg/hr capacity	each	1,42,400.00
19.84	Providing bedding/ hunching for pipe with clean sand passing through IS sieve 2.36 mm and retained on 180 micron sieve in layers including ramming ,consolidation complete in all respect as per specification and the direction of the Engineer with all lead and lift.	cum	1,685.00
19.85	Providing, lowering, laying, aligning, fixing in position in pipe line Zero Velocity Valves of 600 mm dia as per IS:14845 of following dia (including jointing and jointing material), including all material, labour, testing and commissioning as per Technical Specifications and as per direction of Engineer etc, complete in all respect.	each	3,39,400.00
19.86	Providing, lowering, laying, aligning, fixing in position in pipe line Air Cushion Valves 150 mm dia as per IS:14845 of following dia (including jointing and jointing material), including all material, labour, testing and commissioning as per Technical Specifications and as per direction of Engineer etc, complete in all respect.	each	1,40,600.00
19.87	Labour Charges for making connection with proposed pipe line to existing pipe line of AC/ DI/ CI including dewatering etc. complete but excluding the cost of pipes, specials, joints etc as directed by site engineer for following dia. (Earthwork to be measured and paid separately)		
19.87.1	80-200 mm dia	each	3,460.00
19.87.2	250-500 mm dia	each	4,645.00
19.88	Labour Charges for making connection with proposed pipe line to existing pipe line of PVC/ HDPE/ GRP including dewatering etc. complete but excluding the cost of pipes, specials, joints etc as directed by site engineer for following dia. (Earthwork to be measured and paid separately)		
19.88.1	75-200 mm dia	each	2,870.00
19.88.2	250-500 mm dia	each	4,055.00
19.89	Labour Charges for leakage repair in existing pipe line of AC/ DI/ CI including dewatering etc. complete but excluding the cost of pipes, specials, joints etc as directed by site engineer for following dia. (Earthwork to be measured and paid separately)		
19.89.1	80-200 mm dia	each	3,105.00

Code No	Description	Unit	Rate Rs.
19.89.2	250-500 mm dia	each	4,290.00
19.90	Labour Charges for leakage repair in existing pipe line of PVC/ HDPE/ GRP including dewatering etc. complete but excluding the cost of pipes, specials, joints etc as directed by site engineer for following dia. (Earthwork to be measured and paid separately)		
19.90.1	75-200 mm dia	each	2,630.00
19.90.2	250-500 mm dia	each	3,815.00
19.91	Leakage repair in existing pipe line of HDPE including the cost of pipe, electrofusion coupler joints, dewatering etc. complete as directed by site engineer for following dia. (Earthwork to be measured and paid separately)		
19.91.1	75-200 mm dia	each	3,110.00
19.91.2	250-500 mm dia	each	4,510.00
19.92	Leakage repair in existing pipe line of GRP excluding cost of pipes, specials, joint, dewatering etc. as directed by site engineer for following dia. (Earthwork to be measured and paid separately)		
19.92.1	75-200 mm dia	each	2,133.00
19.92.2	250-500 mm dia	each	3,320.00
19.93	Making disconnection of existing pipeline of AC/ DI/ CI/ PVC/ GI etc including dewatering, cost of clamps, plates, specials, joints etc. complete as directed by site engineer for following dia. (Earthwork to be measured and paid separately)		
19.93.1	75-200 mm dia	each	3,840.00
19.93.2	250-500 mm dia	each	5,510.00
19.94	Operation, maintenance and management of water supply system through regular water supply in DMAs/Zones from service reservoirs to consumer water meter points as per specifications including consumables & excluding power charges as directed by Engineer In-charge.	consumer month	60.00
19.95	Operation, maintenance and management of entire water supply system through regular water supply up to consumer water meter points as per specifications including consumables & excluding power charges as directed by Engineer In-charge.	consumer month	90.00
19.96	De-jointing and removing of already laid CI/DI/MS/AC pipes of following diameters in excavated trenches with care, without damaging pipes, CID joints, valves, specials etc. and other materials and then refilling of soil after de-laying and de-jointing of pipelines with proper compaction and disposing of all surplus soil as directed within a lead of 50 mtr. This also include stacking the pipes with care and transporting the same to div./sub div. store or as directed by EIC with in the division. (Rates are Exclusive of Earth Work)		
19.96.1	80 mm	metre	59.30

Code No	Description	Unit	Rate Rs.
19.96.2	100 mm	metre	71.10
19.96.3	125 mm	metre	83.00
19.96.4	150 mm	metre	94.80
19.96.5	200 mm	metre	106.50
19.96.6	250 mm	metre	118.00
19.96.7	300 mm	metre	132.00
19.96.8	350 mm	metre	146.50
19.96.9	400 mm	metre	170.00
19.96.10	450 mm	metre	208.00
19.96.11	500 mm	metre	257.50
19.96.12	600 mm	metre	307.50
19.97	Providing and fixing in position lightening arrester set complete with 600mm x 600mm x 6mm thick G.I. earthing plate embedded below ground in earthing pit at 3.5 metre depth, G.I. strip of size 25mmx5mm thick from earthing plate to top of Over head tank, G.I. Finial made of GI bar 25mm dia and 2m long fixed on top of OH tank and connected to GI strip. The earthing set shall comply of IS:3043 complete in all respect as per specification and the direction of the Engineer.	set	16,800.00
19.98	Supply, delivery at site with necessary packing, receiving, unloading, shifting, storing, installation, testing and commissioning of Horizontal Centrifugal Split Casting pumps with motor as per IS 12615-2011 or amended up to date, CI casing and casing ring, SS 316 impeller, SS 410 Shaft and shaft sleeve, coupling guard, common base plate, foundation bolts etc. complete with all respect as per the specification		
19.98.1	Discharge 20 to 30 LPS and head 20 to 30 M	each	1,72,320.00
19.98.2	Discharge 20 to 30 LPS and head 31 to 40 M	each	2,50,680.00
19.98.3	Discharge 20 to 30 LPS and head 41 to 50 M	each	2,95,560.00
19.98.4	Discharge 20 to 30 LPS and head 51 to 60 M	each	3,38,280.00
19.98.5	Discharge 20 to 30 LPS and head 61 to 70 M	each	4,31,760.00
19.98.6	Discharge 20 to 30 LPS and head 71 to 80 M	each	4,32,480.00
19.98.7	Discharge 20 to 30 LPS and head 81 to 90 M	each	4,32,480.00
19.98.8	Discharge 31 to 40 LPS and head 20 to 30 M	each	2,50,680.00
19.98.9	Discharge 31 to 40 LPS and head 31 to 40 M	each	2,95,560.00
19.98.10	Discharge 31 to 40 LPS and head 41 to 50 M	each	3,38,280.00
19.98.11	Discharge 31 to 40 LPS and head 51 to 60 M	each	4,32,000.00
19.98.12	Discharge 31 to 40 LPS and head 61 to 70 M	each	5,09,280.00

Code No	Description	Unit	Rate Rs.
19.98.13	Discharge 31 to 40 LPS and head 71 to 80 M	each	5,09,280.00
19.98.14	Discharge 31 to 40 LPS and head 81 to 90 M	each	5,94,000.00
19.98.15	Discharge 41 to 50 LPS and head 20 to 30 M	each	2,95,560.00
19.98.16	Discharge 41 to 50 LPS and head 31 to 40 M	each	4,32,000.00
19.98.17	Discharge 41 to 50 LPS and head 41 to 50 M	each	4,32,480.00
19.98.18	Discharge 41 to 50 LPS and head 51 to 60 M	each	5,09,280.00
19.98.19	Discharge 41 to 50 LPS and head 61 to 70 M	each	5,94,000.00
19.98.20	Discharge 41 to 50 LPS and head 71 to 80 M	each	6,95,640.00
19.98.21	Discharge 41 to 50 LPS and head 81 to 90 M	each	6,95,640.00
19.98.22	Discharge 51 to 60 LPS and head 20 to 30 M	each	3,38,280.00
19.98.23	Discharge 51 to 60 LPS and head 31 to 40 M	each	4,32,000.00
19.98.24	Discharge 51 to 60 LPS and head 41 to 50 M	each	5,09,280.00
19.98.25	Discharge 51 to 60 LPS and head 51 to 60 M	each	5,94,000.00
19.98.26	Discharge 51 to 60 LPS and head 61 to 70 M	each	6,95,400.00
19.98.27	Discharge 51 to 60 LPS and head 71 to 80 M	each	8,87,520.00
19.98.28	Discharge 51 to 60 LPS and head 81 to 90 M	each	8,87,640.00
19.98.29	Discharge 61 to 70 LPS and head 20 to 30 M	each	3,38,280.00
19.98.30	Discharge 61 to 70 LPS and head 31 to 40 M	each	4,32,000.00
19.98.31	Discharge 61 to 70 LPS and head 41 to 50 M	each	5,94,000.00
19.98.32	Discharge 61 to 70 LPS and head 51 to 60 M	each	6,95,400.00
19.98.33	Discharge 61 to 70 LPS and head 61 to 70 M	each	8,87,520.00
19.98.34	Discharge 61 to 70 LPS and head 71 to 80 M	each	8,87,640.00
19.98.35	Discharge 61 to 70 LPS and head 81 to 90 M	each	10,24,320.00
19.98.36	Discharge 71 to 80 LPS and head 20 to 30 M	each	4,32,000.00
19.98.37	Discharge 71 to 80 LPS and head 31 to 40 M	each	5,09,280.00
19.98.38	Discharge 71 to 80 LPS and head 41 to 50 M	each	6,95,400.00
19.98.39	Discharge 71 to 80 LPS and head 51 to 60 M	each	8,87,520.00
19.98.40	Discharge 71 to 80 LPS and head 61 to 70 M	each	8,87,640.00
19.98.41	Discharge 71 to 80 LPS and head 71 to 80 M	each	10,24,320.00
19.98.42	Discharge 71 to 80 LPS and head 81 to 90 M	each	11,99,400.00
19.98.43	Discharge 81 to 90 LPS and head 20 to 30 M	each	4,32,000.00
19.98.44	Discharge 81 to 90 LPS and head 31 to 40 M	each	5,94,000.00
19.98.45	Discharge 81 to 90 LPS and head 41 to 50 M	each	6,95,400.00
19.98.46	Discharge 81 to 90 LPS and head 51 to 60 M	each	8,87,520.00

Code No	Description	Unit	Rate Rs.
19.98.47	Discharge 81 to 90 LPS and head 61 to 70 M	each	8,87,640.00
19.98.48	Discharge 81 to 90 LPS and head 71 to 80 M	each	11,99,400.00
19.98.49	Discharge 81 to 90 LPS and head 81 to 90 M	each	11,99,640.00
19.98.50	Discharge 91 to 100 LPS and head 20 to 30 M	each	5,09,280.00
19.98.51	Discharge 91 to 100 LPS and head 31 to 40 M	each	6,95,400.00
19.98.52	Discharge 91 to 100 LPS and head 41 to 50 M	each	8,87,520.00
19.98.53	Discharge 91 to 100 LPS and head 51 to 60 M	each	8,87,640.00
19.98.54	Discharge 91 to 100 LPS and head 61 to 70 M	each	10,24,320.00
19.98.55	Discharge 91 to 100 LPS and head 71 to 80 M	each	11,99,400.00
19.98.56	Discharge 91 to 100 LPS and head 81 to 90 M	each	13,26,240.00
19.98.57	Discharge 101 to 120 LPS and head 20 to 30 M	each	5,09,280.00
19.98.58	Discharge 101 to 120 LPS and head 31 to 40 M	each	6,95,400.00
19.98.59	Discharge 101 to 120 LPS and head 41 to 50 M	each	8,87,520.00
19.98.60	Discharge 101 to 120 LPS and head 51 to 60 M	each	10,24,320.00
19.98.61	Discharge 101 to 120 LPS and head 61 to 70 M	each	11,99,400.00
19.98.62	Discharge 101to 120 LPS and head 71 to 80 M	each	11,99,400.00
19.98.63	Discharge 101 to 120 LPS and head 81 to 90 M	each	16,10,280.00
19.98.64	Discharge 121 to 140 LPS and head 20 to 30 M	each	5,94,000.00
19.98.65	Discharge 121 to 140 LPS and head 31 to 40 M	each	8,87,520.00
19.98.66	Discharge 121 to 140 LPS and head 41 to 50 M	each	10,24,320.00
19.98.67	Discharge 121 to 140 LPS and head 51 to 60 M	each	11,99,400.00
19.98.68	Discharge 121 to 140 LPS and head 61 to 70 M	each	11,99,640.00
19.98.69	Discharge 121 to 140 LPS and head 71 to 80 M	each	13,84,320.00
19.98.70	Discharge 121 to 140 LPS and head 81 to 90 M	each	16,10,280.00
19.98.71	Discharge 141 to 160 LPS and head 20 to 30 M	each	6,95,400.00
19.98.72	Discharge 141 to 160 LPS and head 31 to 40 M	each	8,87,520.00
19.98.73	Discharge 141 to 160 LPS and head 41 to 50 M	each	11,99,400.00
19.98.74	Discharge 141 to 160 LPS and head 51 to 60 M	each	13,26,240.00
19.98.75	Discharge 141 to 160 LPS and head 61 to 70 M	each	16,10,280.00
19.98.76	Discharge 141 to 160 LPS and head 71 to 80 M	each	16,11,360.00
19.98.77	Discharge 141 to 160 LPS and head 81 to 90 M	each	19,19,040.00
19.98.78	Discharge 161 to 180 LPS and head 20 to 30 M	each	8,87,520.00
19.98.79	Discharge 161 to 180 LPS and head 31 to 40 M	each	10,24,320.00
19.98.80	Discharge 161 to 180 LPS and head 41 to 50 M	each	11,99,400.00

Code No	Description	Unit	Rate Rs.
19.98.81	Discharge 161 to 180 LPS and head 51 to 60 M	each	13,84,320.00
19.98.82	Discharge 161 to 180 LPS and head 61 to 70 M	each	16,10,280.00
19.98.83	Discharge 161 to 180 LPS and head 71 to 80 M	each	17,66,880.00
19.98.84	Discharge 161 to 180 LPS and head 81 to 90 M	each	19,19,040.00
19.98.85	Discharge 181 to 200 LPS and head 20 to 30 M	each	8,87,520.00
19.98.86	Discharge 181 to 200 LPS and head 31 to 40 M	each	11,99,400.00
19.98.87	Discharge 181 to 200 LPS and head 41 to 50 M	each	13,26,240.00
19.98.88	Discharge 181 to 200 LPS and head 51 to 60 M	each	16,10,280.00
19.98.89	Discharge 181 to 200 LPS and head 61 to 70 M	each	17,66,880.00
19.98.90	Discharge 181 to 200 LPS and head 71 to 80 M	each	20,68,320.00
19.98.91	Discharge 181 to 200 LPS and head 81 to 90 M	each	22,87,080.00
19.98.92	Discharge 201 to 220 LPS and head 20 to 30 M	each	8,87,520.00
19.98.93	Discharge 201 to 220 LPS and head 31 to 40 M	each	11,99,400.00
19.98.94	Discharge 201 to 220 LPS and head 41 to 50 M	each	16,10,280.00
19.98.95	Discharge 201 to 220 LPS and head 51 to 60 M	each	17,66,880.00
19.98.96	Discharge 201 to 220 LPS and head 61 to 70 M	each	19,19,040.00
19.98.97	Discharge 221 to 240 LPS and head 20 to 30 M	each	10,24,320.00
19.98.98	Discharge 221 to 240 LPS and head 31 to 40 M	each	13,26,240.00
19.98.99	Discharge 221 to 240 LPS and head 41 to 50 M	each	16,10,280.00
19.98.100	Discharge 221 to 240 LPS and head 51 to 60 M	each	19,19,040.00
19.98.101	Discharge 221 to 240 LPS and head 61 to 70 M	each	20,68,320.00
19.98.102	Discharge 241 to 260 LPS and head 20 to 30 M	each	10,24,320.00
19.98.103	Discharge 241 to 260 LPS and head 31 to 40 M	each	13,84,320.00
19.98.104	Discharge 241 to 260 LPS and head 41 to 50 M	each	16,10,280.00
19.98.105	Discharge 241 to 260 LPS and head 51 to 60 M	each	19,19,040.00
19.98.106	Discharge 241 to 260 LPS and head 61 to 70 M	each	22,87,080.00
19.98.107	Discharge 261 to 280 LPS and head 20 to 30 M	each	11,99,400.00
19.98.108	Discharge 261 to 280 LPS and head 31 to 40 M	each	16,10,280.00
19.98.109	Discharge 261 to 280 LPS and head 41 to 50 M	each	17,66,880.00
19.98.110	Discharge 261 to 280 LPS and head 51 to 60 M	each	20,68,320.00
19.98.111	Discharge 261 to 280 LPS and head 61 to 70 M	each	24,65,160.00
19.98.112	Discharge 281 to 300 LPS and head 20 to 30 M	each	11,99,400.00
19.98.113	Discharge 281 to 300 LPS and head 31 to 40 M	each	16,10,280.00
19.98.114	Discharge 281 to 300 LPS and head 41 to 50 M	each	19,19,040.00

Code No	Description	Unit	Rate Rs.
19.98.115	Discharge 281 to 300 LPS and head 51 to 60 M	each	20,68,320.00
19.98.116	Discharge 281 to 300 LPS and head 61 to 70 M	each	24,65,160.00
19.98.117	Discharge 301 to 325 LPS and head 20 to 30 M	each	13,26,240.00
19.98.118	Discharge 301 to 325 LPS and head 31 to 40 M	each	16,10,280.00
19.98.119	Discharge 301 to 325 LPS and head 41 to 50 M	each	20,68,320.00
19.98.120	Discharge 301 to 325 LPS and head 51 to 60 M	each	22,87,080.00
19.98.121	Discharge 301 to 325 LPS and head 61 to 70 M	each	27,42,600.00
19.98.122	Discharge 326 to 350 LPS and head 20 to 30 M	each	13,26,240.00
19.98.123	Discharge 326 to 350 LPS and head 31 to 40 M	each	17,66,880.00
19.98.124	Discharge 326 to 350 LPS and head 41 to 50 M	each	20,68,320.00
19.98.125	Discharge 326 to 350 LPS and head 51 to 60 M	each	24,65,160.00
19.98.126	Discharge 326 to 350 LPS and head 61 to 70 M	each	27,42,600.00
19.98.127	Discharge 351 to 400 LPS and head 20 to 30 M	each	16,10,280.00
19.98.128	Discharge 351 to 400 LPS and head 31 to 40 M	each	19,19,040.00
19.98.129	Discharge 351 to 400 LPS and head 41 to 50 M	each	22,87,080.00
19.98.130	Discharge 351 to 400 LPS and head 51 to 60 M	each	27,42,600.00
19.98.131	Discharge 351 to 400 LPS and head 61 to 70 M	each	30,12,840.00
19.99	Providing, installation, testing and commissioning of Centrifugal Monoblock pump set conforming to IS 9079 , 2 pole motor operating at synchronised speed of 3000 RPM with requisite MOC impeller, priming funnel, cock, suitable flanges at suction and delivery side. Pump shall have common shaft for pump and motor. Motor shall be suitable for working on 415 V $\pm$ 10%, 3 Ph, 50 Hz A.C. Supply. Motor shall be TEFC type and Pump set shall be suitable for working at various discharge and head requirements as per scope of work. Pump shall be erected on C.C. foundation / cross channels / RSJ frame block with suitable foundation bolts grouted in C.C. foundation block etc. complete in all respect as per specification, scope of work and direction of Engineer in-charge of following power rating, suitable for prescribed duty conditions mentioned in TD.		
19.99.1	Centrifugal Monoblock Pump set (Single Stage)		
19.99.1.1	2.2 KW (3.0 HP)	each	35,280.00
19.99.1.2	3.7 KW (5.0 HP)	each	45,480.00
19.99.1.3	5.5 KW (7.5 HP)	each	57,120.00
19.99.1.4	7.5 KW (10 HP)	each	69,960.00
19.99.1.5	9.3 KW (12.5 HP)	each	81,600.00
19.99.1.6	11.0 KW (15 HP)	each	86,040.00
19.99.1.7	15.0 KW (20.0 HP)	each	1,12,680.00

Code No	Description	Unit	Rate Rs.
19.99.1.8	18.5 KW (25.0 HP)	each	1,48,680.00
19.99.2	Centrifugal Monoblock Pump set (Double Stage)		
19.99.2.1	3.7 KW (5.0 HP)	each	52,200.00
19.99.2.2	5.5 KW (7.5 HP)	each	63,480.00
19.99.2.3	7.5 KW (10 HP)	each	76,200.00
19.99.2.4	9.3 KW (12.5 HP)	each	84,240.00
19.99.2.5	11.0 KW (15 HP)	each	93,120.00
19.99.2.6	15.0 KW (20.0 HP)	each	1,21,800.00
19.100	Providing, installation, testing and commissioning of Mono block Vacuum pump set with base plate including C.C. foundation / cross channels / RSJ frame and foundation bolts etc complete in all respect as per specification, scope of work and direction of Engineer in-charge.		
19.100.1	0.75 KW (1 HP), Single Ph	each	32,280.00
19.100.2	2.2 KW (3.0 HP), Three Ph	each	58,800.00
19.101	Providing, installation, testing and commissioning of Vacuum pump set with horizontal foot mounted TEFC squirrel cage motor working on three phase 50 Hz, 415 Volts +/- 10% with base plate including cost of flexible couplings, coupling guard etc complete in all respect as per specification, scope of work and direction of Engineer in-charge.		
19.101.1	3.7 KW (5.0 HP)	each	1,25,160.00
19.101.2	7.5 KW (10 HP)	each	1,54,200.00
19.102	Providing, installation, testing and commissioning of Submerged Centrifugal Pump sets with motor 4 pole synchronised speed of 1500 rpm (water immersed, dry air filled, class "F" insulated TEWC motor integrally mounted on volute casing pump sets for drinking water) 3 phase, 415 volt +/- 10%, along with suitable foundation/ installation device and with 10 mtr cable, material of construction of impeller SS, casing (volute) CI, wearing ring SS, etc. complete in all respect as per specification, scope of work and direction of Engineer in-charge of following power rating, suitable for prescribed duty conditions mentioned in TD.		
19.102.1	15 KW	each	2,52,360.00
19.102.2	18.5 KW	each	3,10,920.00
19.102.3	22 KW	each	3,69,960.00
19.102.4	30 KW	each	5,04,120.00
19.102.5	37 KW	each	6,18,840.00
19.102.6	45 KW	each	6,54,960.00
19.102.7	55 KW	each	8,41,080.00

Code No	Description	Unit	Rate Rs.
19.102.8	75 KW	each	9,33,840.00
19.102.9	90 KW	each	12,63,720.00
19.102.10	110 KW	each	15,54,840.00
19.102.11	125 KW	each	17,05,680.00
19.102.12	132 KW	each	17,98,920.00
19.102.13	160 KW	each	20,71,320.00
19.102.14	180 KW	each	22,00,440.00
19.102.15	200 KW	each	26,40,480.00
19.103	Providing, installation, testing and commissioning of submersible Monoblock pump set conforming to IS 8034 and 2 pole motor operating at synchronised speed of speed 3000 RPM, with water proof winding. Pump shall be suitable for various delivery head and discharge with stainless steel shaft. Motor suitable for working on 415 V $\pm$ 10%, 3 Ph, 50 Hz AC and with water lubricated bearing to accept entire hydraulic thrust. Supply, with cable guard, thrust carbon/fibre bearing to withstand entire hydraulic thrust. The pump set shall be suitable for direct coupling, with suitable suction strainer. Pump should have suitable discharge out let as per manufacturer's design. Antithrust stream lined non return valve shall be provided with the pump and minimum 6 m submersible copper conductor cable in single / double run and 2 pairs of suitable size erection clamp 10 mm thick shall be provided with each pump etc. complete in all respect as per specification, scope of work and direction of Engineer in-charge of following power rating, suitable for prescribed duty conditions mentioned in TD.		
19.103.1	2.2 KW (3.0 HP)	each	37,080.00
19.103.2	3.7 KW (5.0 HP)	each	41,520.00
19.103.3	5.5 KW (7.5 HP)	each	55,560.00
19.103.4	7.5 KW (10 HP)	each	62,760.00
19.103.5	9.3 KW (12.5 HP)	each	79,200.00
19.103.6	11.0 KW (15 HP)	each	88,560.00
19.103.7	15.0 KW (20.0 HP)	each	1,05,360.00
19.104	Providing, installation, testing and commissioning of submersible dewatering pump set conforming to relevant IS codes and as per scope of work and Technical Specifications, with water proof winding. Pump shall be suitable for various delivery head and discharge with stainless steel shaft, impeller, pump and motor body. Motor suitable for working on 415 V $\pm$ 10%, 3 Ph, 50 Hz A.C. Supply, with cable guard. The pump set shall be suitable for direct coupling, with suitable suction strainer etc. complete in all respect as per specification, scope of work and direction of Engineer in-charge of following power rating, suitable for prescribed duty conditions mentioned in TD.		

Code No	Description	Unit	Rate Rs.
19.104.1	0.75 KW (1.0 HP)	each	42,000.00
19.104.2	1.5 KW (2.0 HP)	each	48,240.00
19.104.3	2.2 KW (3.0 HP)	each	82,920.00
19.104.4	3.7 KW (5.0 HP)	each	1,11,240.00
19.105	Providing, Fixing and maintaining barricading of active site such as at tanks etc to keep it safe entry from trespassers and unauthorized persons with using 80 - 100 mm dia Wooden Ballies as vertical post, at least 1.80 m above ground level and at least 60 cm below ground level at a spacing of 2 m and 0.63mm thick GI corrugated sheets for 1.8 m height above ground level for covering the barricading in rows one above another with providing suitable gate arrangement and painting in red and white stripes as per the specifications and directions of the Engineer In-charge with proper fixing arrangements with GI limpet washers nuts and bolts complete in all respect and maintaining it till completion of the work at active site.	metre	361.50
19.106	Design, construction, (including topographical survey, geotechnical investigation and other surveys as required) for specified capacity of WTP based on 22 Hrs. operation including inlet chamber, aeration fountain / cascade, inlet channels including mechanical/manual fine/coarse screens, flash mixer, mixing channel with Parshall flume and flow measuring arrangement, clariflocculator with conventional, filter house and filter plant including back wash tank and back wash pumps with 100% standby, chemical house, coagulant feed tank with feed mechanism, poly aluminium chloride (PAC) or other coagulant tank of specified capacity and nos. with mixing and dosing arrangement complete, vacuum feed gas chlorinator with 100% standby, sludge handling unit and recycling of collected water from sludge, clear water reservoir of specified capacity, clear water pumping station including specified number and capacity of pumps, motors, panels, starters, cables, transformers, etc. complete, external and internal electrification, laboratory building with all specified lab equipment, admin building, Quarter (One no.), sanitary block with necessary water supply and drainage arrangement, campus roads, landscaping and other campus development works, rain water harvesting etc. all required works complete as per the direction of Engineer-in-Charge.		
19.106.1	5 MLD	LS	3,00,00,000.00
19.106.2	Above 5 MLD upto 7.5 MLD	MLD	57,00,000.00
19.106.3	Above 7.5 MLD upto 10.0 MLD	MLD	55,00,000.00
19.106.4	Above 10 MLD upto 15 MLD	MLD	53,00,000.00
19.106.5	Above 15 MLD upto 20 MLD	MLD	51,00,000.00
19.106.6	Above 20 MLD upto 25 MLD	MLD	49,00,000.00
19.106.7	Above 25 MLD upto 30 MLD	MLD	47,50,000.00
19.106.8	Above 30 MLD upto 40 MLD	MLD	46,00,000.00
19.106.9	Above 40 MLD upto 50 MLD	MLD	45,00,000.00

20.0 TUBE WELL

Code No	Description	Unit	Rate Rs.
20.1	Construction of Tube-well upto 100 Meter depth and above in all type of rocks by DTH system and over burden to accommodate casing pipe of following sizes in all types of soils and over burden including lowering of casing pipes but excluding cost of casing pipes as per IS : 2800 (Part I & II) 1979 specifications. The work would be completed after obtaining sand free water. The tube well should have a throughout bore as per nominal dia of casing pipe:		
20.1.1	100 mm dia Nominal bore	metre	528.00
20.1.2	125 mm dia Nominal bore	metre	603.00
20.1.3	150 mm dia Nominal bore	metre	844.00
20.1.4	200 mm dia Nominal bore	metre	1,407.00
20.2	Construction of tube-well from ground levels to accommodate housing and assembly pipe of following sizes in all types of alluvium strata by percussion/ rotary drilling method and with gravel as per IS:4097-1967 and packing as per IS:2800 (Part I -& II) 1979 as amended upto date (the work includes the cost of gravel & its primary packing and packing during development, lowering of housing & strainer assembly pipes, with supply and wrapping of coir-rope, wherever necessary for arresting fine sand particles. The work will not include cost of housing pipe and strainer pipe assembly and development work, but work would be completed after obtaining sand free water).		
20.2.1	Upto 100 Meter depth		
20.2.1.1	Nominal bore 150mm dia	metre	1,414.00
20.2.1.2	Nominal bore 200 mm dia	metre	1,767.00
20.2.1.3	Nominal bore 250 mm dia	metre	2,356.00
20.2.2	Above 100 Metre and upto 200 Meter depth		
20.2.2.1	Nominal bore 150mm dia	metre	1,626.00
20.2.2.2	Nominal bore 200 mm dia	metre	1,847.00
20.2.2.3	Nominal bore 250 mm dia	metre	2,709.00
20.2.3	Above 200 Metre and upto 300 Meter depth		
20.2.3.1	Nominal bore 150mm dia	metre	1,979.00
20.2.3.2	Nominal bore 200 mm dia	metre	2,249.00
20.2.3.3	Nominal bore 250 mm dia	metre	3,298.00
20.3	Development of tube well as per IS specification using suitable compressor to give sand free water for required yield of the gravel packed tube well.	hour	610.00

Code No	Description	Unit	Rate Rs.
20.4	Supply of ERW M.S. black casing pipe ISI marked (IS: 4270/1992) of grade Fe410 of following nominal bore sizes at site of work.		
20.4.1	100 mm dia	metre	1,104.00
20.4.2	125 mm dia	metre	1,317.00
20.4.3	150 mm dia	metre	1,517.00
20.4.4	200 mm dia	metre	1,839.00
20.4.5	250 mm dia	metre	2,121.00
20.5	Supply of strainer pipes made of ERW M.S. black pipe ISI mark of following sizes at the site of work including required size of slotting as per IS:8110-1985 of following nominal bore sizes at site of work.		
20.5.1	150 mm dia	metre	1,531.00
20.5.2	200 mm dia	metre	1,853.00
20.5.3	250 mm dia	metre	2,164.00
20.6	Testing verticality of tube-well by plumbing system and yield test and draw down test by pumping system as per IS: 2800 (Part II) 1979.	each	9,423.00
20.7	Supply and fixing of tube well cover of M.S. sheet (6mm thick) with nuts and bolts complete for casing size:		
20.7.1	100 mm dia	each	242.00
20.7.2	125 mm dia	each	264.00
20.7.3	150 mm dia	each	285.00
20.7.4	200 mm dia	each	301.00
20.7.5	250mm dia	each	384.00
20.8	Supply and fixing of M.S. clamp set of 50 ×6mm flat iron with nuts and bolts etc. for holding the riser pipe assembly of submersible pump set.	each set	312.00
20.9	Installation of submersible motor pump set in tube-well/open well complete (labour charges only) including transportation of tripod, chain pulley block & any other material required for lowering purpose.	each	5,468.00
20.10	Providing & lowering of G.I. flange pipe B Class including rubber washer and nuts of 8 mm dia complete in all respect.		
20.10.1	50 mm dia	metre	656.00
20.10.2	75 mm dia	metre	868.00
20.10.3	100 mm dia	metre	1,150.00

21.0 CONCRETE WORK

Code No	Description	Unit	Rate Rs.
21.1	Providing and laying in position cement concrete of specified grade excluding the cost of centring and shuttering - All work upto plinth level :		
21.1.1	1:1:2 (1 Cement : 1 coarse sand : 2 graded stone aggregate 20 mm nominal size) (As per design mix)	cum	5,980.00
21.1.2	1:1½:3 (1 Cement : 1½ coarse sand : 3 graded stone aggregate 20 mm nominal size).	cum	5,910.00
21.1.3	1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	cum	5,510.00
21.1.4	1:2:4 (1 Cement : 2 coarse sand : 4 graded stone aggregate 40 mm nominal size).	cum	5,400.00
21.1.5	1:3:6 (1 Cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size).	cum	5,000.00
21.1.6	1:3:6 (1 Cement : 3 fine/ coarse sand : 6 graded stone aggregate 40 mm nominal size).	cum	4,885.00
21.1.7	1:4:8 (1 Cement : 4 fine/ coarse sand : 8 graded stone aggregate 40 mm nominal size).	cum	4,575.00
21.1.8	1:5:10 (1 cement : 5 fine/ coarse sand : 10 graded stone aggregate 40 mm nominal size)	cum	4,330.00
21.1.9	1:2:3½:9 (1 ordinary Portland cement : 2 Fly ash : 3½ coarse sand : 9 graded stone aggregate 40 mm nominal size).	cum	4,410.00
21.1.10	1:2½:4:11 (1 ordinary Portland cement : 2½ fly ash : 4 coarse sand : 11 graded stone aggregate 40 mm nominal size)	cum	4,110.00
21.2	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 etc. upto two stories, excluding the cost of centring, shuttering and finishing :		
21.2.1	1:1:2 (1 cement : 1 coarse sand : 2 graded stone aggregate 20 mm nominal size) (As per design mix) including Providing /mixing of synthetic fibers compulsorily complying with IS 16481:2022 of 06 mm/12 mm length to be mixed @ 0.25% by weight of Cement i.e. 125 gms per 50 kg Cement up to 900 gms per cum of Concrete/ mortar.	cum	6,890.00
21.2.2	1:1½:3 (1 cement : 1½ coarse sand : 3 graded stone aggregate 20 mm nominal size). including Providing /mixing of synthetic fibers compulsorily complying with IS 16481:2022 of 06 mm/12 mm length to be mixed @ 0.25% by weight of Cement i.e. 125 gms per 50 kg Cement up to 900 gms per cum of Concrete/ mortar.	cum	6,810.00

Code No	Description	Unit	Rate Rs.
21.2.3	1:2:4 (1 Cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	cum	6,010.00
21.2.4	1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 40 mm nominal size).	cum	5,900.00
21.2.5	1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size).	cum	5,490.00
21.2.6	1:3:6 (1 cement : 3 fine/ coarse sand : 6 graded stone aggregate 40 mm nominal size).	cum	5,380.00
21.3	Providing and laying cement concrete in kerbs, steps and the like at or near ground level excluding the cost of centring, shuttering and finishing.		
21.3.1	1:2:4 (1 Cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size).	cum	5,510.00
21.4	Providing and fixing upto two stories 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 centring, shuttering and finishing smooth with 6mm thick cement plaster 1:3 (1 Cement : 3 fine sand) on exposed surfaces complete.		
21.4.1	1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size).	cum	9,470.00
21.4.2	1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20mm nominal size).	cum	8,950.00
21.5	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 centring, shuttering and finishing smooth with 6mm thick cement plaster 1:3 (1 cement : 3 fine sand) on exposed surfaces complete.		
21.5.1	1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size).	cum	7,930.00
21.6	Providing and fixing upto two stories precast cement concrete solid block including hoisting and setting in position with cement mortar 1:3 (1 cement : 3 coarse sand), including cost of required centring, shuttering and finishing smooth with 6mm thick cement plaster 1:3 (1 cement : 3 fine sand) on exposed surfaces complete :		
21.6.1	1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size).	cum	13,800.00
21.6.2	1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20mm nominal size).	cum	13,300.00
21.7	Providing and laying damp-proof course with cement concrete grade M-15 (1 : 2 : 4) mortar prepared with 1% solution of water-proof compound complete as per specification . including Providing		

Code No	Description	Unit	Rate Rs.
	/mixing of synthetic fibers compulsorily complying with IS 16481:2022 of 06 mm/12 mm length to be mixed @ 0.25% by weight of Cement i.e. 125 gms per 50 kg Cement up to 900 gms per cum of Concrete/ mortar.		
21.7.1	50mm thick.	sqm	445.00
21.7.2	75mm thick.	sqm	648.00
21.8	Extra for providing and mixing water proofing material in cement concrete work @ 1 kg per 50 kg of cement.	per 50 kg cement bag	45.20
21.9	Applying a coat of residual petroleum bitumen of penetration 80/100 of approved quality using 1.7kg per square metre on damp proof course after cleaning the surface with brushes and finally with a piece of cloth lightly soaked in kerosene oil.	sqm	147.00
21.10	Extra for concrete work in superstructure above two stories for every two stories or part thereof.	cum	450.00
21.11	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.	cum/mtr	720.00
21.12	Extra for laying concrete in or under foul positions.	cum	297.50
21.13	Making plinth protection 50mm thick of cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) over 75mm bed by dry brick ballast 40mm nominal size well rammed and consolidated and grouted with fine sand including finishing the top smooth.	sqm	503.00

22.0 FORM WORK

Code No	Description	Unit	Rate Rs.
22.1	Centring and shuttering with plywood or steel sheet upto two stories (each story of height upto 3.5 metre from floor level) including strutting, propping etc. and removal of form for :		
22.1.1	Foundations, footings, bases of columns, etc. for mass concrete.	sqm	236.50
22.1.2	Walls (any thickness) including attached pilasters, buttresses, plinth and string courses etc.	sqm	367.00
22.1.3	Suspended floors, roofs, landings, balconies and access platform.	sqm	456.00
22.1.4	Shelves (Cast in situ)	sqm	456.00
22.1.5	Lintels, beams, plinth beams, girders, bressumers and cantilevers.	sqm	426.00
22.1.6	Columns, Pillars, Piers, Abutments, Posts and Struts.	sqm	375.00
22.1.7	Stairs, (excluding landings) except spiral-staircases.	sqm	429.00
22.1.8	Spiral staircases (including landing).	sqm	396.50
22.1.9	Arches, domes, vaults upto 6 m span	sqm	1,114.00
22.1.10	Extra for arches, domes, vaults exceeding 6 m span	sqm	526.00
22.1.11	Chimneys and shafts	sqm	307.50
22.1.12	Vertical and horizontal fins individually or Grid roofing forming box louvers band, facias and eaves boards.	sqm	601.00
22.1.13	Extra for shuttering in circular work (20% of respective centring and shuttering items).	sqm	20.00
22.1.14	Small lintels not exceeding 1.5m clear span, moulding as in cornices, window sills, string courses, bands, copings, bed plates, anchor blocks and the like.	sqm	153.50
22.1.15	Edges of slabs and breaks in floors and walls.		
22.1.15.1	Under 20 cm wide	metre	125.00
22.1.15.2	Above 20 cm wide	sqm	566.00
22.1.16	Cornices and mouldings	sqm	633.00
22.1.17	Small surfaces such as cantilever ends, brackets and ends of steps, caps and bases to pilasters and columns and the like.	sqm	508.00
22.1.18	Weather shade, Chajjas, corbels etc., including edges.	sqm	519.00
22.1.19	Suspended floors, roofs, landings, balconies and access platform. with water proof ply 12mm thick.	sqm	461.50
22.1.20	Lintels, beams, plinth beams, girders, bressumers and cantilevers with water proof ply 12mm thick.	sqm	410.00
22.1.21	Lintels of sewer and manhole work	sqm	385.00

Code No	Description	Unit	Rate Rs.
22.2	Add extra for doing centering and shuttering work for each subsequent storey above two storey.	sqm	34.00
22.3	Add extra for doing centering and shuttering work for every additional height of 1 metre or part thereof beyond initial 3.5 metre height from floor level.	sqm	10.70

23.0 REINFORCED CEMENT CONCRETE

Code No	Description	Unit	Rate Rs.
23.1	Providing and laying in position specified grade of reinforced cement concrete excluding the cost of centring, shuttering, finishing and reinforcement - All work upto plinth level :		
23.1.1	1:1:2 (1 cement : 1 coarse sand : 2 graded stone aggregate 20 mm nominal size). (As per design mix)	cum	6,410.00
23.1.2	1:1½:3 (1 cement : 1½ coarse sand : 3 graded stone aggregate 20 mm nominal size)	cum	6,340.00
23.1.3	1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	cum	5,940.00
23.2	Reinforced cement concrete work in walls (any thickness), including attached pilasters, buttresses, plinth and string courses, fillets, columns, pillars, piers, abutments, posts and struts etc. upto two stories excluding cost of centring, shuttering, finishing and reinforcement : including Providing /mixing of synthetic fibers compulsorily complying with IS 16481:2022 of 06 mm/12 mm length to be mixed @ 0.25% by weight of Cement i.e. 125 gms per 50 kg Cement up to 900 gms per cum of Concrete/ mortar.		
23.2.1	1:1:2 (1 cement : 1 coarse sand : 2 graded stone aggregate 20 mm nominal size) (As per design mix)	cum	7,460.00
23.2.2	1:1½:3 (1 cement : 1½ coarse sand : 3 graded stone aggregate 20 mm nominal size)	cum	7,380.00
23.2.3	1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size).	cum	6,990.00
23.3	Reinforced cement concrete work in beams, suspended floors, roofs having slope upto 15° landings, balconies, shelves, chajjas, lintels, bands, plain window sills, staircases and spiral stair cases upto two stories excluding the cost of centring, shuttering, finishing and reinforcement: including Providing /mixing of synthetic fibers compulsorily complying with IS 16481:2022 of 06 mm/12 mm length to be mixed @ 0.25% by weight of Cement i.e. 125 gms per 50 kg Cement up to 900 gms per cum of Concrete/ mortar		
23.3.1	M-15 Grade Concrete (1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) -As per design mix)	cum	7,220.00
23.3.2	M-20 Grade Concrete (1:1½:3 (1 cement : 1½ coarse sand : 3 graded stone aggregate 20 mm nominal size) -As per design mix)	cum	7,660.00
23.3.3	M-25 Grade Concrete (1:1:2 (1 cement : 1 coarse sand : 2 graded stone aggregate 20 mm nominal size) -As per design mix)	cum	7,740.00
23.3.4	M-30 Grade Concrete	cum	7,770.00
23.3.5	M-35 Grade Concrete	cum	7,800.00

Code No	Description	Unit	Rate Rs.
23.4	Providing and laying upto two stories reinforced cement concrete in kerbs, steps and the like excluding the cost of centring, shuttering, finishing and reinforcement with 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size). including Providing /mixing of synthetic fibers compulsorily complying with IS 16481:2022 of 06 mm/12 mm length to be mixed @ 0.25% by weight of Cement i.e. 125 gms per 50 kg Cement up to 900 gms per cum of Concrete/ mortar	cum	6,500.00
23.5	Reinforced cement concrete work in arches, arch ribs, domes, vaults, shells, folded plate and roofs having slope more than 15° upto two stories excluding the cost of centring, shuttering, finishing and reinforcement with 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size). including Providing /mixing of synthetic fibers compulsorily complying with IS 16481:2022 of 06 mm/12 mm length to be mixed @ 0.25% by weight of Cement i.e. 125 gms per 50 kg Cement up to 900 gms per cum of Concrete/ mortar	cum	6,410.00
23.6	Reinforced cement concrete work in vertical and horizontal fins individually or forming box louvers, facias and eaves boards upto two stories excluding the cost of centring, shuttering, finishing and reinforcement with 1:1½:3 (1 cement : 1½ coarse sand : 3 graded stone aggregate 20mm nominal size). including Providing /mixing of synthetic fibers compulsorily complying with IS 16481:2022 of 06 mm/12 mm length to be mixed @ 0.25% by weight of Cement i.e. 125 gms per 50 kg Cement up to 900 gms per cum of Concrete/ mortar	cum	7,270.00
23.7	Providing and fixing tie bolt, spring coil and plastic cone in wall shuttering complete as per the direction of Engineer-in-charge		
23.7.1	12 mm dia. & 100 mm length.	each set	140.00
23.7.2	12 mm dia. & 150 mm length.	each set	155.50
23.7.3	20 mm dia. & 150 mm length.	each set	171.50
23.7.4	20 mm dia.& 225 mm length.	each set	190.00
23.8	Add extra for laying reinforced cement concrete above two stories (or 7.50 mtr height above plinth level) for every one storey or 3.00 m height or part thereof.	cum	229.50
23.9	Providing, hoisting and fixing upto two stories 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 centring, shuttering, finishing smooth with 6 mm thick cement plaster 1:3 (1 cement : 3 fine sand) on exposed surfaces complete but excluding cost of reinforcement with 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20mm nominal size). including Providing /mixing of synthetic fibers compulsorily complying with IS 16481:2022 of 06 mm/12 mm length to be mixed @ 0.25% by weight of Cement i.e. 125 gms per 50 kg Cement up to 900 gms per cum of Concrete/ mortar	cum	9,760.00

Code No	Description	Unit	Rate Rs.
23.10	Providing, hoisting and fixing upto two stories precast reinforced cement concrete in small lintels not exceeding 1.5m clear span upto two stories including the cost of required centring, shuttering and finishing smooth with 6 mm thick cement plaster 1:3 (1 cement : 3 fine sand) on exposed surfaces but excluding the cost of reinforcement with 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size). including Providing /mixing of synthetic fibers compulsorily complying with IS 16481:2022 of 06 mm/12 mm length to be mixed @ 0.25% by weight of Cement i.e. 125 gms per 50 kg Cement up to 900 gms per cum of Concrete/ mortar	cum	12,050.00
23.11	Providing, hoisting and fixing upto two stories 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 centring, shuttering and finishing smooth with 6 mm thick cement plaster 1:3 (1 cement : 3 fine sand) on exposed surfaces complete but excluding the cost of reinforcement with 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size). including Providing /mixing of synthetic fibers compulsorily complying with IS 16481:2022 of 06 mm/12 mm length to be mixed @ 0.25% by weight of Cement i.e. 125 gms per 50 kg Cement up to 900 gms per cum of Concrete/ mortar	cum	14,450.00
23.12	Providing, hoisting and fixing upto two stories precast reinforced cement concrete in lintels, beams and bressumers including setting in cement mortar 1:3 (1 cement : 3 coarse sand), cost of required centring and shuttering and finishing smooth with 6 mm thick cement plaster 1:3 (1 cement : 3 fine sand) on exposed surfaces but excluding the cost of reinforcement with 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size). including Providing /mixing of synthetic fibers compulsorily complying with IS 16481:2022 of 06 mm/12 mm length to be mixed @ 0.25% by weight of Cement i.e. 125 gms per 50 kg Cement up to 900 gms per cum of Concrete/ mortar	cum	10,500.00
23.13	Providing, hoisting and fixing upto two stories precast reinforced cement concrete in shelves including setting in cement mortar 1:3 (1 cement : 3 coarse sand), cost of required centring, shuttering and finishing with neat cement punning on exposed surfaces but excluding the cost of reinforcement with 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 12.5mm nominal size). including Providing /mixing of synthetic fibers compulsorily complying with IS 16481:2022 of 06 mm/12 mm length to be mixed @ 0.25% by weight of Cement i.e. 125 gms per 50 kg Cement up to 900 gms per cum of Concrete/ mortar	cum	13,300.00
23.14	Providing, hoisting and fixing upto two stories 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 centring, shuttering and finishing smooth with 6mm thick cement plaster 1:3 (1 cement : 3 fine sand)		

Code No	Description	Unit	Rate Rs.
	on exposed surfaces complete but excluding the cost of reinforcement with 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size). including Providing /mixing of synthetic fibers compulsorily complying with IS 16481:2022 of 06 mm/12 mm length to be mixed @ 0.25% by weight of Cement i.e. 125 gms per 50 kg Cement up to 900 gms per cum of Concrete/ mortar	cum	15,950.00
23.15	Providing precast cement concrete Jali 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 6mm nominal size) reinforced with 1.6 mm dia mild steel wire including centring and shuttering, roughening cleaning, fixing and finishing in cement mortar 1:3 (1 cement: 3 fine sand) etc. complete excluding plastering of the jambs, sills and soffits.		
23.15.1	50 mm thick	sqm	1,222.00
23.15.2	40 mm thick	sqm	1,007.00
23.15.3	25 mm thick	sqm	960.00
23.16	Encasing rolled steel sections, in beams and columns, with cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 12.5mm nominal size) including centring and shuttering complete but excluding cost of reinforcement.	cum	9,980.00
23.17	Encasing rolled steel section in grillages with cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 12.5mm nominal size) including centring and shuttering but excluding cost of expanded metal and hangers.	cum	6,290.00
23.18	Extra for providing and fixing expanded metal mesh of size 20x60mm and strands 3.25mm wide 1.6mm thick weighing 3.64 kg. per sqm. for encasing of rolled steel sections in beams, columns and grillages excluding cost of hangers.	sqm	454.00
23.19	Reinforcement for R.C.C. work at all levels including straightening, cutting, bending, placing in position and binding all complete.		
23.19.1	Mild steel and Medium Tensile steel bars.	kg	81.80
23.19.2	Hard drawn steel wire	kg	78.50
23.19.3	Cold twisted bars	kg	83.30
23.19.4	Hot rolled deformed bars	kg	83.30
23.19.5	Hard drawn steel wire fabric	kg	92.50
23.19.6	Thermo-Mechanically Treated bars.	kg	83.30
23.20	In Situ Anti Corrosive treatment by applying inhibitor admixture and sealed cement slurry for corrosion protection of mild steel reinforcement / HYSD bars in accordance with MORT&H Appendix 1000-1 (Fourth Revision) including surface preparation and surface pre-treatment.	kg	7.50
23.21	Deduct for omitting in R.C.C. work smooth finishing of the exposed surface with 6mm thick cement mortar 1:3 (1 Cement : 3 fine sand)	sqm	182.50

Code No	Description	Unit	Rate Rs.
23.22	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	115.00
23.23	Providing and fixing in position copper plate as per design for expansion joints.	kg	480.00
23.24	Providing and filling in position, blown bitumen in expansion joints.	mtr/cm Dep/cm Width	7.60
23.25	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.	mtr/cm Dep/cm Width	2.65
23.26	Providing and fixing in position 12mm thick bitumen impregnated fibre board conforming to IS:1838 including cost of primer, sealing compound in expansion joints.	sqm	717.00
23.27	Providing and fixing sheet covering over expansion joints with iron screws as per design to match the colour / shade of wall treatment.		
23.27.1	Non-asbestos fibre cement board 6 mm thick as per IS:14862.		
23.27.1.1	150mm wide.	metre	175.00
23.27.1.2	200mm wide.	metre	235.50
23.27.2	Aluminium fluted strips 3.15mm thick.		
23.27.2.1	150 mm wide.	metre	478.50
23.27.2.2	200 mm wide.	metre	661.00
23.28	Add or deduct for plaster drip course/ groove in plastered surface or moulding to R.C.C. projections.	metre	51.30
23.29	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.	cum	720.00
23.30	Extra for laying reinforced cement concrete in or under foul positions.	cum	297.50

24.0 BRICK WORK

Code No	Description	Unit	Rate Rs.
24.1	Brick work with FPS bricks of class designation 75 in foundation and plinth in:		
24.1.1	Cement mortar 1:4 (1 cement : 4 coarse sand)	cum	5,600.00
24.1.2	Cement mortar 1:6 (1 cement : 6 coarse sand)	cum	5,400.00
24.2	Brick work with sewer-bricks of in foundation and plinth in:		
24.2.1	Cement mortar 1:4 (1 cement : 4 coarse sand)	cum	6,020.00
24.3	Brick work with modular bricks of class designation 75 in foundation and plinth in:		
24.3.1	Cement mortar 1:4 (1 cement : 4 coarse sand)	cum	5,130.00
24.3.2	Cement Mortar 1:6 (1 cement : 6 coarse sand).	cum	4,955.00
24.4	Brick work with machine moulded perforated bricks of class designation 125 conforming to IS: 2222 -1991 in superstructure above plinth level upto two stories in cement mortar 1:6 (1 cement : 6 coarse sand) :		
24.4.1	With FPS bricks.	cum	6,920.00
24.4.2	With Modular bricks.	cum	6,120.00
24.5	Brick work with FPS bricks of class designation 75 in superstructure above plinth level upto two stories in all shapes and sizes in :		
24.5.1	Cement mortar 1:4 (1 cement : 4 coarse sand)	cum	6,500.00
24.5.2	Cement mortar 1:6 (1 cement : 6 coarse sand)	cum	6,300.00
24.6	Extra for brick work in superstructure above two stories for each two stories or part thereof by mechanical means by lifting material using mobile crane .	cum	215.50
24.7	Brick work 7 cm thick with FPS brick of class designation 75 in cement mortar 1:3 (1 cement : 3 coarse sand) in superstructure.	sqm	574.00
24.8	Brick work in plain arches in superstructure including centring and shuttering complete for span upto 6 metres with brick of class designation 75 in cement mortar 1:3 (1 cement : 3 coarse sand).	cum	9,190.00
24.9	Brick work in gauged arches in superstructure in cement mortar 1:3 (1 cement : 3 coarse sand) including centring and shuttering complete, for span upto 6 meters with brick of class designation 75.	cum	11,800.00
24.10	Extra for additional cost of centring for arches exceeding 6m span including all shuttering, bolting, wedging and removal (Area of the soffit to be measured).	sqm	1,151.00
24.11	Half brick masonry with FPS brick of class designation 75 in foundations and plinth in :		

Code No	Description	Unit	Rate Rs.
24.11.1	Cement mortar 1:3 (1 cement : 3 coarse sand)	sqm	696.00
24.11.2	cement mortar 1:4 (1 cement : 4 coarse sand)	sqm	674.00
24.12	Half brick masonry with FPS bricks of class designation 75 in superstructure above plinth level upto two stories.		
24.12.1	Cement mortar 1:3 (1 cement :3 coarse sand)	sqm	789.00
24.12.2	Cement mortar 1:4 (1 cement :4 coarse sand)	sqm	767.00
24.13	Extra for half brick masonry in superstructure, above two stories for every two stories or part thereof by mechanical means by lifting material using mobile crane.	sqm	19.10
24.14	Extra for providing and placing in position 2 Nos. 6mm dia. M.S. bars at every third course of half brick masonry.	sqm	94.20
24.15	Tile brick masonry with tile bricks of class designation 100 in foundation and plinth in:		
24.15.1	Cement mortar 1:4 (1 cement : 4 coarse sand)	cum	9,200.00
24.15.2	Cement mortar 1:6 (1 cement : 6 coarse sand).	cum	8,880.00
24.16	Tile brick masonry with machine moulded tile bricks of class designation 125 conforming to IS : 2690 (Part I) - 1993 in foundation and plinth in cement mortar 1:6 (1 cement : 6 coarse sand).	cum	8,660.00
24.17	Tile brick masonry with machine moulded tile bricks of class designation 125 conforming to IS : 2690 (Part I) - 1993 in superstructure above plinth level upto two stories in Cement mortar 1:6 (1 cement : 6 coarse sand).	cum	9,590.00
24.18	Extra for tile brick masonry with tile bricks of class designation 100 in superstructure above two stories for every two stories or part thereof.	cum	450.00
24.19	Tile brick masonry with tile bricks of class designation 100 in plain arch work in superstructure in cement mortar 1:4 (1 cement : 4 coarse sand) including centring and shuttering complete.	cum	12,650.00
24.20	Tile brick masonry with tile bricks of class designation 100 in gauged arch work in superstructure in cement mortar 1:4 (1 cement : 4 coarse sand) including centring and shuttering complete.	cum	15,300.00
24.21	Tile brick masonry work 5 cm thick with tile bricks of class designation 100 in cement mortar 1:3 (1 cement : 3 coarse sand) in superstructure.	sqm	628.00
24.22	Honey-comb brick work 10/11.4 cm thick with FPS bricks of class designation 75 in cement mortar 1:4 (1 cement : 4 coarse sand).	sqm	416.00
24.23	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.	cum	720.00
24.24	Extra for laying brick work in or under foul position.	cum	297.50

Code No	Description	Unit	Rate Rs.
24.25	Brick work with selected FPS bricks of class designation 75 in exposed brick work including making horizontal and vertical grooves 10mm wide 12mm deep complete from ground level upto plinth level in cement mortar 1:6 (1 cement : 6 coarse sand)	cum	5,570.00
24.26	Brick work with modular bricks of class designation 75 in exposed brick work including making horizontal and vertical grooves 10mm wide 12mm deep complete from ground level upto plinth level in cement mortar 1:6 (1 cement : 6 coarse sand).	cum	4,980.00
24.27	Brick work with machine moulded modular bricks of class designation 125 in exposed brick work including making horizontal and vertical grooves 10mm wide 12mm deep complete from ground level upto plinth level in cement mortar 1:6 (1 cement : 6 coarse sand).	cum	4,965.00
24.28	Brick work with machine moulded F.P.S. bricks of class designation 125 in exposed brick work including making horizontal and vertical grooves 10 mm wide 12mm deep complete from ground level upto plinth level in cement mortar 1:6 (1 cement : 6 coarse sand)	cum	5,780.00
24.29	Brick work with machine moulded perforated F.P.S. bricks of class designation 125 conforming IS : 2222-1991 in exposed brick work including making horizontal and vertical grooves 10mm wide 12 mm deep complete from ground level upto plinth level in cement mortar 1:6 (1 cement : 6 coarse sand).	cum	5,780.00
24.30	Brick work with machine moulded perforated modular bricks of class designation 125 conforming to IS : 2222 -1991 in exposed brick work including making horizontal and vertical grooves 10 mm wide 12mm deep complete from ground level upto plinth level in cement mortar 1:6 (1 cement : 6 coarse sand).	cum	5,330.00
24.31	Brick work with clay flyash brick of class designation 75 in superstructure above plinth level upto two stories in :		
24.31.1	Cement mortar 1:4 (1 cement : 4 coarse sand)	cum	6,410.00
24.31.2	Cement mortar 1:6 (1 cement : 6 coarse sand)	cum	6,210.00
24.32	Extra for exposed brick work/ clay flyash brick work in superstructure above two stories, for each two stories or part thereof.	cum	450.00
24.33	Brick work with modular fly ash lime bricks (FALG Bricks) conforming to IS:12894-2002, class designation 100 average compressive strength in super structure above plinth level upto two stories in :		
24.33.1	Cement mortar 1:4 (1 cement : 4 coarse sand)	cum	5,430.00
24.33.2	Cement mortar 1:6 (1 cement : 6 Coarse sand)	cum	5,250.00
24.34	Brick work with modular calcium silicate bricks machine moulded conforming to IS:4139-1989, class designation 100 average compressive strength in super structure above plinth level upto two stories in :		
24.34.1	Cement mortar 1:4 (1 cement : 4 coarse sand)	cum	6,520.00

Code No	Description	Unit	Rate Rs.
24.34.2	Cement mortar 1:6 (1 cement : 6 coarse sand)	cum	6,340.00
24.35	Brick work with modular extruded brunt fly ash clay sewer bricks (Conforming to IS: 4885 - 1988) in foundation and plinth :		
24.35.1	Cement Mortar 1:4 (1 cement : 4 coarse sand)	cum	5,550.00
24.36	Brick work with modular extruded brunt fly ash clay sewer bricks (conforming to IS : 4885-1988) in arches in foundation and plinth in cement mortar 1:3 (1 cement : 3 fine sand).	cum	9,050.00
24.37	Providing and laying Gypsum panel partitions 100mm thick with water proof Gypsum panels of size 666x500x100mm, made of calcite phosphor Gypsum fixed with tongue and groove, jointed with bonding plaster as per manufacturers specifications in superstructure above plinth level upto two stories. Gypsum blocks will have a minimum compressive strength of 9.3 kg/cm ²	sqm	1,006.00
24.38	Extra for Gypsum panel Partitions in superstructure above two stories for every two stories or part thereof.	sqm	51.60
24.39	Brick work with mechanised autoclaved flyash lime bricks conforming to IS: 12894 :2002 of class designation 100 in superstructure above plinth level upto two stories in.		
24.39.1	Cement mortar 1:4 (1 cement :4 coarse sand)	cum	5,690.00
24.39.2	Cement mortar 1:6 (1 cement :6 coarse sand).	cum	5,490.00
24.40	Extra for mechanised autoclave flyash lime bricks conforming to IS: 12894- 1990 of class designation 100 in superstructure above two stories for every two stories or part thereof.	cum	450.00
24.41	Brick edging 7cm wide 11.4cm deep to plinth protection with FPS bricks of class designation 75 including grouting with cement mortar 1:4 (1 cement : 4 fine sand).	metre	44.80
24.42	Providing and laying autoclaved aerated cement blocks masonry with 150mm/230mm/300 mm thick AAC blocks 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	6,640.00

25.0 STONE WORK (Masonry)

Code No	Description	Unit	Rate Rs.
25.1	Random rubble masonry with hard stone in foundation and plinth :		
25.1.1	Cement mortar 1:6 (1 cement : 6 coarse sand)	cum	4,860.00
25.1.2	Cement mortar 1:4 (1 cement : 4 coarse sand)	cum	5,130.00
25.1.3	Cement mortar 1:3 (1 cement : 3 coarse sand)	cum	5,390.00
25.2	Extra for random rubble masonry with hard stone in superstructure above plinth level and upto two stories.	cum	970.00
25.3	Extra for random rubble masonry with hard stone in superstructure above two stories for every two stories or part thereof	cum	685.00
25.4	Extra for random rubble masonry with hard stone in :		
25.4.1	Square or rectangular pillars	cum	725.00
25.4.2	Circular pillars.	cum	1,920.00
25.5	Extra for random rubble masonry with hard stone curved on plan for a mean radius not exceeding 6 m.	cum	694.00
25.6	Coursed rubble masonry (first sort) with hard stone in foundation and plinth with :		
25.6.1	Cement mortar 1:6 (1 cement : 6 coarse sand)	cum	6,120.00
25.7	Coursed rubble masonry (second sort) with hard stone in foundation & plinth with :		
25.7.1	Cement mortar 1:6 (1 cement : 6 coarse sand)	cum	5,640.00
25.8	Extra for coursed rubble masonry with hard stone (first or second sort) in superstructure above plinth level and upto two stories.	cum	977.00
25.9	Extra for coursed rubble masonry with hard stone (first or second sort) in superstructure above two stories for every two stories or part thereof.	cum	685.00
25.10	Extra for coursed rubble masonry with hard stone (first or second sort) in :		
25.10.1	Square or rectangular pillars	cum	812.00
25.10.2	Circular pillars.	cum	2,197.00
25.11	Extra for coursed rubble masonry with hard stone (first or second sort) curved on plan for a mean radius not exceeding 6 m.	cum	764.00
25.12	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 :		
25.12.1	One face dressed.		

Code No	Description	Unit	Rate Rs.
25.12.1.1	Red sand stone	cum	40,300.00
25.12.1.2	White sand stone	cum	46,900.00
25.12.2	Both face dressed.		
25.12.2.1	Red sand stone.	cum	56,400.00
25.12.2.2	White sand stone	cum	63,000.00
25.13	Providing and fixing up to floor five level of cement concrete solid blocks (M-20 Grade) of different sizes (Manufactured with fully mechanised dry cast process with forced action mixer whose arms revolve along the main axis and rotate about its own axis also, having humidity sensor for moisture control of w/c ratio in concrete mix. Manufactured with steel moulds (Milled and manufactured in CSI diamond or CSI Nitro process for accuracy) on steel base plate of min 16 mm thick; Having Vibration and pressing action both together with the help of multiple synchronised vibrators. Power of hydraulic station should be minimum 50KW for compaction and cured in controlled chambers having humidity control and automated air circulation system) including hoisting and setting in position with cement mortar 1:3 (1 Cement : 3 Coarse Sand), cost of required centering, shuttering complete.	cum	9,270.00
25.14	Providing and fixing up to floor five level of cement concrete Hollow Rectangular blocks of different sizes (Manufactured with fully mechanised dry cast process with forced action mixer whose arms revolve along the main axis and rotate about its own axis also, having humidity sensor for moisture control of w/c ratio in concrete mix. Manufactured with steel moulds (Milled and manufactured in CSI diamond or CSI Nitro process for accuracy) on steel base plate of min 16 mm thick; Having Vibration and pressing action both together with the help of multiple synchronised vibrators. Power of hydraulic station should be minimum 50KW for compaction and cured in controlled chambers having humidity control and automated air circulation system) including hoisting and setting in position with cement mortar 1:3 (1 Cement : 3 Coarse Sand), cost of required centering, shuttering complete.	cum	7,540.00
25.15	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.	sqm	168.50

26.0 STONE WORK (Slabs)

Code No	Description	Unit	Rate Rs.
26.1	Stone work (machine cut edges) for wall lining etc. (veneer work) backing filled with a grout of 12mm thick 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 : (To be secured to the backing by means of cramps which shall be paid for separately) :		
26.1.1	Red sand stone - exposed face fine dressed with rough backing.		
26.1.1.1	70 mm thick.	sqm	2,293.00
26.1.1.2	60 mm thick.	sqm	2,179.00
26.1.1.3	50 mm thick.	sqm	2,065.00
26.1.1.4	40 mm thick.	sqm	1,950.00
26.1.1.5	30 mm thick.	sqm	1,836.00
26.1.2	Red sand stone - Exposed face machine cut and table rubbed with rough backing.		
26.1.2.1	70 mm thick	sqm	2,293.00
26.1.2.2	60 mm thick	sqm	2,179.00
26.1.2.3	50 mm thick	sqm	2,065.00
26.1.2.4	40 mm thick	sqm	1,950.00
26.1.2.5	30 mm thick	sqm	1,836.00
26.1.3	White sand stone - exposed face fine dressed with rough backing .		
26.1.3.1	70 mm thick	sqm	2,760.00
26.1.3.2	60 mm thick	sqm	2,580.00
26.1.3.3	50 mm thick	sqm	2,398.00
26.1.3.4	40 mm thick	sqm	2,216.00
26.1.3.5	30 mm thick	sqm	2,036.00
26.1.4	White sand stone - Exposed face machine cut and table rubbed with rough backing.		
26.1.4.1	70 mm thick	sqm	2,760.00
26.1.4.2	60 mm thick	sqm	2,580.00
26.1.4.3	50 mm thick	sqm	2,398.00
26.1.4.4	40 mm thick	sqm	2,274.00
26.1.4.5	30 mm thick	sqm	2,036.00
26.2	Extra for stone work (veneer work) curved on plan with a mean radius not exceeding 6 m.	cum	1,281.00

Code No	Description	Unit	Rate Rs.
26.3	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	703.00
26.4	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	27.00
26.5	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	31.90
26.6	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 12mm diameter anchoring steel bar 45 cm long fixed in each stone and supported on and including with bricks cove of class designation 75 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:		
26.6.1	Red sand stone:		
26.6.1.1	With bricks	sqm	2,163.00
26.6.2	White sand stone:		
26.6.2.1	With bricks	sqm	2,231.00
26.7	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:		
26.7.1	Red sand stone	sqm	1,452.00
26.7.2	White sand stone	sqm	1,512.00
26.8	30mm 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	1,491.00
26.9	Providing and fixing red sand stone brackets 55x22.5x45cm sunk and moulded including providing and fixing with 4 Nos. gun metal cramp 25x6mm 30 cm long and dowel bars 7.5 cm long 6 mm dia as per design.	each	4,925.00
26.10	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.		
26.10.1	Red sand stone	cum	58,600.00
26.10.2	White sand stone	cum	65,200.00

Code No	Description	Unit	Rate Rs.
26.11	Providing and fixing stone jali 40mm 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.		
26.11.1	Red sand stone	sqm	18,750.00
26.11.2	White sand stone	sqm	18,800.00
26.12	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.	cum/ mtr depth	720.00
26.13	Extra for laying stone work in or under foul position.	cum	297.50
26.14	Wall lining butch work upto 10m height with red/ white sand 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 75x75mm and by providing layer of 75mm thick strips i/c 12mm thick bed of cement mortar 1:3 (1 Cement : 3 coarse sand) i/c ruled pointing in 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	2,405.00
26.15	Stone work (machine cut edges) for wall lining upto 10 m height etc. (Veneer work) backing filled with a grout of 12mm 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 by means of cramps which shall be paid for separately)		
26.15.1	Kota stone slabs exposed face dressed and rubbed.		
26.15.1.1	25 mm thick.	sqm	2,655.00
26.16	Stone tile work for wall lining upto 10 m height with special adhesive over 12mm 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.		
26.16.1	8mm thick (mirror polished and machine cut edge)		
26.16.1.1	Granite stone of any colour and shade.	sqm	2,351.00
26.16.1.2	Raj Nagar plain white marble/ Udaipur green marble/ Zebra black marble.	sqm	2,131.00
26.17	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	90.30
26.18	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		

Code No	Description	Unit	Rate Rs.
	of Engineer-in-charge. (The steel frame work, stainless steel cramps and pins etc. shall be paid for separately.)		
26.18.1	Red sand stone.	sqm	3,210.00
26.18.2	White sand stone	sqm	3,530.00
26.19	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 supported in wall with the help of MS 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 20mm nominal size) of size 300x230x300mm 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	183.00
26.20	Providing and fixing adjustable stainless steel cramps of approved quality and of 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	366.00
26.21	Providing and fixing single paitam (rebated) stone doors windows and ventilator frames of approved quarry in cement sand mortar 1:4:		
26.21.1	size 75x75 mm	metre	146.50
26.21.2	size 100x60 mm	metre	161.00
26.21.3	size 100x75 mm	metre	182.00
26.21.4	size 125x100 mm	metre	189.50
26.22	Providing and fixing double paitam (rebated) stone doors windows and ventilator frames of approved quality in cement sand mortar 1:4:		
26.22.1	size 100x75 mm	metre	176.50
26.22.2	size 125x100 mm	metre	203.50
26.23	Providing & fixing precast cement concrete coping 1 : 2 :4 mix 50mm thick complete as per specification	sqm	421.50

Code No	Description	Unit	Rate Rs.
26.24	Supplying and fixing in walls machine cut and polished stone shelves, tands and in CM 1:3 with machine cut edges :		
26.24.1	Sand or other approved stone 25mm thick.	sqm	554.00
26.24.2	Sand or other approved stone 50mm thick.	sqm	704.00
26.24.3	Kota stone minimum 30mm thick.	sqm	613.00
26.25	Supplying and fixing machine cut fine dressed Red/Pink sand stone dasa or coping, with full moulding if required laid on cement mortar 1:4 including pointing with admixture of pigment matching with the stone shade.		
26.25.1	25 mm thick	sqm	1,243.00
26.25.2	50 mm thick	sqm	1,457.50
26.25.3	75 mm thick	sqm	1,664.30
26.26	Supplying and fixing machine cut dressed 75 mm Pink sand stone (Bansi Paharpur) dasa/ coping with ornamental shape having moulding and "PAN Shape" engraving as per required pattern with engraving depth of 5 mm (average) in single piece of length 90 cm to be laid on cement mortar 1:4 (12 to 20mm thick) including pointing with admixture of pigment matching with the stone shade.	sqm	5,308.60
26.27	Providing and fixing Stone jali 40mm thick Red/Pink sand stone 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 patterns to be cut square to jali slab without any chamfers etc:	sqm	7,850.70
26.28	Providing and fixing Stone jali 50mm thick Red/Pink sand stone as per ornamental design to fixed with white cement/epoxy mortar including pointing in white cement mortar 1:2 (1 white cement : 2 stone dust) with an admixture of pigment, matching the stone shade.	sqm	8,813.20
26.29	Providing and fixing Red/Pink sand stone post (Mataga) having size 100x100mm heights 600 to 750 mm as per ornamental design such as like flower octagonal head border etc. to fixed with white cement/epoxy mortar including pointing in white cement mortar 1:2 (1 white cement : 2 stone dust) with an admixture of pigment, matching the stone shade.	sqm	799.70

27.0 MARBLE WORK

Code No	Description	Unit	Rate Rs.
27.1	Providing and fixing Marble stone flooring table rubbed, 15-18 mm thick over 20mm (Av.) thick base of CM 1:4 (1 cement : 4 coarse sand) or slab in wall, steps, pillars, counters, jambs, shelves, sills etc laid over 12mm (Av.) thick base of CM 1:3 (1 cement : 3 coarse sand), jointing with white cement mortar 1:2 (1 white cement : 2 marble dust) with pigment to match the shade of the marble slab including grinding, rubbing and polishing complete.		
27.1.1	Makrana 'Adanga'.		
27.1.1.1	Upto to 1500 Cm2 Tiles	sqm	1,845.00
27.1.1.2	1501 Cm2 to 3600 Cm2 Tiles	sqm	2,002.00
27.1.1.3	Above 3601 Cm2 Slabs	sqm	2,585.00
27.1.2	Rajnagar 1st quality/Ageria with light spots.		
27.1.2.1	Upto to 1500 Cm2 Tiles	sqm	1,664.00
27.1.2.2	1501 Cm2 to 3600 Cm2 Tiles	sqm	1,806.00
27.1.2.3	Above 3601 Cm2 Slabs	sqm	2,254.00
27.1.3	Keseriaji/ Abu Ambaji (Green Marble)		
27.1.3.1	Upto to 1500 Cm2 Tiles	sqm	1,845.00
27.1.3.2	1501 Cm2 to 3600 Cm2 Tiles	sqm	1,994.00
27.1.3.3	Above 3601 Cm2 Slabs	sqm	2,585.00
27.1.4	Bhaislana, Abu, Kishangarh Zebra (Black Marble)		
27.1.4.1	Upto to 1500 Cm2 Tiles	sqm	1,664.00
27.1.4.2	1501 Cm2 to 3600 Cm2 Tiles	sqm	1,767.00
27.1.4.3	Above 3601 Cm2 Slabs	sqm	2,309.00
27.2	Providing and fixing Granite stone slab mirror polished and machine edge cut in walls, pillars, steps, Shelves, Sills Counters, Floors etc. laid on 12mm (Av.) thick base of cement mortar 1:3 (1 cement : 3 coarse sand) jointing with white cement mortar 1:2 (1 white cement : 2 marble dust) with pigment to match the shade of the marble slab including grinding, rubbing and polishing complete.		
27.2.1	Jhunjhunu / Jalore (Red / Chocolate Colour)		
27.2.1.1	Upto to 1500 Cm2 Tiles	sqm	3,025.00
27.2.1.2	1501 Cm2 to 3600 Cm2 Tiles	sqm	3,645.00
27.2.1.3	Above 3601 Cm2 Slabs	sqm	4,430.00
27.2.2	South (Red)		
27.2.2.1	Upto to 1500 Cm2 Tiles	sqm	3,015.00

Code No	Description	Unit	Rate Rs.
27.2.2.2	1501 Cm2 to 3600 Cm2 Tiles	sqm	3,740.00
27.2.2.3	Above 3601 Cm2 Slabs	sqm	5,980.00
27.2.3	Green / Black		
27.2.3.1	Upto to 1500 Cm2 Tiles	sqm	2,905.00
27.2.3.2	1501 Cm2 to 3600 Cm2 Tiles	sqm	4,025.00
27.2.3.3	Above 3601 Cm2 Slabs	sqm	6,650.00
27.3	Extra for providing edge moulding to 15-18mm thick marble/ Granite stone counters, Vanities etc. including machine polishing to edge to give high gloss finish etc. complete as per design approved by Engineer-in-Charge.		
27.3.1	Marble work	metre	180.50
27.3.2	Granite Work	metre	310.00
27.4	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	37.30
27.5	Extra for providing opening of required size & shape for wash basins/ kitchen sink in kitchen platform, vanity counters and similar location in marble/Granite/stone work including necessary holes for pillar taps etc. including rubbing and polishing of cut edges etc. complete	each	285.50
27.6	Extra for Mirror polishing on marble work where ever required to give high gloss finish complete.	sqm	150.50
27.7	Extra in marble flooring work for upto 50 mm wide strip of Green/White/ Jaisalmer stone in flooring work as per direction of Engineer in-charge	metre	64.80
27.8	Providing and fixing cramps of required size & shape in RCC/ CC backing with cement mortar 1:2 (1 cement :2 coarse sand) including drilling necessary hole in stones and embedding the cramp in the hole .		
27.8.1	Gun Metal cramp	kg	672.00
27.8.2	Stainless steel cramps	kg	703.00
27.9	Providing and fixing expansion hold fasteners on C.C. /R.C.C. surface backing including drilling necessary holes and the cost of bolt etc complete.		
27.9.1	Wedge expansion type		
27.9.1.1	Fastener with threaded dia 6 mm.	each	34.20
27.9.1.2	Fastener with threaded dia 10 mm.	each	34.70
27.9.1.3	Fastener with threaded dia 12 mm.	each	58.10
27.10	Providing and fixing stone slab table rubbed, edges rounded and polished of size 75x50 cm deep and 1.8 cm thick fixed in urinal		

Code No	Description	Unit	Rate Rs.
	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.		
27.10.1	White Agaria Marble Stone.	sqm	1,708.00
27.10.2	Granite Stone of approved shade.	sqm	3,310.00
27.11	Providing and fixing 1st quality standard white, grey, ivory, fume red brown, light green, light blue and other light shades glazed tiles confirming to IS : 13753 & IS :15622 of size 200mm x 300mm in walls, floors, steps, pillars etc. laid on a bed of neat cement slurry finished with flush pointing in the white cement mixed with pigment to match the shade of the tile complete (excluding the cost of cement plaster on walls and pillar).	sqm	891.00
27.12	Providing and fixing 1st quality MAT finished ceramic tile size 300x300mm confirming to IS : 13755 and IS : 15622 colour such as white, grey, ivory, fume red brown, light green, light blue and other light shades in floors, steps, pillars etc. laid on a bed of neat cement slurry finished with flush pointing in the white cement mixed with pigment to match the shade of the tile complete (including the cost of cement mortar bed 1:4).	sqm	864.00
27.13	Extra for using Marble printed / Granite shade or dark shade tiles instead of white, grey, ivory, fume red brown, light green, light blue and other light shades in glazed tiles and MAT finished tiles.	percent	10.00
27.14	Extra for using size above 200x300mm in glazed tiles and for using 400mm x 400mm MAT finished tiles in place of 300mm x 300mm size.	percent	10.00
27.15	Providing and fixing 75 mm wide Decorative Border in different shades and in all colours in glazed tiles laid over 12 mm thick bed of cement mortar 1:3 (1 cement : 3 coarse sand) and jointing with grey cement slurry @ 3.3 kg per sqm including pointing in white mixed with pigment of matching shade complete.	metre	327.00
27.16	Providing and fixing Motive pieces all colours for glazed tiles laid over 12 mm thick bed of cement mortar 1:3 (1 cement : 3 coarse sand) and jointing with grey cement slurry @ 3.3 kg per sqm including pointing in white mixed with pigment of matching shade complete..		
27.16.1	Size 200 x 200mm	each	180.00
27.16.2	Size 200 x 300mm	each	209.50
27.17	P & F 1st quality Vitrified Porcelain Polished tiles on floor, skirting and steps etc.in different sizes (thickness to be specified by manufacture) with water absorption less than 0.08% and conforming to IS 15622 of approved make in all colour and shade, laid with 20 mm thick CM 1 : 4 including grouting the joints with white cement and matching pigment etc complete.		

Code No	Description	Unit	Rate Rs.
27.17.1	Size 450 mm X 450 mm	sqm	1,509.00
27.17.2	Size 600 mm X 600 mm	sqm	1,540.00
27.17.3	Size 800mm X 800 mm	sqm	1,766.00
27.18	Providing and fixing 1st quality ceramic glazed vitrified tiles of colour standard white, grey, ivory, fume, red brown, light green, light blue, and other light shades with water absorption less than or equal to 0.08% confirming to IS : 13753 & IS : 15622 in floor, steps etc laid on bed on neat cement slurry finished with flush pointing in the white cement mixed with pigment to match the shade of the tile complete (excluding the cost of cement plaster on wall and pillar)		
27.18.1	Size 600mm x 600mm	sqm	1,560.00
27.18.2	Size 800mm x 800mm	sqm	1,589.00
27.18.3	Size 600mm x 1200mm	sqm	1,875.00
27.18.4	Size 800mm x 1200mm	sqm	2,328.00
27.18.5	Size 896mm x 1215mm	sqm	2,328.00
27.18.6	Size 1000mm x 2000mm	sqm	4,785.00
27.19	Providing and fixing 1st quality MAT & GLOSSY finished ceramic tiles colour such as standard white, grey, ivory, fume, red brown, light green, light blue, and other light shades with water absorption less than or equal to 0.08% confirming to IS : 13753 & IS : 15622 in floor, steps etc laid on bed on neat cement slurry finished with flush pointing in the white cement mixed with pigment to match the shade of the tile complete (including the cost of cement mortar bed 1:4)		
27.19.1	Size 250mm x 375mm	sqm	972.00
27.19.2	Size 300mm x 450mm	sqm	1,074.00
27.19.3	Size 200mm x 600mm	sqm	1,140.00
27.19.4	Size 300mm x 600mm	sqm	1,177.00
27.19.5	Size 250mm x 1000mm	sqm	1,411.00
27.20	Providing and fixing 1st quality Vitrified Polished tiles in all colours and shades with water absorption less than or equal to 0.08% confirming to IS : 15622 on floor, skirting, steps etc laid with 20mm thick CM 1:4 including grouting the joints with white cement mixed with pigment to match the shade of the tile complete (excluding the cost of cement mortar bed 1:4)		
27.20.1	Size 800mm x 800mm	sqm	1,700.00
27.20.2	Size 800mm x 1200mm	sqm	2,440.00
27.21	Providing and fixing 1st quality Heavy duty Vitrified Polished Digital tiles in all colours and shades with water absorption less than or equal to 0.08% confirming to IS : 15622 on floor, skirting, steps etc laid with 20mm thick CM 1:4 including grouting the joints with white cement mixed with pigment to match the shade of the tile complete		

Code No	Description	Unit	Rate Rs.
	(excluding the cost of cement mortar bed 1:4)		
27.21.1	Size 298mm x 298mm	sqm	944.00
27.21.2	Size 300mm x 450mm	Sqm	945.00
27.21.3	Size 600mm x 600mm	Sqm	1,380.00
27.21.4	Size 600mm x 1200mm	Sqm	1,832.00
27.22	Extra for Fixing glazed/ Ceramic/ Vitrified floor tiles with cement based high polymer modified quick-set tile adhesive (Water based) conforming to IS: 15477 , using 5kg. adhesive per cum of tile area, in average 3mm thickness instead of cement mortar.	sqm	305.50
27.23	Providing non slip grooves to granite/ kota stone flooring, counters, vanities etc. using groove cutter V type machine etc. complete as per design approved by engineer in-charge	metre	80.00
27.24	P & F 1st quality Heavy Duty Vitrified Polished Digital tiles on floor, skirting and steps etc.in different sizes (thickness minimum 10mm) with water absorption less than or equal 0.08% and conforming to IS 15622 of approved make in all colour and shade, laid with 20 mm thick CM 1: 4 including grouting the joints with white cement and matching pigment etc complete.		
27.24.1	size 600 mm X 1200 mm	sqm	1,672.00
27.25	P & F 1st quality Heavy Duty Vitrified glazed MAT tiles on floor, skirting and steps etc.in different sizes (thickness minimum 10mm) with water absorption less than or equal 0.08% and conforming to IS 15622 of approved make in all colour and shade, laid with 20 mm thick CM 1: 4 including grouting the joints with white cement and matching pigment etc complete.		
27.25.1	size 600 mm X 600 mm	sqm	1,397.00
27.25.2	size 600 mm X 1200mm	sqm	1,942.00
27.26	P & F 1st quality Heavy Duty Vitrified Double Charged tiles on floor, skirting and steps etc.in different sizes (thickness minimum 10mm) with water absorption less than or equal 0.08% and conforming to IS 15622 of approved make in all colour and shade, laid with 20 mm thick CM 1: 4 including grouting the joints with white cement and matching pigment etc complete.		
27.26.1	size 600 mm X 600mm	sqm	1,123.00
27.26.2	size 800 mm X 800mm	sqm	1,397.00
27.26.3	size 1000 mm X 1000mm	sqm	1,577.00

28.0 WOOD AND PVC WORK

Code No	Description	Unit	Rate Rs.
28.1	Providing & fixing door, window, chowkhats and other frames, including anti termite treatment, M.S. flat, hold fasts of size 250 x 40 x 3mm fixed with M.S. bolt 5mm dia 50mm long duly embedded in cement concrete M-15 grade :		
28.1.1	Second class teak wood	cum	1,17,400.00
28.1.2	Sal wood	cum	89,200.00
28.1.3	Kiln seasoned and chemically treated Hollock wood.	cum	74,100.00
28.1.4	Sheesham wood Grade - I.	cum	1,21,100.00
28.1.5	Nigeria teak wood Grade - I.	cum	1,33,700.00
28.1.6	Ghana teak wood Grade - I.	cum	1,35,300.00
28.1.7	Ivory coast wood Grade I	cum	1,59,600.00
28.2	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 fixed in position as per directions of Engineer-in-charge.	cum	1,04,000.00
28.3	Supplying and fixing wood work in frames of wall panelling, false ceiling partition wall etc. as per approved design and drawing including anti termite treatment.		
28.3.1	Sal wood	cum	79,200.00
28.3.2	Kiln seasoned and chemically treated Hollock wood.	cum	64,000.00
28.3.3	Chir wood	cum	59,400.00
28.4	Extra for additional labour in frames for circular members such as in fan lights, staircase railing etc.:		
28.4.1	Second class teak wood	cum	11,750.00
28.4.2	Sal wood	cum	8,920.00
28.4.3	Kiln seasoned and chemically treated Hollock wood.	cum	7,410.00
28.5	Providing and fixing fully panelled/partly panelled/ double leaf shutter frame for doors as per approved design and drawings with approved ordinary C.P./ oxidised steel fittings as per Annexure - 'A' and width of styles & top rails of 100mm and lock rails width of 150mm and bottom rails of 200mm width including teak wood beading of size 19mm x 12mm on both faces complete :		
28.5.1	35 mm thick		
28.5.1.1	Nigeria wood grade I	sqm	3,605.00
28.5.1.2	Ghana wood grade I	sqm	3,645.00

Code No	Description	Unit	Rate Rs.
28.5.1.3	Shesham wood grade I	sqm	3,325.00
28.5.1.4	Ivory coast wood grade I	sqm	4,185.00
28.5.2	30 mm thick		
28.5.2.1	Nigeria wood grade I	sqm	3,260.00
28.5.2.2	Ghana wood grade I	sqm	3,295.00
28.5.2.3	Shesham wood grade I	sqm	3,020.00
28.5.2.4	Ivory coast wood grade I	sqm	3,765.00
28.6	Providing and fixing fully panelled /partly panelled double leaf shutters frame for windows and ventilators as per approved design and drawings with approved steel fittings as per Annexure 'A' and width of styles, bottom and top rails 75mm including intermediate rails 50mm wide, beading of 25mm x 15mm size on both faces :		
28.6.1	35 mm thick		
28.6.1.1	Nigeria wood grade I	sqm	2,620.00
28.6.1.2	Ghana wood grade I	sqm	2,640.00
28.6.1.3	Shesham wood grade I	sqm	2,448.00
28.6.1.4	Ivory coast wood grade I	sqm	2,970.00
28.6.2	30 mm thick		
28.6.2.1	Nigeria wood grade I	sqm	2,427.00
28.6.2.2	Ghana wood grade I	sqm	2,447.00
28.6.2.3	Shesham wood grade I	sqm	2,278.00
28.6.2.4	Ivory coast wood grade I	sqm	2,735.00
28.6.3	25 mm thick		
28.6.3.1	Nigeria wood grade I	sqm	2,240.00
28.6.3.2	Ghana wood grade I	sqm	2,257.00
28.6.3.3	Shesham wood grade I	sqm	2,112.00
28.6.3.4	Ivory coast wood grade I	sqm	2,505.00
28.7	Providing and fixing wood 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 and glazed shutter 25 mm to 40 mm thick		
28.7.1	Wood panel		
28.7.1.1	Nigeria wood Grade I	sqm	2,895.00
28.7.1.2	Ghana wood grade I	sqm	2,925.00
28.7.1.3	Shesham wood grade I	sqm	2,665.00
28.7.1.4	Ivory coast wood grade I	sqm	3,365.00

Code No	Description	Unit	Rate Rs.
28.7.2	Ply wood IS : 710- 1976 marked		
28.7.2.1	9 mm thick commercial ply	sqm	1,870.00
28.7.2.2	9 mm thick Teak ply BWR one side	sqm	1,994.00
28.7.2.3	9 mm thick Teak ply BWR both side	sqm	2,241.00
28.7.2.4	12 mm thick commercial ply	sqm	1,595.00
28.7.2.5	12 mm thick Teak ply BWR one side	sqm	2,224.00
28.7.2.6	12 mm thick Teak ply BWR both side	sqm	2,515.00
28.7.2.7	12 mm thick Plain particle board flat pressed, 3 layer or graded wood particle board medium density Grade I, IS : 3087 marked.	sqm	1,300.00
28.7.2.8	12 mm thick Veneered flat pressed three layer or graded wood particle board with commercial veneering on both sides conforming to IS:3097, grade I.	sqm	1,674.00
28.7.2.9	12 mm thick Pre-laminated particle board with decorative lamination on one side and balancing lamination on other side, Grade I, Type II IS:12823 marked.	sqm	1,834.00
28.7.2.10	12 mm thick Pre-laminated particle board with decorative lamination on both sides, Grade I, Type II, IS:12823 marked.	sqm	1,895.00
28.7.3	Wire gauge		
28.7.3.1	GI wire gauge 24 gauge 14 mesh of IS 1568-1970 marked 85 gauge of dia 0.56 mm	sqm	1,134.00
28.7.3.2	SS wire gauge 14 mesh x 24 gauge	sqm	1,458.00
28.7.4	Float glass		
28.7.4.1	4 mm thick	sqm	1,355.00
28.7.4.2	5 mm thick	sqm	1,612.00
28.7.4.3	8 mm thick	sqm	1,994.00
28.8	Providing and fixing wall panelling on existing wood frame as per specification and drawing using :		
28.8.1	6 mm teak ply one side BWR ISI marked	sqm	1,221.00
28.8.2	9 mm teak ply one side BWR ISI marked	sqm	1,527.00
28.8.3	12 mm thick Acoustical Board	sqm	1,249.00
28.8.4	12 mm thick one side laminated board Practical board (Phenol bonded)	sqm	1,527.00
28.9	Extra for providing movable/ fixed Nigeria / Ghana /Ivory Teak wood grade - I louvers instead of wooden panels in column No.4 for Nigeria / Ghana/Ivory Teak wood door shutters.	percent	10.00
28.10	Extra for Providing Single leaf shutter instead of double leaf.	percent	20.00
28.11	Add extra for etching work in glass work as per direction of engineer in-charge (Area of opening for glass panes excluding portion inside rebate shall be measured)	percent	20.00

Code No	Description	Unit	Rate Rs.
28.12	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 or panelled and glazed shutters 25 mm to 40 mm thick. Coir veneer board (conforming to IS : 14842-2000) :		
28.12.1	12 mm thick	sqm	2,003.00
28.13	Providing and fixing glazed shutters for doors, windows and clerestory windows using 4 mm thick float glass panes including black enamelled ISI marked M.S butt hinges with necessary screws.		
28.13.1	Second class teak wood		
28.13.1.1	35 mm thick	sqm	4,050.00
28.13.1.2	30 mm thick	sqm	3,695.00
28.13.2	Kiln seasoned and chemically treated Hollock wood		
28.13.2.1	35 mm thick	sqm	2,990.00
28.13.2.2	30 mm thick	sqm	2,780.00
28.14	Providing and fixing factory made laminated veneer lumber glazed shutter conforming to IS : 14616 and TADS 15:2001 (Part B) , using 4mm thick float glass panes for doors, windows and clerestory windows including ISI marked black enamelled M.S butt hinges with necessary screws as per directions of Engineer-in-charge		
28.14.1	30 mm thick shutters	sqm	2,468.00
28.15	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)		
28.15.1	5.5 mm thick instead of 4 mm thick.	sqm	215.50
28.16	Extra for providing frosted glass panes 4 mm thick instead of ordinary float glass panes 4 mm thick in doors, windows and clerestory window shutters. (Area of opening for glass panes excluding portion inside rebate shall be measured).	sqm	82.80
28.17	Deduct for providing pin headed glass panes instead of ordinary float glass panes weighing 4 mm thick in doors, windows and clerestory windows, shutters (Area of opening for glass panes excluding portion inside rebate shall be measured).	sqm	88.50
28.18	Extra for providing ISI marked Stainless Steel butt hinges instead of black enamelled M.S. butt hinges with necessary screws. (Shutter area to be measured).	sqm	132.50
28.19	Deduct if fixed shutters (without hinges) are provided instead of openable shutters for doors, windows or clerestory windows with :		
28.19.1	Stainless steel butt hinges with stainless steel screws :		
28.19.1.1	For 2nd class teak wood and other inferior class of wood shutters.	sqm	194.00

Code No	Description	Unit	Rate Rs.
28.19.2	Black enamelled M.S. butt hinges with necessary screws.		
28.19.2.1	For 2nd class teak wood and other inferior class of wood shutters.	sqm	61.80
28.20	Providing and fixing 25 mm thick shutters for cup board etc. :		
28.20.1	Panelled or panelled & glazed shutters :		
28.20.1.1	Second class teak wood including ISI marked anodised aluminium butt hinges with necessary screws.	sqm	3,580.00
28.20.2	Glazed shutters :		
28.20.2.1	Second class teak wood including ISI marked SS butt hinges with necessary screws.	sqm	3,390.00
28.21	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) :		
28.21.1	12 mm thick	sqm	615.00
28.21.2	18 mm thick	sqm	796.00
28.22	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 II 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).		
28.22.1	18 mm thick	sqm	1,304.00
28.22.2	25 mm thick	sqm	1,616.00
28.23	Providing and fixing 25 mm thick shutters for cupboards etc. including ISI marked black enamelled M.S. butt hinges with necessary screws :		
28.23.1	Panelled or panelled and glazed shutters		
28.23.1.1	Second class teak wood	sqm	3,395.00
28.23.2	Glazed shutters		
28.23.2.1	Second class teak wood	sqm	3,380.00
28.24	Providing and fixing external grade board solid core single leaf flush door shutters ISI 2202-67 marked using Phenol formaldehyde resin in glue both sides including approved ISI marked Stainless Steel butt hinges fittings with necessary screws complete as per annexure 'A' :		
28.24.1	25 mm thick		
28.24.1.1	Commercial Veneer both side	sqm	1,896.00
28.24.1.2	Decorative teak veneer One side	sqm	2,133.00
28.24.1.3	Decorative teak veneer both side	sqm	2,645.00
28.24.2	30 mm thick		

Code No	Description	Unit	Rate Rs.
28.24.2.1	Commercial Veneer both side	sqm	1,889.00
28.24.2.2	Decorative teak veneer One side	sqm	2,223.00
28.24.2.3	Decorative teak veneer both side	sqm	2,950.00
28.24.3	35 mm thick		
28.24.3.1	Commercial Veneer both side	sqm	1,956.00
28.24.3.2	Decorative teak veneer One side	sqm	2,498.00
28.24.3.3	Decorative teak veneer both side	sqm	3,100.00
28.25	Extra for Providing and fixing flush doors with decorative veneering		
28.25.1	On one side	sqm	489.50
28.26	Extra for providing lipping with 2nd class teak wood battens 25 mm minimum depth on all edges of shutters (overall area of door shutter to be measured)	sqm	401.00
28.27	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) :		
28.27.1	Rectangular or square.	sqm	211.50
28.27.2	Circular.	sqm	220.00
28.28	Extra if louvers (not exceeding 0.2 sqm) are provided in flush door shutters (overall area of door shutters to be measured).		
28.28.1	Decorative type door.	sqm of door area	470.00
28.29	Extra for cutting rebate in flush door shutters (Total area of the shutter to be measured).	sqm of door area	164.00
28.30	Providing and fixing 35mm thick wire gauze shutters using galvanised M.S. wire gauze of average width of aperture 1.4mm with wire of dia. 0.63 mm for doors, windows and clerestory windows including ISI marked bright finished or/and black enamelled M.S. butt hinges with necessary screws :		
28.30.1	Second class teak wood.	sqm	3,895.00
28.30.2	Kiln seasoned and chemically treated Hollock wood.	sqm	2,955.00
28.31	Providing and fixing 35mm thick wire gauze shutters using galvanised M.S. wire gauze of average width of aperture 1.4mm with wire of dia. 0.63 mm for doors, windows and clerestory windows including ISI marked stainless steel butt hinges with necessary screws :		
28.31.1	Second class teak wood.	sqm	4,030.00
28.31.2	Kiln seasoned and chemically treated Hollock wood.	sqm	3,090.00
28.32	Providing and fixing 30mm thick wire gauge shutters using galvanised M.S. wire gauge of average width of aperture 1.4mm with wire of dia. 0.63 mm for doors, windows and clerestory windows		

Code No	Description	Unit	Rate Rs.
	including ISI marked Stainless Steel butt hinges with necessary screws :		
28.32.1	Second class teak wood.	sqm	3,525.00
28.32.2	Kiln seasoned and chemically treated Hollock wood.	sqm	2,720.00
28.33	Providing and fixing 30mm thick wire gauze shutters using galvanised M.S. wire gauze of average width of aperture 1.4mm with wire of dia 0.63 mm for doors, windows and clerestory windows including ISI marked bright finished or /and black enamelled M.S. butt hinges with necessary screws :		
28.33.1	Second class teak wood.	sqm	3,460.00
28.33.2	Kiln seasoned and chemically treated Hollock wood.	sqm	2,655.00
28.34	Providing and fixing wire gauze laminated veneer lumber shutters conforming to IS : 14616, and as per TADS 15 :2001 (Part B) using galvanised wire gauze with average width of aperture 1.4mm in both directions with wire of dia 0.63mm as per IS :1568 for doors, windows and clerestory windows including ISI marked bright finished or/ and black enamelled M.S. butt hinges with necessary screws as per directions of Engineer-in-charge:		
28.34.1	35 mm thick shutters	sqm	2,515.00
28.34.2	30 mm thick shutters	sqm	2,238.00
28.35	Providing 50x50x50mm 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	30.90
28.36	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.		
28.36.1	25 mm long	each	15.80
28.36.2	32 mm long	each	18.00
28.36.3	40 mm long	each	20.80
28.36.4	50 mm long	each	22.30
28.37	Providing and fixing 2nd class teak wood plain lining tongued and grooved on and including wooden plugs complete with necessary screws and priming coat on unexposed surface.		
28.37.1	40 mm thick.	sqm	5,720.00
28.37.2	25 mm thick.	sqm	3,780.00
28.37.3	20 mm thick	sqm	2,950.00
28.37.4	12 mm thick	sqm	1,963.00
28.38	Providing and fixing in wall lining flat pressed three layer (medium density) particle board or graded wood Pre-laminated one side decorative lamination on other side balancing lamination Grade I,		

Code No	Description	Unit	Rate Rs.
	Type II, IS : 12823 marked including priming coat on unexposed surface, with necessary fixing arrangement and screws etc. complete :		
28.38.1	12 mm thick	sqm	1,242.00
28.38.2	18 mm thick	sqm	1,439.00
28.38.3	25 mm thick	sqm	1,765.00
28.39	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.		
28.39.1	Hollock wood.	cum	1,28,000.00
28.40	Providing and fixing plywood 4 mm thick one side decorative veneer conforming to IS: 1328 (type-1) for plain lining / cladding with necessary screws, priming coat on unexposed surface with:		
28.40.1	Decorative veneer facings of approved manufacture.	sqm	1,543.00
28.41	Providing and fixing 4mm thick coir veneer board, ISI marked IS : 14842 - 2000, plain lining with necessary screws, priming coat on unexposed surface etc., complete.	sqm	1,480.00
28.42	Providing and fixing skirting of Pre-laminated with (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 :		
28.42.1	18 mm thick	sqm	1,627.00
28.42.2	25 mm thick	sqm	1,954.00
28.43	Providing and fixing wooden moulded beading to door and window frames with iron screws, plugs and priming coat on unexposed surface etc. complete :		
28.43.1	2nd class teak wood		
28.43.1.1	50x12 mm	metre	179.00
28.43.1.2	50 x 20 mm	metre	222.00
28.43.2	Hollock wood		
28.43.2.1	50x12 mm	metre	152.00
28.43.2.2	50x20 mm	metre	177.00
28.44	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 :		
28.44.1	Second class teak wood.	sqm	2,355.00

Code No	Description	Unit	Rate Rs.
28.45	Providing and fixing 18 mm thick, 150 mm wide pelmet of flat pressed 3 layer or graded wood particle board medium density grade I, IS : 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 M.S. flat 10 cm long and rawl plugs 50 mm long (designation 10 no.) etc all complete	metre	461.50
28.46	Providing and fixing 18 mm thick, 150 mm wide pelmet of coir veneer board ISI marked IS : 14842 - 2000, including top cover of 6 mm coir veneer board, nickel 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 and rawl plug 50 mm long (designation 10 No.) etc., all complete	metre	463.50
28.47	Extra for using veneered particle board conforming to IS 3097 Grade I, in item of pelmet 18mm thick 150mm wide.		
28.47.1	Non decorative veneer on both sides.	metre	29.70
28.47.2	Particle board with decorative veneering on both sides.	metre	99.80
28.48	Providing and fixing teak wood lipping of size 25x3 mm in pelmet.	metre	63.90
28.49	Providing and fixing curtain rods of 1.25 mm thick chromium plated brass plate, with two chromium plated brass brackets fixed with C.P. brass screws and wooden plugs, etc., wherever necessary complete :		
28.49.1	12 mm dia.	metre	290.00
28.49.2	20 mm dia.	metre	367.00
28.49.3	25 mm dia.	metre	551.00
28.50	Providing and fixing nickel plated M.S. pipe curtain rods with nickel plated brackets :		
28.50.1	20 mm dia (heavy type)	metre	88.20
28.50.2	25 mm dia (heavy type)	metre	107.00
28.51	Providing and fixing M.S. grills of required pattern in frames of windows etc. with M.S. flats, square or round bars etc. all complete.		
28.51.1	Fixed to steel windows by welding.	kg	167.00
28.51.2	Fixed to openings /wooden frames with rawl plugs screws etc.	kg	174.50
28.52	Providing and fixing expanded metal 20x60mm strands 3.25mm wide and 1.6mm thick for windows etc. including 62x19mm beading of IInd class teak wood.	sqm	1,109.00
28.53	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.	sqm	1,329.00
28.54	Providing and fixing fly proof galvanised M.S. wire gauze to windows and clerestory windows using galvanised M.S. wire gauge with average width of aperture 1.4 mm in both directions with wire of dia. 0.63 mm.		

Code No	Description	Unit	Rate Rs.
28.54.1	With 2nd class teak wood beading 62X19 mm.	sqm	984.00
28.54.2	With 12 mm mild steel U beading.	sqm	668.00
28.55	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.	sqm	168.50
28.56	Providing 40x5 mm flat iron hold fast 40 cm long including fixing to frame with 10 mm diameter bolts, nuts and wooden plugs and embeddings in cement concrete block 30x10x15cm 1:3:6 mix (1 cement : 3 coarse sand : 6 graded stone aggregate 20mm nominal size)	each	160.50
28.57	Providing beams including hoisting, fixing in position and applying wood preservative for the unexposed surfaces, etc. complete with :		
28.57.1	Sal wood.	cum	76,900.00
28.57.2	Hollock wood.	cum	60,800.00
28.58	Providing and fixing ISI marked M.S. pressed butt hinges bright finished with necessary screws etc. complete :		
28.58.1	125x65x2.12 mm	each	45.20
28.58.2	100x58x1.90 mm	each	37.90
28.58.3	75x47x1.70 mm	each	31.70
28.58.4	50x37x1.50 mm	each	16.40
28.59	Providing and fixing IS : 1341 marked M.S. heavy weight butt hinges with necessary screws etc. complete :		
28.59.1	125x90x4.00 mm	each	59.70
28.59.2	100x75x3.50 mm	each	46.50
28.59.3	75x60x3.10 mm	each	34.70
28.59.4	50x40x2.50 mm	each	19.40
28.60	Providing and fixing ISI marked oxidised M.S. pressed butt hinges with necessary screws etc. complete.		
28.60.1	125x65x2.12 mm	each	42.90
28.60.2	100x58x1.90 mm	each	36.80
28.60.3	75x47x1.70 mm	each	31.10
28.60.4	50x37x1.50 mm	each	15.30
28.61	Providing and fixing ISI marked oxidised M.S. pressed Parliamentary hinges with necessary screws etc. complete :		
28.61.1	150x125x27x2.50 mm	each	76.30
28.61.2	125x125x27x2.50 mm	each	68.80
28.61.3	100x125x27x2.50 mm	each	58.80
28.61.4	75x100x20x2.24 mm	each	50.70

Code No	Description	Unit	Rate Rs.
28.62	Providing and fixing ISI marked oxidised M.S. single acting spring hinges with necessary screws etc. complete :		
28.62.1	150 mm	each	201.50
28.62.2	125 mm	each	186.00
28.62.3	100 mm	each	162.00
28.63	Providing and fixing oxidised M.S. double acting spring hinges with necessary screws etc. complete.		
28.63.1	150 mm	each	210.50
28.63.2	125 mm	each	194.50
28.63.3	100 mm	each	177.50
28.64	Providing M.S. Piano hinges ISI marked IS : 3818 finished with nickel plating and fixing with necessary screws etc., complete.		
28.64.1	Overall width 35 mm.	metre	248.50
28.64.2	Overall width 50 mm.	metre	245.50
28.64.3	Overall width 65 mm.	metre	254.00
28.65	Providing and fixing ISI marked oxidised M.S. sliding door bolts with nuts and screws etc. complete :		
28.65.1	300x16 mm	each	164.50
28.65.2	250x16 mm	each	140.50
28.66	Providing and fixing ISI marked oxidised M.S. tower bolt black finish, (Barrel type) with necessary screws etc. complete :		
28.66.1	250x10 mm	each	62.70
28.66.2	200x10 mm	each	53.10
28.66.3	150x10 mm	each	47.80
28.66.4	100x10 mm	each	37.40
28.67	Providing and fixing ISI marked 85x42mm oxidised M.S. pull bolt lock conforming to IS : 7534 with necessary screws bolts, nut and washers etc. complete.	each	88.20
28.68	Providing and fixing ISI marked oxidised M.S. door latches conforming to IS:5930 with screws etc. complete :		
28.68.1	300x20x6 mm	each	71.10
28.68.2	250x20x6 mm	each	59.70
28.69	Providing and fixing ISI marked oxidised M.S. handles conforming to IS:4992 with necessary screws etc. complete :		
28.69.1	125 mm	each	25.40
28.69.2	100 mm	each	21.10
28.69.3	75 mm	each	19.70

Code No	Description	Unit	Rate Rs.
28.70	Providing and fixing oxidised M.S. hasp and staple (safety type) conforming to IS : 363 with necessary screws etc. complete :		
28.70.1	150 mm	each	25.50
28.70.2	115 mm	each	22.30
28.70.3	90 mm	each	19.10
28.71	Providing and fixing oxidised M.S. casement stays (straight peg type) with necessary screws etc. complete.		
28.71.1	300 mm weighing not less than 200 gms.	each	46.70
28.71.2	250 mm weighing not less than 150 gms.	each	39.00
28.71.3	200 mm weighing not less than 120 gms.	each	36.10
28.72	Providing and fixing oxidised M.S. Safety chain with necessary fixtures for doors. (Weighing not less than 450 gms.)	each	95.40
28.73	Providing and fixing IS : 12817 marked stainless steel butt hinges with stainless steel screws etc. complete :		
28.73.1	125x64x1.90 mm	each	83.40
28.73.2	100X58X1.90 mm	each	68.20
28.73.3	75x47x1.80 mm	each	52.70
28.73.4	50x37x1.50 mm	each	31.80
28.74	Providing and fixing IS : 12817 marked stainless steel butt hinges (heavy weight) with stainless steel screws etc. complete :		
28.74.1	125x64x2.50 mm	each	97.70
28.74.2	100x60x2.50 mm	each	80.40
28.74.3	75x50x2.50 mm	each	63.40
28.75	Providing and fixing bright finished brass butt hinges with necessary screws etc. complete :		
28.75.1	125x85x5.5 mm (heavy type)	each	276.00
28.75.2	125x70x4 mm (ordinary type)	each	147.00
28.75.3	100x85x5.5 mm (heavy type)	each	223.50
28.75.4	100x70x4 mm (ordinary type)	each	107.50
28.75.5	75x65x4 mm (heavy type)	each	128.50
28.75.6	75x40x2.5 mm (ordinary type)	each	71.00
28.75.7	50x40x2.5 mm (ordinary type)	each	31.60
28.76	Providing and fixing bright finished brass parliamentary hinges with necessary screws etc. complete :		
28.76.1	150x125x27x5 mm	each	357.00
28.76.2	125x125x27x5 mm	each	322.50
28.76.3	100x125x27x5 mm	each	281.00

Code No	Description	Unit	Rate Rs.
28.76.4	75x100x20x3.2 mm	each	233.50
28.77	Providing and fixing bright finished brass tower bolts (barrel type) with necessary screws etc. complete :		
28.77.1	250x10 mm	each	300.50
28.77.2	200x10 mm	each	243.50
28.77.3	150x10 mm	each	196.50
28.77.4	100x10 mm	each	139.00
28.78	Providing and fixing bright finished brass door latch with necessary screws etc. complete :		
28.78.1	300x16x5 mm	each	220.00
28.78.2	250x16x5 mm	each	204.00
28.79	Providing and fixing bright finished brass 100 mm mortice latch and lock with 6 levers and a pair of lever handles with necessary screws etc. complete (best make of approved quality).	each	798.00
28.80	Providing and fixing bright finished brass 100 mm mortice latch with one dead bolt and a pair of lever handles with necessary screws etc. complete (best make of approved quality).	each	759.00
28.81	Providing and fixing bright finished brass night latch including necessary screws etc. complete (best make of approved quality).	each	866.00
28.82	Providing and fixing special quality bright finished brass cupboard or wardrobe locks with four levers including necessary screws etc. complete (best make of approved quality) :		
28.82.1	40 mm	each	259.50
28.82.2	50 mm	each	291.00
28.82.3	65 mm	each	313.50
28.82.4	75 mm	each	336.50
28.83	Providing and fixing 50 mm bright finished brass cup board or wardrobe knob with necessary screws (best make of approved quality)	each	59.70
28.84	Providing and fixing bright finished brass handles with screws etc. complete :		
28.84.1	125 mm	each	197.00
28.84.2	100 mm	each	181.00
28.84.3	75 mm	each	135.50
28.85	Providing and fixing bright finished brass hanging type floor door stopper with necessary screws, etc. complete.	each	106.50
28.86	Providing and fixing IS : 3564 marked Aluminium die cast body tubular type universal hydraulic door closer with necessary accessories and screws etc. complete.	each	772.00

Code No	Description	Unit	Rate Rs.
28.87	Providing and fixing IS : 3564 marked aluminium extruded section body tubular type universal hydraulic door closer with double speed adjustment with necessary accessories and screws etc. complete.	each	1,364.00
28.88	Providing and fixing bright finished brass casement window fastener with necessary screws etc. complete.	each	72.40
28.89	Providing and fixing bright finished brass casement stays (straight peg type) with necessary screws etc. complete :		
28.89.1	300 mm weighing not less than 330 gms	each	159.00
28.89.2	250 mm weighing not less than 280 gms	each	129.50
28.89.3	200 mm weighing not less than 240 gms	each	116.50
28.90	Providing and fixing bright finished brass hasp and staple (safety type) with necessary screws etc. complete:		
28.90.1	150 mm	each	113.00
28.90.2	115 mm	each	95.50
28.90.3	90 mm	each	80.90
28.91	Providing and fixing chromium plated brass 100 mm mortice latch and lock with 6 levers and a pair of lever handles with necessary screws etc. complete (best make of approved quality).	each	820.00
28.92	Providing and fixing chromium plated brass night latch including necessary screws etc. complete (Best make of approved quality).	each	943.00
28.93	Providing and fixing special quality chromium plated brass cupboard locks with six levers including necessary screws etc. complete (Best make of approved quality) of :		
28.93.1	Size 40 mm	each	255.00
28.93.2	Size 50 mm	each	275.00
28.93.3	Size 65 mm	each	305.00
28.93.4	Size 75 mm	each	336.50
28.94	Providing and fixing chromium plated brass 50 mm cupboard or wardrobe knobs with nuts complete.	each	137.00
28.95	Providing and fixing chromium plated brass handles with necessary screws etc. complete:		
28.95.1	125 mm	each	205.50
28.95.2	100 mm	each	171.00
28.95.3	75 mm	each	158.50
28.96	Providing and fixing chromium plated brass casement window fastener with necessary screws etc. complete.	each	136.00
28.97	Providing and fixing chromium plated brass casement stays (straight peg type) with necessary screws etc. complete :		
28.97.1	300 mm weighing not less than 330 gms	each	174.50

Code No	Description	Unit	Rate Rs.
28.97.2	250 mm weighing not less than 280 gms	each	162.00
28.97.3	200 mm weighing not less than 240 gms	each	139.00
28.98	Providing and fixing ISI marked aluminium butt hinges 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:		
28.98.1	125x75x4 mm	each	152.00
28.98.2	125x63x4 mm	each	133.00
28.98.3	100x75x4 mm	each	116.50
28.98.4	100x63x4 mm	each	107.00
28.98.5	100x63x3.2 mm	each	108.00
28.98.6	75x63x4 mm	each	82.80
28.98.7	75x63x3.2 mm	each	75.80
28.98.8	75x45x3.2 mm	each	64.80
28.99	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 :		
28.99.1	300x16 mm	each	289.00
28.99.2	250x16 mm	each	249.00
28.100	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 :		
28.100.1	300x10 mm	each	111.50
28.100.2	250x10 mm	each	112.50
28.100.3	200x10 mm	each	98.10
28.100.4	150x10 mm	each	81.10
28.100.5	100x10 mm	each	62.10
28.101	Providing and fixing aluminium pull bolt lock anodised ISI marked (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	85.30
28.102	Providing and fixing 50cm long aluminium kicking plate 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	193.50
28.103	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.		

Code No	Description	Unit	Rate Rs.
	complete :		
28.103.1	125 mm	each	69.30
28.103.2	100 mm	each	60.60
28.103.3	75 mm	each	47.80
28.104	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.		
28.104.1	Single rubber stopper	each	36.80
28.104.2	Twin rubber stopper	each	66.80
28.105	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	76.10
28.106	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 with necessary screws etc. complete (Best make of approved quality).	each	877.00
28.107	Providing and fixing aluminium tee channels (heavy duty) with rollers, stop end in pelmets as curtain rod.	metre	89.00
28.108	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/ role form G.I. sheet with zinc coating of grade 175 in consisting of floor and ceiling channel 50mm wide having equal flanges of 32mm and 0.5mm thick fixed to the floor and ceiling at the spacing of 610mm centre to centre with dash fastener of 12.5mm diameter 40mm length and the studs 48mm wide having one flange of 34mm and other flange 36mm and 0.50mm thick fixed vertically within flanges of floor and ceiling channel and placed at a spacing of 610mm centre to centre by 6mm dia bolts and nuts at both ends of partition fixed flush to wall with rawl plugs at spacing of 450mm centre to centre and fixing of boards to either side of frame work by 25mm dry wall screws on studs, floor and ceiling channels at the spacing of 300mm centre to centre, including jointing and finishing to a flush finish with recommended jointing compound, jointing tape, joint finisher and two coats of primer suitable for board as per manufacture's specification all complete.		
28.108.1	67mm overall thickness partition with 8.5mm thick double skin glass reinforced Gypsum board (GRG) conforming to IS: 2095: part III	sqm	1,775.00
28.108.2	75mm overall thickness partition with 12.5mm thick double skin plain Gypsum board conforming to IS: 2095: part I	sqm	1,598.00
28.108.3	66mm overall thickness Partition with 8mm thick double skin Calcium Silicate Board made with Calcareous & Siliceous materials	sqm	1,850.00

Code No	Description	Unit	Rate Rs.
	reinforced with cellulose fibre manufactured through autoclaving process with compressive Strength 225 kg/sq.cm, Bending Strength 100 kg/ sq.cm.		
28.108.4	66mm overall thickness partition using 8mm thick double skin non-asbestos multipurpose cement board reinforced with cellulose fibre manufactured through autoclaving process (High pressure steam cured) as per IS: 14862 with suitable fibre cement screw.	sqm	1,850.00
28.109	Providing and fixing PTMT handles with necessary screws etc. complete.		
28.109.1	125x34x24 mm weighing not less than 23 gms.	each	44.30
28.109.2	150x34x24 mm weighing not less than 26 gms.	each	45.80
28.110	Providing and fixing PTMT Butt hinges with necessary screws etc. complete.		
28.110.1	75x60x10 mm fitted with 5.5 mm dia M.S. Bright Bar Rod weighing not less than 34 gms.	each	72.40
28.110.2	100x75x10 mm fitted with 5.5 mm dia MS Bright Bar Rod weighing not less than 53 gms.	each	89.20
28.111	Providing and fixing PTMT Tower Bolts with 12 mm one piece rod inside and necessary screws etc., complete.		
28.111.1	152x42x18 mm weighing not less than 60 gms.	each	86.60
28.111.2	202x42x18 mm weighing not less than 78 gms.	each	114.00
28.112	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	39.60
28.113	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 50X25mm fixed with nails and G.I wire to existing surface complete as per direction of Engineer-in-charge.	sqm	556.00
28.114	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.		
28.114.1	50x50mm (base and height).	metre	288.50
28.115	Providing and fixing 2nd class teak wood lipping/ moulded beading or Taj beading of size 18X5mm 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	76.70
28.116	Providing and fixing bright finished 100mm mortice lock with 6 levers without pair of handles for aluminium door with necessary screws etc complete (Best make of approved quality) as per direction of Engineer-in-charge.	each	633.00
28.117	Providing and fixing magnetic catcher in cupboard / ward robe		

Code No	Description	Unit	Rate Rs.
	shutters including fixing with necessary screws etc. complete (Best make of approved quality.		
28.117.1	Triple strip vertical type.	each	42.30
28.117.2	Double strip (horizontal type).	each	39.40
28.118	Providing and fixing powder coated telescopic drawer channels 300mm long with necessary screws etc. complete as per directions of Engineer-in-charge.	each	275.50
28.119	Providing and fixing sliding arrangement in racks/cupboards/cabinets shutter by P/F stainless steel rollers to run inside C or E aluminium channel section (The payment of C or E channel shall be made separately)	each	17.20
28.120	Providing and fixing factory made UPVC door frame made of UPVC profile section having an overall dimension as below (tolerance ± 1 mm) with wall thickness 2.0mm ± 0.2 mm, corners of the door frame to be mitred and welded of plastic, galvanized brackets and stainless steel screws. The hinge side vertical of the frames reinforced by galvanized M.S. tube of size 19 X 19mm and 1mm ± 0.1 mm wall thickness and 3 nos. stainless steel hinges fixed to the frame complete as per manufacturers specification and direction of Engineer-in-charge		
28.120.1	Extruded section Profile size 48x40 mm.	metre	234.50
28.120.2	Extruded section Profile size 42x50 mm.	metre	263.00
28.121	Providing and fixing to existing door frames.		
28.121.1	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 joined 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 overall 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	2,144.00
28.121.2	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 joined at the corners by means of M.S. galvanised/ plastic brackets of size 75x220 mm having wall thickness 1.0 mm and stainless steel		

Code No	Description	Unit	Rate Rs.
	screws. The styles of the shutter reinforced by inserting galvanised M.S. tube of size 25x20 mm and 1 mm $\pm$ 0.1 mm wall thickness. The lock rail made up of 'H' section, a UPVC hollow section of size 100x30 mm and 2 mm $\pm$ 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 overall thickness of 20 mm and 1 mm $\pm$ 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	2,315.00
28.121.3	25mm thick PVC flush door shutters made out of a one piece Multi chamber extruded PVC section of the size of 762mm X 25mm or less as per requirement with an average wall thickness of 1mm $\pm$ 0.3mm. PVC foam end cap of size 23x10mm are provided on both vertical edges to ensure the overall thickness of 25mm. An M.S. tube having dimensions 19mm x 19mm 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 25mm X 11mm. Door shutter shall be reinforced with special polymeric reinforcements as per manufactures' 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	2,780.00
28.122	Providing and fixing factory made P.V.C. door frame of size 50x47mm with a wall thickness of 5mm, made out of extruded 5mm rigid PVC foam sheet mitred at corners and joined with 2 Nos. of 150mm long brackets of 15x15mm M.S. square tube, the vertical door profiles to be reinforced with 19x19mm 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 65/100mm size complete as per manufacturers specification and direction of Engineer-in-Charge.	metre	520.00
28.123	Providing and fixing to existing door frames.		
28.123.1	30mm thick factory made panel PVC door shutter consisting of frame made out of M.S. tubes of 19 gauge thickness and size of 19mm x 19mm for styles and 15x15mm for top & bottom rails. M.S. frame shall have a coat of steel primers of approved make and manufacture. M.S. frame covered with 5mm thick heat moulded PVC 'C' channel of size 30mm thickness, 70mm width out of which 50mm shall be flat and 20mm shall be tapered in 45degree angle on either side forming styles; and 5mm thick, 95mm wide PVC sheet out of which 75mm shall be flat and 20mm shall be tapered in 45 degree on the inner side to form top and bottom rail and 115mm wide PVC sheet out of which 75mm shall be flat and 20mm shall be tapered on both sides to form lock rail. Top, bottom and lock rails shall be provided either side of the panel. 10mm (5mm x 2) thick, 20mm wide cross PVC sheet be provided as gap insert for top rail &		

Code No	Description	Unit	Rate Rs.
	bottom rail. panelling of 5mm thick both side PVC sheet to be fitted in the M.S. frame welded/ sealed to the styles & rails with 7mm (5mm+2mm) thick x 15mm wide PVC sheet beading on inner side, and joined together with solvent cement adhesive. An additional 5mm thick PVC strip of 20mm 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 (for W.C. and bathroom door shutter).	sqm	3,270.00
28.123.2	30mm thick factory made solid both side Pre-laminated panel PVC door shutter consisting of frame made out of M.S. tubes of 19 gauge thickness and size of 19mm x 19mm for styles and 15x15mm for top & bottom rails. M.S. frame shall have a coat of steel primers of approved make and manufacture . M.S. frame covered with 5mm thick heat moulded Pre-laminated PVC 'C' channel of size 30mm thickness, 70mm width out of which 50mm shall be flat and 20mm shall be tapered in 45degree angle on either side forming styles; and 5mm thick, 95mm wide PVC sheet out of which 75mm shall be flat and 20mm shall be tapered in 45 degree on the inner side to form top and bottom rail and 115mm wide PVC sheet out of which 75mm shall be flat and 20mm shall be tapered on both sides to form lock rail. Top, bottom and lock rails shall be provided either side of the panel. 10mm (5mm x 2) thick, 20mm wide cross PVC sheet be provided as gap insert for top rail & bottom rail. panelling of 5mm thick both side Pre-laminated PVC sheet to be fitted in the M.S. frame welded/ sealed to the styles & rails with 7mm (5mm+2mm) thick x 15mm wide PVC sheet beading on inner side, and joined together with solvent cement adhesive. An additional 5mm thick PVC strip of 20mm 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 (for W.C. and bathroom door shutter).	sqm	3,555.00
28.124	Providing and fixing of Fibre Glass Reinforced plastic (FRP) Door Frames of three legged of cross-section 90mm x 45mm having single rebate of 32mm x 15mm to receive shutter of 30mm thickness .The laminate doorframe moulded with fire resistant grade unsaturated polyester resin and chopped mat .Doorframe laminate shall be 2mm thick and shall be filled with suitable wooden block in all the three legs. The frame shall be covered with fibreglass from all sides. MS stat shall be provided at the bottom to sturdy the frame.	metre	560.00
28.125	Providing and fixing to existing door frames.		
28.125.1	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 thick FRP laminate for panels and confirming to IS: 14856 - 2000 including fixing to frames.	sqm	3,250.00

Code No	Description	Unit	Rate Rs.
28.125.2	30mm thick fibreglass reinforced plastic (F.R.P.) flush door shutter in different plain and wood finish made with fire retardant grade unsaturated polyester resin, moulded to 3mm 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 : 2000, complete as per direction of Engineer-in-charge.	sqm	3,120.00
28.126	Providing and fixing factory made door frame (single rebate) made of solid PVC foam profile with homogenous fine cellular structure having smooth outer integral skin having 60mm width & 30mm thickness and shall be fixed to wall as per instructions of engineer-in-charge using 100x8 sheet metal CSK screws.	metre	443.00
28.127	Providing and fixing 28 mm thick door shutter made of solid PVC foam profile with homogenous fine cellular structure having smooth outer integral skin having 71mm width & 28mm thick as styles and rails. Joints are made using solvent adhesive and GI 'C' sections (39mm x 19mm x 0.6mm thick) or M S pipe (40mm x 20mm) stiffener frame insert & telescopic polymeric 'L' corners .The panel shall be filled with 3mm thick high - pressure compact laminate as per manufacturer's specifications and direction of Engineer-in-charge, cover moulding shall be provided for covering fixing screws and elegant look.(for W.C. and bathroom door shutter).	sqm	4,095.00
28.128	Providing and fixing PVC rigid foam sheet 1mm thick on existing door shutters (bathroom and W.C. doors) using synthetic rubber based adhesive.	sqm	1,085.00
28.129	Providing and fixing 12mm 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 25mm to 40mm thick.		
28.129.1	Marine plywood of lamination / painting quality and conforming to IS: 710	sqm	2,284.00
28.129.2	Fire retardant plywood of lamination / painting quality conforming to IS: 5509.	sqm	2,322.00
28.130	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.		
28.130.1	1.5 mm thick.	sqm	966.00
28.130.2	1.0 mm thick.	sqm	721.00

Code No	Description	Unit	Rate Rs.
28.131	Providing and fixing factory made Fibreglass Reinforced plastics (F.R.P.) chajja 4mm 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 2nos. vertically and 1nos. horizontally 50x2mm thick M.S. flat with 12mm in built hole for grouting on the existing wall along with the 50mm 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,	sqm	5,170.00
28.132	Providing and fixing cup board shutters 25mm 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 25mm wide x12 mm thick with necessary screws and bright finished stainless steel piano hinges complete as per direction of the Engineer-in-Charge.	sqm	1,895.00
28.133	Providing and fixing cup board shutters with 25mm thick veneered particle board IS : 3097 marked exterior grade (Grade I) of approved make including IInd class teak wood lipping of 25mm wide x 12 mm thick with necessary screws and bright finished stainless steel piano hinges complete as per direction of Engineer-in-Charge.		
28.133.1	With decorative veneering on one side and commercial veneering on other side.	sqm	1,710.00
28.133.2	With non decorative veneering on both sides.	sqm	1,584.00
28.134	Providing and fixing factory made 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).		
28.134.1	25 mm thick.	sqm	2,177.00
28.135	Providing and fixing aluminium U beading of required size to Pre-laminated /flush door shutter including fixing etc. complete as per direction of Engineer-in-charge.	kg	466.50
28.136	Providing and fixing, in position concealed G.I. section for wall panelling using board of required thickness fixed on the 'W' profile (0.55mm thick) having a knurled web of 51.55mm and two flanges		

Code No	Description	Unit	Rate Rs.
	of 26mm each with lips of 10.55 mm placed @ 610mm C/C in perimeter channel having one flange of 20mm and another flange of 30mm with thickness of 0.55mm and web of length 27mm. Perimeter channel is fixed on the floor and the ceiling with the nylon sleeves @ 610mm C/C with fully threaded self-tapping drywall screws. Board is fixed to the 'W' profile with 25 mm countersunk ribbed head screws @ 200mm 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 fibre tape to provide seamless finish.		
28.136.1	Tapered edge calcium silicate board made with calcareous & siliceous materials reinforced with cellulose fibre manufactured through autoclaving process to give stable crystalline structure, with compressive strength 225 kg/sq.cm, Bending strength 100 kg/sq.cm.		
28.136.1.1	10mm thick.	sqm	1,292.00
28.136.2	Non-asbestos multipurpose cement board reinforced with cellulose fibre manufactured through autoclaving process (high pressure steam cured) as per IS 14862 with suitable fibre cement screw.		
28.136.2.1	8 mm thick.	sqm	1,120.00
28.136.3	Gypsum board conforming to IS: 2095 - 1996: Part - I .		
28.136.3.1	12.5 mm thick.	sqm	995.00
28.137	Providing and fixing Drapery rod 25.4 mm dia made of 20 gauge cold rolled steel strip by electrical resistance welded, coated with acid resistance polymer finial made from ABS material with suitable nos of ring made from ABS material in nearest matching colour of rod including Brackets of made of galvanized steel.	metre	484.50
28.138	Providing and fixing sun control film having thickness 1 Mil (25.4 micron) Visible Light Transmittance 4-24% & Solar Energy Transmittance 42-51% & Total solar Energy rejection 37-43% of approved colour and shade , complete in all respect , at all level , as directed by engineer- in -charge.	sqm	859.00
28.139	Supply and installation of Multi Rib Proofing /Cladding Sheet Manufacture out of following thickness TCT(Total Coated thickness) high tensile Zinc aluminium alloy coated galvalume steel (as per 150gsm zinc aluminium coated 550Mpa yield strength) confirming to IS: 1397/ ASTM A -792, sheet to have wide pens 30mm high nb at 250mm centre and centre width of 1020 mm sheets be casted with regular modified polyester system on a continuous with line on centre for face and with a polyester coating respectively, sheet shall have proportionality with siphoned plate at, made to prevent leakage, sheet shall be fixed by more of sell drilling lift tapping hot dip zinc coated hoax head fastener of size 12x14x55mm long. The sheet shall be supplied in one length and for a minimum up to 12 mts with all scaffolding.		
28.139.1	0.50mm TCT(Total Coated thickness)	sqm	843.00
28.139.2	0.60mm TCT(Total Coated thickness)	sqm	928.00

Code No	Description	Unit	Rate Rs.
28.139.3	0.80mm TCT(Total Coated thickness)	sqm	1,096.00
28.140	Supply and Installation PREFABRICATED INSULATED PPGL Insulated sandwich panels for ROOF of total thickness mentioned below exclusive of crest height of top corrugation. Panel shall be made of 0.50mm (+/-0.04mm) thick pre coated metal sheet on both sides of rigid polyurethane insulation. The top external facing metal sheet shall have corrugated shape with crest. The trapezoidal shape crowns/crest height should not be less than 30mm. The pre-coated metal sheet shall be PPGL (Pre Painted Galvalume Sheet with AZ coating) sheet having SDP (Super Durable Polyester) colour coat of 18 micron (min). The bottom sheet must have tongue and groove type flange (U shape) of 8mm x 8mm on groove side and 8mm x 12mm on tongue side. Flange must be on lengthwise sides for joining adjacent panels. Panel's bottom side PPGL sheet must also be pre-strengthened by full lengthwise stiffening with semi-circular beading of 12mm width & 3 to 4mm depth at 240 (+/-5) mm pitch. The top corrugated sheet must have at-least one open crown/crest for overlapping adjacent panel width wise. Similarly the top corrugated sheet must have suitable open extension of min 6" on bottom width wise side of panel for overlapping further panels joined lengthwise also. The insulation core shall be self-extinguishing DIN 4102,Class B3 fire retardant class rigid PUR with thermal conductivity of 0.025 W/mK and with initial density of 40kg/m3 (+/-2kg) suitable for temperature range of -30 degree C to +80 degree C. The panel must be made using glue-free high pressure hot pressing self-bonding method. PPGL sheet on both sides of panel shall have a min15 micron protective plastic guard film to avoid scratches during transportation.		
28.140.1	Thickness 65mm (+/- 2mm)	sqm	2,413.00
28.140.2	Thickness 105mm (+/- 2mm)	sqm	2,685.00
28.141	Supply and Installation of WALL – PREFABRICATED INSULATED PPGL PANEL: Walls: Insulated sandwich panels for wall of total thickness mentioned below. Panel shall have 0.50mm (+/-0.04mm) thick pre coated metal sheet on both sides of rigid PUR insulation. The pre-coated metal sheet shall be PPGL (Pre Painted Galvalume Sheet with AZ coating) sheet having SDP (Super Durable Polyester) colour coat of 18 micron (min). The panels shall be vertically joined together with adjacent panel by tongue and groove joints. For joining, wall panel's metal sheet facings must have lengthwise flange (U shape) of 8mm x 8mm on groove side and 8mmx12mm on tongue side of panel. The pre-coated metal sheet (PPGL) must also be pre-strengthened by full lengthwise stiffening with semi-circular beading of 12mm width & 3 to 4mm depth at 240 (+/-5) mm pitch. Panels may have optional provision for inbuilt electrical conduit running lengthwise at vertical center of specified panels. The insulation core shall be self-extinguishing DIN 4102,Class B3 fire retardant class rigid PUR with thermal conductivity of 0.025 W/mK and with density of 40kg/m3 (+/-2kg) suitable for temperature range		

Code No	Description	Unit	Rate Rs.
	of -30 degree C to +80 degree C. The panel must be made using glue-free high pressure pressing self-bonding method. PPGL sheet on both sides of panel shall have a min15 micron protective plastic guard film to avoid scratches during transportation.		
28.141.1	Thickness 55mm (+/- 2mm)	sqm	2,295.00
28.141.2	Thickness 65mm (+/- 2mm)	sqm	2,295.00
28.142	Supply and Installation of WALL – PREFABRICATED INSULATED CEMENT FACE PANEL: Factory-readymade structural reinforced insulated wall panel of thickness mentioned below. Panel shall be made of 6mm (+/-0.6mm) thick asbestos-free fiber cement sheet/ Cement bonded particle board as per IS:14276:1995 on both sides of rigid PUR insulation. The wall panel shall be vertically joined together with adjacent panel by biscuit joints lengthwise with suitable construction adhesive. Joining member (biscuit) shall be made of approx 12mm thick cement sheet /Cement bonded particle board as per IS:14276:1995. Panels may have optional provision for inbuilt electrical conduit running lengthwise at vertical center of specified panels. Both vertical lengthwise sides of panels must have full length MS tubes of min 1.0mm thickness for better structural strength.The final panel surface must be free from undulations. The Insulating core shall be self-extinguishing DIN 4102,Class B3 fire retardant class rigid PUR with thermal conductivity of 0.025 W/mK and with density of 40kg/m3 (+/-2kg) suitable for temperature range of -30 degree C to +80 degree C. The panel must be made using glue-free high pressure hot pressing self-bonding method and shall be free from major surface undulations.		
28.142.1	Thickness 65mm (+/- 2mm)	sqm	2,295.00
28.142.2	Thickness 75mm (+/- 2mm)	sqm	2,399.00
28.143	Supply and Installation of WALL – PREFABRICATED INSULATED LAMINATED FACE PANEL: Factory-readymade interior wall panel of thickness mentioned below. Panel shall be made of min 4mm (+/- 0.5mm) thick laminated wood based medium density fiber board sheet on both sides of rigid PUR insulation.The panels shall have suitable provision for joining adjacent panels. Interior panels may have optional provision for inbuilt electrical conduit running lengthwise at vertical center of specified panels. The insulation core shall be self-extinguishing DIN 4102,Class B3 fire retardant class rigid PUR with thermal conductivity of 0.025 W/mK and with density of 40kg/m3 (+/-2kg) suitable for temperature range of -30 degree C to +80 degree C. The panel must be made using glue-free high pressure hot pressing self-bonding method and shall be free from major surface undulations. both sides of panel shall have a min15 micron protective plastic guard film to avoid scratches during transportation.		
28.143.1	Thickness 65mm (+/- 2mm)	sqm	2,399.00
28.143.2	Thickness 75mm (+/- 2mm)	sqm	2,515.00

Code No	Description	Unit	Rate Rs.
28.144	Providing & Fixing in position, following Acoustical Panelling on 50 x 50 mm sal-wood frame of 600 x 600 c to c having wooden supports from wall of required length, in front of 1000 gsm synthetic wool 50 mm thick with chicken mesh on wall side, including cost of required Cut-Outs, decorative mouldings / finishing-items / paint & Scaffolding, as per Architectural & Acoustical Design & Instructions & Complete in all aspects.including all materials labour, finishing etc complete		
28.144.1	Fabric wrapped Compressed polyester fibre nonwoven 9 mm panels	sqm	4,780.00
28.144.2	Wood- wool board 20mm panels	sqm	3,575.00
28.144.3	Gypsum plain 12mm panels	sqm	2,399.00
28.144.4	12mm wp Ply wood & 1.5mm laminate panels	sqm	5,300.00
28.145	Providing & Fixing in position Acoustical Doors along with 150 x 150 mm teak wood frame, doors made from 50mm Teak wood frame 600 x600 c to c filled with 1000 Gsm synthetic wool 50mm thick and 3mm Tecsound from both sides, 12mm waterproof ply & veneer from both sides , including 150mm heavy duty SS hinges (Geze / Dorma or eq.) 4 no each leaf, with Door-closer (Dorma / Geze or eq.) including cost of required Cut-Outs, decorative mouldings / finishing-items / melamine polish & Scaffolding as per Architectural & Acoustical Design & Instructions & Complete in all aspects .including all materials labour, finishing etc complete	sqm	24,700.00
28.146	Providing & fixing in position Stage flooring Made from 18mm plywood 1200 x 2400 & 18mm Teakwood planks 100 x 800 having tongue & grove on Sal-wood frame of 50 x 100 at 600mm c to c on stage surface including cost of required Cut-Outs, decorative mouldings / finishing-items / polish etc., as per Architectural & Acoustical Design & Instructions & Complete in all aspects. .including all materials labour, finishing etc complete	sqm	8,560.00
28.147	Providing & Fixing in position, Acoustical Ceiling with following Panels on approved heavy duty G.I. frame ceiling channels at 450 c to c, & intermediate channels not more than 1200 c to c, along with ply wood forms suspended with Hangers from Roof, in front of 1000 Gsm synthetic wool 50 mm thick, with Paint, including cost of required Cut-Outs, decorative mouldings / finishing-items & Scaffolding, as per Architectural & Acoustical Design & Instructions & Complete in all aspects.including all materials labour, finishing etc complete		
28.147.1	Gypsum Plain panels	sqm	1,529.00
28.147.2	Compressed polyester fibre nonwoven 9mm panels	sqm	2,985.00
28.147.3	Rigitone 8/18 perforated panels	sqm	1,254.00
28.148	Providing & Fixing in position, Acoustical Panelling made from 12mm thick Agro wood strips of 50, 75 7 100 mm width on 50 x 50 mm Sal- wood frame of 600 x 600 c to c having supports from wall of required length, in front of 1000 gsm synthetic wool 50 mm thick with		

Code No	Description	Unit	Rate Rs.
	approved coloured fabric on strips side & chicken mesh on wall side, including cost of required Cut-Outs, decorative mouldings / finishing-items / Melamine Polish & Scaffolding, as per Architectural & Acoustical Design & Instructions & Complete in all aspects. including all materials labour, finishing etc complete	sqm	5,280.00
28.149	Providing & Fixing in position, Fabric wrapped Compressed polyester fibre nonwoven 9mm panels above the wood wool board panelling or existing sal wood frame, using adhesive, as per Architectural & Acoustical Design & Instructions & Complete in all aspects. including all materials labour, finishing etc complete	sqm	3,075.00
28.150	Providing & Fixing in position, Partition made from 12mm thick Gypsum from both sides on 50 x 50 mm Sal-wood frame of 600 x 600 c to c, having of 800 gsm synthetic wool 50 mm thick in between, including cost of required Cut-Outs & Scaffolding, as per Architectural & Acoustical Design & Instructions & Complete in all aspects including all materials labour, finishing etc complete	sqm	3,235.00
28.151	Providing & Fixing in position, Carpet more than 800+ gsm, made with 100% stain proof fibres of approved make along with 5mm underlay as per Architectural & Acoustical Design & Instructions & Complete in all aspects including all materials labour, finishing etc complete	sqm	1,511.00
28.152	Providing & Fixing in position, 12mm wp Ply wood & 1.5mm laminate panels above the fabricated frame on one side , as per Architectural & Acoustical Design & Instructions & Complete in all aspects. including all materials labour, finishing etc complete	sqm	2,287.00
28.153	Providing & Fixing in position, Under Deck insulation for metal deck using 1000 Gsm synthetic wool with fixed to deck using adhesive and chicken mesh.	sqm	957.00
28.154	Providing & fixing in position, heavy duty fully upholstered Auditorium chairs 520 mm c to c tip-up type. Height of back should be less than 1030 mm with plastic protective cover on back and bottom having teak wood handles. Back to back distance is 1000mm. The auditorium chairs should be of following specifications 1. Powder Coated Heavy duty MS Stand. 2. Individually moulded , ergonomically designed seat and back cushions. 3.Moulded Polyurethane Foam cushion. PU foam density 48 – 52 kgs/cu.mtr 4. Moulded Polyurethane Foam manufactured in certified ISO 9001 facility to ensure consistency in density for longevity .5.Upholstered in Foam laminated stretch sandwich Fabric for clean finish and soft comfortable feel as per the colour & pattern selected by the client. 6.Seat and Back should have moulded synthetic protective cover. 7. Wooden or PU armrest 65mm x 20mm - 330mm long . 8.Mounted using Anchor fasteners.	No	6,280.00
28.155	Supply and Installation of SMALL ROOM (TOILET & GUARD ROOM) with following thickness PREFABRICATED INSULATED PPGL FACE closed lip panels (for door, wall and roof) of thickness mentioned below. Panel shall have 0.50mm (+/-0.04mm) thick pre-		

Code No	Description	Unit	Rate Rs.
	coated metal sheet on both sides of rigid PUR insulation. The pre-coated metal sheet shall be PPGL (Pre Painted Galvalume Sheet with AZ coating) sheet having SDP (Super Durable Polyester) colour coat of 18 micron(min). The Pre coated metal sheet on both sides must be pre-strengthened by full lengthwise stiffening with semi-circular beading of 12mm wide & 3mm depth at 240 (+/-5) mm pitch. Panels shall have closed lengthwise sides made by right angle flange on both side of Pre coated metal sheets, free from cap type covers. The top and bottom part on widthwise sides of panels must have full width MS Square tube insert of (min 25mm x 1.0mm) for better screw retention and strength. The insulation core shall be self-extinguishing DIN 4102, Class B3 fire retardant class rigid PUR with thermal conductivity of 0.025 W/mK and with density of 40kg/m ³ (+/-2kg) suitable for temperature range of -30 degree C to +80 degree C. The panel must be made using glue-free high pressure hot pressing self-bonding method free from major undulations. PPGL sheet on both sides of panel shall have a min15 micron protective plastic guard film to avoid scratches during transportation.		
28.155.1	Thickness of 32mm (+/-2mm)	sqm	3,295.00
28.155.2	Thickness of 50mm (+/-2mm)	sqm	3,505.00
28.156	Supply and Installation of following accessories in Small rooms made of prefabricated panels including necessary screws, adhesives etc complete.		
28.156.1	Bottom and Top U track for mounting panels with floor made from minimum 1.15 mm thick PPGL sheet with flange height of minimum 35 mm and width as per thickness of panel used.	metre	316.00
28.156.2	50x50mm Corner angle flashings (inner and outer) of equal shape for covering various corners and open sides of panels made from 0.5mm thick pre-coated PPGL sheet in following sizes:	metre	246.50
28.156.3	100x100mm Corner angle flashings (inner and outer) of equal shape for covering various corners and open sides of panels made from 0.5mm thick pre-coated PPGL sheet in following sizes:	metre	316.00
28.156.4	200x200mm Roof Ridge Cap flashing for roof panels made from 0.5mm thick pre-coated PPGL sheet	metre	316.00
28.156.5	Roof Front side flashing for roof panels (corrugated trapezoidal shape) made from 0.5mm thick pre-coated PPGL sheet.	metre	316.00
28.156.6	Roof End cap for closing ends of roof panels made from 0.5mm thick PPGL sheet.	metre	246.50
28.156.7	Frame for door/ windows made out of min 1.15mm thick press steel sheet.	metre	366.50
28.156.8	U or L shape panel end caps suitable for thickness of panel used, with 30mm flange made from 0.5mm Pre coated PPGL sheet.	metre	112.00

Code No	Description	Unit	Rate Rs.
28.157	Supply and fixing of Cement Bonded Particle Board (as per IS 14276) false ceiling using 6MM thick Cement Board with galvanized and pre painted steel T section of size 24mm x 27mm x 0.4mm for main T duty pre punched to accept cross T section of size 24mm x 25mm x 0.4mm duly punched at both ends for insertion into main T. The grid size will be 610mm x 610mm. The frame work (grid) is suspended to the roof by using G.I flat of 0.60mm or 14-gauge G.I wire with necessary fixers to the roof and frame work. Cement Board panel is loaded on the grid. The cost inclusive of necessary hardware, labour, one coat of primer (Both side) and two coats of smooth finish on visible side.	sqm	717.00
28.158	Supply and fixing of Cement Bonded Particle Board (as per IS 14276) wall panelling using 10 MM thick Cement Board with frame work made of GI stud section of size 48mm x 35mm x 0.55mm thick placed at every 610 mm C/C intervals vertically and at 1200mm internals horizontally fixed to the wall by means of self expansion screws and caps. Cement Board panel is to be fixed to frame by means of self taping screws placed at every 300 mm intervals leaving 3mm gap between two panels. The cost inclusive of one coat of Altek primer and two coats of Altek smooth finish and cost & conveyance of all materials, labour charges etc. complete as per the direction of Engineer in-charge.	sqm	1,635.00
28.159	Supply and fixing of Cement Bonded Particle Board (as per IS 14276) double skin partition using with 10 MM thick Cement Board made out of G.I. track section of size 50mmx 35mm x 0.55 mm for fixing to the roof and floor and stud section of size 48mm x 35mm x 0.55mm placed in track section vertically at 610mm intervals and at 1200mm intervals horizontally fixed to the wall by means of self expansion screws and caps to the wall and roof. Cement Board panel is to be fixed both sides of frame work by using self taping screws fixed at every 300mm intervals to the frame work leaving 3 mm gap between two panels. The cost inclusive with one coat of Alltek primer and two coats of Alltek smooth finish and cost and conveyance of all materials to site, labour charges etc., complete as per the direction of Engineer in-charge.	sqm	2,875.00
28.160	Supply and fixing of Factory Laminated Cement Bonded Particle Board double skin partition using with 10MM Factory Laminated Cement Bonded Board made out of G.I track section of size 50 mm x 35mm x 0.55mm for fixing to the roof and floor and stud section of size 48mm x 35mm x 0.55mm placed in track section vertically at 610mm intervals and at 1200mm internals horizontally. The frame is fixed by means of self expansion screws and caps to the wall / roof. Laminated Cement Bonded Particle Board is to be fixed both sides of the frame work by using 2mm thick electro plated CR flat section leaving 3mm gap between two panels. The cost inclusive of cost and conveyance of all materials to sites, other materials incidentals and labour charges as per the direction of Engineer in-charges.	sqm	3,750.00

Code No	Description	Unit	Rate Rs.
28.161	Supply and fixing of Bath room / Toilet door shutter with 16mm Factory Laminated Cement Bonded Particle Board BISON Lam (IS 14276) door shutter with all-round 'U' lipping of PPS section of size 12mm X 18mmX 12mmX0.6mm thickness with a hardware of 12mm dia X200mm long aluminium aldrop – 2 nos2 No of 125mm long handles and also 3 no Of IS304 grade Patee Hinges 3mmX12mmX180mm long with pole receiver of 10mm dia pole X40mm long welded on 2mm X40mm(ss304) plates works as receiver for RT patte hinges. The price inclusive of all material at site.	sqm	2,650.00

29.0 STEEL WORK

Code No	Description	Unit	Rate Rs.
29.1	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	100.50
29.2	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	114.50
29.3	Providing and fixing in position collapsible steel shutters with vertical channels 20x10x2mm and braced with flat iron diagonals 20x5mm size with top and bottom rail of T-iron 40x40x6mm with 40mm dia, steel pulleys complete with bolts, nuts, locking arrangement, stoppers, handles, including applying a priming coat of approved steel primer.	sqm	8,620.00
29.4	Providing and fixing 1mm thick M.S. sheet sliding-shutters with frame and diagonal braces of 40x40x6mm angle iron, 3mm M.S. gusset plates at the junction and corners 25mm dia pulley, 40x40x6mm angle and T-iron guide at the top and bottom respectively including applying a priming coat of approved steel primer.	sqm	5,180.00
29.5	Providing and fixing 1mm thick M.S. sheet door with frame of 40x40x6mm angle iron and 3mm M.S. gusset plates at the junctions and corners, all necessary fittings complete, including applying a priming coat of approved steel primer.		
29.5.1	Using M.S. angels 40x40x6 mm for diagonal braces.	sqm	4,550.00
29.5.2	Using flats 30x6mm for diagonal braces and central cross piece.	sqm	4,355.00
29.6	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 27.5cm long wire springs grade No.2 and M.S. top cover of required thickness for rolling shutters.		
29.6.1	80x1.25mm M.S. laths with 1.25 mm thick top cover.	sqm	2,905.00
29.6.2	80x1.20 mm M.S. laths with 1.20 mm thick top cover.	sqm	2,310.00
29.6.3	80x0.90 mm M.S. laths with 0.90 mm thick top cover.	sqm	2,128.00
29.7	Providing and fixing ball bearing for rolling shutters.	each	430.00
29.8	Extra for providing mechanical device chain and crank operation for operating rolling shutters.		

Code No	Description	Unit	Rate Rs.
29.8.1	Exceeding 10.00 sqm and upto 16.80 sqm in the area.	sqm	991.00
29.8.2	Exceeding 16.80 sqm in area.	sqm	1,014.00
29.9	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	491.00
29.10	Fixing standard steel glazed doors, windows and ventilators in walls with 15x3mm lugs 10 cm long embedded in cement concrete blocks 15x10x10cm of 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) or with wooden plugs and screws or rawl plugs and screws or with fixing clips or with bolts and nuts as required, 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 with lugs, glass panes cut to size and glazing clips or metal beading with screws, shall be supplied by department free of cost.)	kg	63.70
29.11	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 rivetted with 15x3mm lugs, 10cm long, embedded in cement concrete blocks 15x10x10cm of 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20mm nominal size) or with wooden plugs and screws or rawl plugs and screws or with fixing clips or with bolts and nuts as required, including providing and fixing of hinges, pivots, float glass panes with glazing clips and special metal sash putty of approved make and a priming coat of approved steel primer excluding the cost of metal beading and other fittings except necessary hinges or pivots complete as per approved design.	kg	195.00
29.12	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 rivetted with 15x3mm lugs, 10cm long, embedded in cement concrete blocks 15x10x10cm of 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20mm nominal size) or with wooden plugs and screws or rawl plugs and screws or with fixing clips or with bolts and nuts as required, including providing and fixing of hinges, pivots, float glass panes with glazing clips and special metal sash putty of approved make and a priming coat of approved steel primer excluding the cost of metal beading and other fittings except necessary hinges or pivots complete as per approved design.	sqm	3,830.00
29.13	Extra for providing and fixing steel beading of approved shape and section with screws instead of glazing clips and metal sash putty in steel doors, windows, ventilators and composite units.	metre	36.40

Code No	Description	Unit	Rate Rs.
29.14	Providing and fixing T-iron frames for doors, windows and ventilators of mild steel Tee-sections, joints mitred and welded with 15x3 mm lugs 10cm long embedded in cement concrete blocks 15x10x10 cm of 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) or with wooden plugs and screws or with dash fastener or rawl plugs and screws or with fixing clips or with bolts and nuts as require including fixing of necessary butt hinges and screws and applying a priming coat of approved steel primer.	kg	115.50
29.15	Providing and fixing pressed steel door frames confirming to IS: 4351 manufactured from commercial mild steel sheet of 1.25 mm thickness including hinges jamb, lock jamb, bead and if required angle threshold of mild steel angle of section 50x25mm, or base ties of 1.25mm pressed mild steel welded or rigidly fixed together by mechanical means, adjustable lugs with split end tail to each jamb including steel butt hinges 2.5mm 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:		
29.15.1	Profile B	metre	509.00
29.15.2	Profile C	metre	554.00
29.15.3	Profile E	metre	601.00
29.16	Providing and fixing M.S. Tubular frames for doors, windows, ventilators and cupboard with L-Type section made of 1.60mm thick M.S. Sheet, joints mitred and welded and grinded finish profiles required size with 15x3mm lugs 10cm long embedded in cement concrete blocks 15x10x10cm of 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20mm nominal size) or with wooden plugs and screws or rawl plugs and screws or with fixing clips or with bolts and nuts as required including fixing of necessary butt hinges and screws and applying a priming coat of approved steel primers.	kg	146.50
29.17	Steel work in built up tubular trusses including cutting, hoisting fixing in position and applying a priming coat of approved steel primer, welded and bolted including special shaped washers etc. complete.		
29.17.1	Hot finished welded type tubes	kg	133.50
29.17.2	Hot finished seamless type tubes	kg	142.50
29.17.3	Electric resistance or induction butt welded tubes.	kg	150.00
29.18	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, beams during laying including painting the exposed portion of loop, all as per standard design complete.	each	183.50
29.19	Providing and fixing circular/ Hexagonal cast iron or M.S. sheet box for ceiling fan clamp of internal dia 140mm, 73mm height, top lid of 1.5mm 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 3.3mm dia. round headed screws, one lock at the corners. Clamp shall be made of 12mm dia M.S. bar bent to shape as per standard drawing.	each	177.00

Code No	Description	Unit	Rate Rs.
29.20	Providing and fixing M.S. round holding down bolts with nuts and washer plates complete.	kg	115.00
29.21	Providing and fixing bolts including nuts and washers complete.	kg	157.50
29.22	Providing and fixing M.S. rivets of sizes in position.	kg	215.00
29.23	Welding by gas or electric plant including transportation of plant at site etc. complete.	cm	4.30
29.24	Providing and fixing bright finished brass casement window fasteners or peg stays to windows/ ventilators with necessary welding and machine screws etc. complete.	kg	73.60
29.25	Providing and fixing 14 mm bright finished brass spring catch to steel centre hung ventilators with necessary welding and machine screws etc. complete.	each	40.20
29.26	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.		
29.26.1	In stringers, treads, landings etc. of stair cases including use of chequered plate wherever required, all complete.	kg	113.50
29.26.2	In gratings, frames, guard bar, ladder, railings, brackets, gates and similar works.	kg	144.50
29.27	Providing and fixing hand rail of approved size by welding etc. to steel ladder railing, balcony railing and staircase railing including applying a priming coat of approved steel primer.		
29.27.1	M.S. tube.	kg	133.50
29.27.2	E.R.W. tubes.	kg	160.00
29.27.3	G.I. pipes.	kg	164.00
29.28	Providing and fixing GI wire gauge of average width of aperture 1.56mm with wire of 0.45mm to existing steel door, window shutter frames with necessary M.S. strip beading 20x3mm with suitable screw at not exceeding 150mm distance etc. complete.	sqm	697.00
29.29	Providing and fixing cow catcher made of R.S. joist angles channels MS rounds including cutting welding and fabrication with priming coat of red oxide (as per design).	kg	104.00
29.30	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	380.50

Code No	Description	Unit	Rate Rs.
29.31	Providing and fixing SS grab bars set for accessible toilets comprising of 1 no S.S. 304 SWING HANDICAP GRAB BAR 700 mm and of DIA 32MM and thickness 1.5mm, 1 No S.S. 304 L SHAPED DISABLED GRAB BAR of IZE-600MM (H) X 600MM (D) and 32MM DIA and thickness 1.5mm, 2 Nos S.S 304 Straight GRAB bar 600 mm, 32mm dia, thickness 1.5mm.	No	5,190.00
29.32	Providing & Fixing in position, MS fabrication work using angles, sqr tubes, c channels etc for various partition frame as per Design & Instructions & Complete in all aspects . including all materials labour, finishing etc complete	Kg	114.50

30.0 FLOORING

Code No	Description	Unit	Rate Rs.
30.1	Brick on edge flooring with bricks of class designation 75 including cement slurry etc. complete in cement mortar:		
30.1.1	1:4 (1 cement : 4 coarse sand)	sqm	758.00
30.1.2	1:6 (1cement : 6 coarse sand)	sqm	724.00
30.2	Dry brick on edge flooring in required pattern with bricks of class designation 75 on a bed of 12 mm mud mortar including filling joints with Jamuna sand complete.	sqm	596.00
30.3	Cement concrete flooring 1:2:4 (1 cement : 2 coarse sand : 4 graded 20mm nominal size stone aggregate) finished with a floating coat of neat cement including cement slurry, but excluding the cost of nosing of steps etc. complete. including Providing /mixing of synthetic fibers compulsorily complying with IS 16481:2022 of 06 mm/12 mm length to be mixed @ 0.25% by weight of Cement i.e. 125 gms per 50 kg Cement up to 900 gms per cum of Concrete/ mortar		
30.3.1	40mm thick	sqm	422.50
30.3.2	75mm thick	sqm	792.00
30.4	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 is mixed @ 2 litre per 50 kg of cement or as per manufacturers specifications. This includes cost of cement slurry, but excluding the cost of nosing of steps etc. complete. including Providing /mixing of synthetic fibers compulsorily complying with IS 16481:2022 of 06 mm/12 mm length to be mixed @ 0.25% by weight of Cement i.e. 125 gms per 50 kg Cement up to 900 gms per cum of Concrete/ mortar	sqm	674.00
30.5	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 is mixed @ 2 litre per 50 kg of cement or as per manufactures specifications. This includes cost of cement slurry, but excluding the cost of nosing of steps etc. complete. including Providing /mixing of synthetic fibers compulsorily complying with IS 16481:2022 of 06 mm/12 mm length to be mixed @ 0.25% by weight of Cement i.e. 125 gms per 50 kg Cement up to 900 gms per cum of Concrete/ mortar	sqm	734.00

Code No	Description	Unit	Rate Rs.
30.6	Cement plaster skirting (upto 30 cm height) with cement mortar 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement. including Providing /mixing of synthetic fibers compulsorily complying with IS 16481:2022 of 06 mm/12 mm length to be mixed @ 0.25% by weight of Cement i.e. 125 gms per 50 kg Cement up to 900 gms per cum of Concrete/ mortar		
30.6.1	18 mm thick.	sqm	479.50
30.7	Providing and laying M30 grade controlled cement concrete pavements including mixing and vibrations concrete with necessary needle vibrators and surface with screed board vibrating complete in all respect with 20/25 mm stone aggregate (crusher broken) including anti-skid textured finish to required camber/ super elevation and grade including curing etc. as per specification with cement concrete M-30 grade including cost of Steel frame work for sides of C.C. pavement consisting of M. S. channels flats and angles with required steel pegs (some of them may left embedded in concrete/ including providing frame work) (only for Building Campus) including Providing /mixing of synthetic fibers compulsorily complying with IS 16481:2022 of 06 mm/12 mm length to be mixed @ 0.25% by weight of Cement i.e. 125 gms per 50 kg Cement up to 900 gms per cum of Concrete/ mortar	Cum	6,260.00
30.8	Cement concrete pavement with 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) including finishing complete. including Providing /mixing of synthetic fibers compulsorily complying with IS 16481:2022 of 06 mm/12 mm length to be mixed @ 0.25% by weight of Cement i.e. 125 gms per 50 kg Cement up to 900 gms per cum of Concrete/ mortar	cum	6,440.00
30.9	Extra for making chequers of approved pattern on cement concrete floors, steps, landing, pavements etc.	sqm	55.40
30.10	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 12.5mm nominal size) and top layer 6mm thick with white, black, chocolate, grey, yellow or green marble chips of sizes from 1mm to 4mm 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 :		
30.10.1	Dark shade pigment with ordinary cement.	sqm	689.00
30.10.2	Light shade pigment with white cement .	sqm	841.00
30.10.3	Medium shade pigment with 50% white cement and 50% ordinary cement.	sqm	788.00
30.10.4	White cement without any pigment.	sqm	723.00
30.10.5	Light shade pigment with ordinary cement.	sqm	734.00
30.10.6	Ordinary cement without any pigment.	sqm	664.00
30.11	40 mm thick marble chips flooring, rubbed and polished to		

Code No	Description	Unit	Rate Rs.
	granolithic finish, under layer 31mm thick cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 12.5mm nominal size) and top layer 9mm thick with white, black, chocolate, grey, yellow or green marble chips of sizes from 4mm to 7mm 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.		
30.11.1	Dark shade pigment with Ordinary cement.	sqm	690.00
30.11.2	Light shade pigment with white cement.	sqm	906.00
30.11.3	Medium shade pigment with 50% white cement and 50% ordinary cement.	sqm	831.00
30.11.4	White cement without any pigment.	sqm	761.00
30.11.5	Light shade pigment with ordinary cement.	sqm	735.00
30.11.6	Ordinary cement without any pigment.	sqm	681.00
30.12	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 12.5mm nominal size) and top layer 12mm thick with white, black, chocolate, grey yellow or green marble chips of sizes from 7mm to 10mm 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 :		
30.12.1	Dark shade pigment with ordinary cement.	sqm	739.00
30.12.2	Light shade pigment with white cement.	sqm	845.00
30.12.3	Medium shade pigment with 50% white cement and 50% ordinary cement.	sqm	789.00
30.12.4	White cement without any pigment.	sqm	808.00
30.12.5	Light shade pigment with ordinary cement.	sqm	733.00
30.12.6	Ordinary cement without any pigment.	sqm	695.00
30.13	Marble chips skirting (upto 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 :		
30.13.1	18 mm thick with under layer 12 mm thick in cement plaster 1:3 (1 cement : 3 coarse sand) :		
30.13.1.1	Dark shade pigment with ordinary cement.	sqm	1,230.00
30.13.1.2	Light shade pigment with white cement.	sqm	1,283.00
30.13.1.3	Medium shade pigment with 50% white cement and 50% ordinary cement.	sqm	1,255.00
30.13.1.4	White cement without any pigment.	sqm	1,264.00

Code No	Description	Unit	Rate Rs.
30.13.1.5	Light shade pigment with ordinary cement.	sqm	1,227.00
30.13.1.6	Ordinary cement without any pigment.	sqm	1,205.00
30.14	Providing and fixing glass strips in joints of terrazzo/ cement concrete floors.		
30.14.1	40 mm wide and 4 mm thick.	metre	63.80
30.15	Extra for laying terrazzo flooring on staircase treads not exceeding 30 cm in width including cost of forming, nosing etc.	sqm	62.50
30.16	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 1mm to 4mm nominal size by volume) and under layer 25mm thick cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 12.5 mm nominal size) rubbing, polishing and cement slurry etc. complete :		
30.16.1	18 mm thick crazy marble stone white, black or as specified.	sqm	1,232.00
30.17	Precast terrazzo tiles 20mm thick with graded marble chips of size upto 12mm laid in floors, and landings, jointed with neat cement slurry mixed with pigment to match the shade of the tiles including rubbing and polishing complete with precast tiles on 20mm thick bed of cement mortar 1:4 (1 cement :4 coarse sand) :		
30.17.1	Light shade using white cement.	sqm	1,012.00
30.17.2	Medium shade using 50%white cement and 50% ordinary cement.	sqm	958.00
30.17.3	Dark shade using ordinary cement.	sqm	915.00
30.17.4	Ordinary cement without any pigment.	sqm	865.00
30.18	Extra if terrazzo tiles are laid in treads of steps not exceeding 30 cm in width.	sqm	82.80
30.19	Precast terrazzo tiles 20 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 :		
30.19.1	Light shade using white cement.	sqm	1,631.00
30.19.2	Medium shades using 50% white cement and 50% ordinary cement.	sqm	1,561.00
30.19.3	Dark shade using ordinary cement.	sqm	1,505.00
30.19.4	Ordinary cement without any pigment.	sqm	1,454.00
30.20	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) :		

Code No	Description	Unit	Rate Rs.
30.20.1	Light shade using white cement.	sqm	950.00
30.20.2	Medium shade using 50% white cement, 50% ordinary cement.	sqm	935.00
30.20.3	Dark shade using ordinary cement.	sqm	892.00
30.20.4	Ordinary cement without any pigment.	sqm	841.00
30.21	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).		
30.21.1	Light shade using white cement.	sqm	944.00
30.21.2	Medium shade using 50% white cement 50% Grey cement.	sqm	1,069.00
30.21.3	Dark shade using ordinary cement.	sqm	883.00
30.21.4	Ordinary cement without any pigment.	sqm	832.00
30.22	Providing and fixing 10mm 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.		
30.22.1	In flooring on a bed of 10 mm thick mortar 1:4 (1 acid proof cement : 4 coarse sand).		
30.22.1.1	Acid and alkali resistant tile.	sqm	1,287.00
30.22.2	In dado/skirting on 12 mm thick mortar 1:4 (1 acid proof cement : 4 coarse sand).		
30.22.2.1	Acid and alkali resistant tile.	sqm	1,398.00
30.23	Extra for prefinished nosing to treads of steps of marble stone.	metre	540.00
30.24	Extra for marble stone flooring in treads of steps and risers using single length upto 2.00 metre .	sqm	590.00
30.25	Kota stone slab flooring 25mm thick 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) :		
30.25.1	Area of each slab 900 to 2000 sqcm	sqm	1,365.00
30.25.2	Area of each slab 2001 to 5000 sqcm	sqm	1,447.00
30.26	Kota stone slabs 25 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	1,634.00
30.27	40 mm thick fine dressed stone flooring over 20 mm (average) thick base of cement mortar 1:5 (1cement : 5 coarse sand) with joints finished flush.		

Code No	Description	Unit	Rate Rs.
30.27.1	Red sand stone	sqm	783.00
30.27.2	White sand stone	sqm	833.00
30.28	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.		
30.28.1	Red sand stone	sqm	1,143.00
30.28.2	White sand stone	sqm	1,193.00
30.29	40 mm thick rubbed stone flooring over 20 mm (average) thick base of cement mortar 1:5 (1 cement : 5 coarse sand) with joints 3mm 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		
30.29.1	Red sand stone	sqm	1,229.00
30.29.2	White sand stone	sqm	1,279.00
30.30	Extra for pre finished nosing in treads of steps of Kota stone/ sand stone slab.	metre	178.00
30.31	Extra for Kota stone/ sand stone in treads of steps and risers using single length upto 1.05 metre .	sqm	29.70
30.32	25mm wooden planking, tongued and grooved in flooring including fixing with iron screws complete with :		
30.32.1	Second class teak wood	sqm	3,730.00
30.32.2	Second class deodar wood	sqm	3,385.00
30.33	38mm thick wood block flooring of first class teak wood laid over 25mm thick levelling layer of cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 10mm nominal size) to be paid separately coated with a thin layer of hot bitumen (blown type) @ 2.45 kg per sqm. including fixing blocks in position after dipping in hot bitumen (blown type) upto half depth, planed, levelled smooth and finished complete.	sqm	9,670.00
30.34	Providing and fixing M.S. angle 50x50x5 mm to act as nosing with lugs of M.S. flat 10x5 mm 10cm 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	129.00
30.35	Random rubble dry stone Kharanja (soling) under floor.	cum	2,270.00
30.36	Providing and Fixing Cushion Vinyl/Fully flexible Vinyl Flooring confirming to I.S.-3462 Flooring of approved make with fibre base using rubber base adhesives including rolling with light wooden roller complete :		
30.36.1	1.0 mm thick.	sqm	915.00
30.36.2	1.5 mm thick.	sqm	1,009.00

Code No	Description	Unit	Rate Rs.
30.36.3	2.0 mm thick.	sqm	1,089.00
30.37	Providing and laying wooden flooring with a direct laminated surface treated with aluminium oxide on top of a high-density fiber board with a density of 850 Kg./per Mtr. having a click system tongue and groove joint to secure a long lasting joint. The planks are or termite resistant and water protected with both side lamination Wooden flooring Planks of size 1208 x 194 x 8 mm / 1215x294x8 mm (8mm thick laminated floor class of use 23/31 having a wear resistance level of AC-3 , impact resistance > 9mm, moisture resistance 3-10% as per (EN-424, EN – 438 EN – 425 EN – 417 – 2)or PREN 3329 complete in all respect as per direction of EI	sqm	2,705.00
30.38	Providing and laying of skirting 89 mm wide having both side laminations with moulding in upper side with matching of floor fixing with nails and screws & fevicol complete in all respect as per direction of EI.	metre	1,184.00
30.39	Providing and fixing fine dressed " marble stone flooring " with white lime stone (raj nagar stone) machine cut of approved shade set in pattern over 20mm thick base of cement mortar 1:3 including jointing finished flush with white cement and stone powder with an admixture of pigment as per direction of Engineer in-charge. (50-75mm thick)	sqm	3,576.00

31.0 ROOFING

Code No	Description	Unit	Rate Rs.
31.1	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 and including a coat of approved steel primer and two coats of approved paint on overlapping of sheets 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.		
31.1.1	1.00mm thick with zinc coating not less than 275gm/m ²	sqm	1,241.00
31.1.2	0.80mm thick with zinc coating not less than 275gm/m ²	sqm	1,064.00
31.1.3	0.63 mm thick with zinc coating not less than 275gm/m ²	sqm	914.00
31.2	Extra for straight cutting in C.G.S. sheet roofing for making opening of area exceeding 40 sq. decimetre for chimney stacks, sky light etc. :		
31.2.1	1.00 mm thick	metre	82.80
31.2.2	0.80 mm thick	metre	66.20
31.2.3	0.63 mm thick	metre	55.20
31.3	Extra for circular cutting in C.G.S. sheet roofing for making opening of area exceeding 40 square decimetre :		
31.3.1	1.00 mm thick	metre	466.50
31.3.2	0.80 mm thick	metre	372.50
31.3.3	0.63 mm thick	metre	372.50
31.4	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.		
31.4.1	0.80mm thick with zinc coating not less than 275gm/m ²	metre	905.00
31.4.2	0.63mm thick with zinc coating not less than 275gm/m ²	metre	807.00
31.5	Providing valleys of 90cm wide overall in plain G.S. sheet fixed with polymer coated J or L hooks, bolts and nuts 8mm dia. G.I. limpet and bitumen washers complete :		
31.5.1	1.60mm thick with zinc coating not less than 350gm/m ²	metre	1,628.00
31.6	Providing flashing of 40 cm overall width in 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 (1cement : 3 coarse sand).		
31.6.1	1.00mm thick with zinc coating not less than 275gm/m ²	metre	718.00
31.7	Providing and fixing 15 cm wide 45 cm overall semi circular plain		

Code No	Description	Unit	Rate Rs.
	G.S. sheet gutter with iron brackets 40x3mm size, bolts, nuts and washers etc. including making necessary connections with rain water pipes complete.		
31.7.1	0.80mm thick with zinc coating not less than 275gm/m ²	metre	852.00
31.7.2	0.63mm thick with zinc coating not less than 275gm/m ²	metre	771.00
31.8	Providing non-asbestos high impact Polypropylene reinforced cement 6 mm thick corrugated sheets (As per IS:14871) roofing upto any pitch and fixing with polymer coated J or L hooks, bolts and nuts 8mm 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: corrugated sheets and including cutting to size and shape wherever required.	sqm	458.50
31.9	Extra for straight cutting in non- asbestos polypropylene reinforced cement corrugated, semi-corrugated 6 mm thick sheet roofing for making openings of area exceeding 40 square decimetre for chimney stacks, skylights etc.	metre	67.40
31.10	Extra for circular cutting in non-asbestos polypropylene reinforced cement corrugated/ semi-corrugated 6 mm thick sheet roofing for making openings of area exceeding 40 square decimetre.	metre	186.00
31.11	Extra for providing and fixing wind ties of 40x 6mm flat iron section.	metre	178.50
31.12	Providing and fixing ridges and hips in non-asbestos fibre cement high impact polypropylene reinforced roofing with suitable fixing accessories or self drilling fastener and EPDM washer etc. complete.		
31.12.1	Corrugated serrated adjustable ridges	metre	472.50
31.12.2	Plain wing adjustable ridges	metre	481.00
31.12.3	Close fitting adjustable ridges	metre	585.00
31.12.4	Unserrated adjustable hips	metre	498.00
31.13	Providing and fixing non-asbestos fibre cement high impact polypropylene reinforced roofing accessories 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:		
31.13.1	Corrugated apron pieces	metre	363.00
31.13.2	Eave's filler pieces	metre	229.50
31.13.3	North light curves	metre	469.50
31.13.4	ventilator curves	metre	556.00
31.13.5	Barge boards	metre	551.00
31.13.6	Ridge finials	pair	203.00
31.13.7	Special north light curves	each	593.00
31.13.8	S type louvers	metre	421.50

Code No	Description	Unit	Rate Rs.
31.14	Providing flat iron brackets 50x3mm size with necessary bolts, nuts and washers etc. for fixing asbestos cement/G.S. sheets gutters with purlins.	metre	68.20
31.15	Painting top of roofs with bitumen of approved quality at 17kg per 10 sqm impregnated with a coat of coarse sand at 60 cudm per 10sqm including cleaning the slab surface with brushes and finally with a piece of cloth lightly soaked in kerosene oil complete :		
31.15.1	With residual type petroleum bitumen of penetration 80/100	sqm	164.00
31.16	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 at 35 kg per cum of earth and gobri leaping with mix 1:1 (1 clay : 1 cow dung) and covered with flat tile bricks of class designation 100 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 :		
31.16.1	With F.P.S. brick tiles	sqm	739.00
31.17	10cm thick (average) mud phaska of damped brick earth on roofs laid to slope consolidated and plastered with 25mm thick mud mortar with bhusha at 35kg per cum of earth and gobri leaping with mix 1:1 (1 clay : 1 cow-dung) and covered with machine moulded tile bricks of class designation 125 conforming to IS : 2690 (Part I) -1992 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.		
31.17.1	With machine moulded F.P.S. brick tiles	sqm	728.00
31.18	Extra for every additional 1 cm thickness of mud phaska	sqm	12.00
31.19	Providing and laying brick tiles of class designation 100 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 a 12 mm layer of cement mortar 1:3 (1 cement : 3 fine sand) and finished neat :		
31.19.1	With F.P.S. brick tiles	sqm	486.50
31.20	Providing and laying pressed clay tiles (as per approved pattern 20 mm nominal thickness and 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	717.00
31.21	Providing gola 75x75 mm in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 stone aggregate 10mm and down gauge) including finishing with cement mortar 1:3 (1 cement : 3 fine sand) as per standard design :		
31.21.1	In 75x75mm deep chase	metre	207.00

Code No	Description	Unit	Rate Rs.
31.22	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 1mx1mx400micron, finished with 12mm cement plaster 1:3 (1 cement : 3 coarse sand) and a coat of neat cement rounding the edge sand making and finishing the outlet complete.	each	173.50
31.23	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 (Karries and battens to be paid separately) including pointing the ceiling joints with cement mortar 1:3 (1 cement : 3 fine sand) complete :		
31.23.1	Red sand stone slab		
31.23.1.1	40 to 50 mm thick	sqm	880.00
31.23.2	White sand stone slab :		
31.23.2.1	40 to 50 mm thick	sqm	927.00
31.24	Providing and fixing insulating board ceiling of approved quality with necessary nails etc. complete (frame work to be paid separately) :		
31.24.1	Natural colour insulating board		
31.24.1.1	12 mm thick	sqm	747.00
31.24.2	White face insulating board		
31.24.2.1	12 mm thick	sqm	811.00
31.24.3	Flame retardant face insulating board		
31.24.3.1	12 mm thick	sqm	926.00
31.25	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) :		
31.25.1	12 mm thick	sqm	810.00
31.26	Providing and fixing plain Multipurpose Cement board (High Pressure steam cured) as per IS : 14862 : 2000) with suitable fibre cement screw in ceiling etc. complete (frame work to be paid separately) :		
31.26.1	6 mm thick cement board	sqm	747.00
31.27	Extra for Circular cutting and waste in ceiling with:		
31.27.1	2nd class teak wood planks 20 mm thick	metre	554.00
31.27.2	Natural colour insulating board		
31.27.2.1	12 mm thick	metre	362.00
31.27.3	White face insulating board:		
31.27.3.1	12 mm thick	metre	370.00
31.27.4	Flame retardant face insulating board:		

Code No	Description	Unit	Rate Rs.
31.27.4.1	12 mm thick	metre	384.50
31.27.5	Standard quality hard board sheet:		
31.27.5.1	3 mm thick	metre	351.00
31.27.5.2	4.5 mm thick	metre	376.00
31.28	Extra for providing and fixing ceiling to curved surfaces in narrow widths	sqm	327.00
31.29	Providing and fixing false ceiling with 12 mm thick plain/ semi perforated or with design ceiling tiles of BWP type phenol formaldehyde synthetic resin bonded pressed particle board conforming to IS:3087 finished with a coat of aluminium primer on both sides & edges and two coats of synthetic enamel paint of approved quality on exposed face fixed to a grid made out of anodised aluminium (with 15 micron anodic coating) T-sections 35 x15x1.5 mm size main runners and cross runners 23.5x19x1.5 mm fixed to main runners placed 600 mm centre to centre both ways so as to form a grid of 600 mm square. The frame work shall be suspended from ceiling by level adjusting hangers of 6 mm dia M.S rod fixed to roof slab by means of ceiling cleats. The suspenders shall be placed 600x 1200 mm centre to centre including fixing to the frame with C.P brace screws and applying a priming coat of zinc chromate yellow primer (aluminium frame work shall be paid separately.)	sqm	574.00
31.30	Extra for providing 3 mm thick translucent white acrylic plastic sheets of approved quality in false ceiling instead of 12 mm thick plain/or with design particle board ceiling tiles in item above.	sqm	541.00
31.31	Providing 10 mm thick plaster of Paris (gypsum anhydrous) ceiling upto 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) :		
31.31.1	Flat surfaces	sqm	1,658.00
31.31.2	Curved surfaces	sqm	1,925.00
31.32	Extra for any sunk or raised mouldings in the plaster of Paris (Gypsum anhydrous) ceiling	sqm	508.00
31.33	Extra for providing plaster of Paris (Gypsum anhydrous) ceiling above 5 metres height from floor level	sqm/ metre	199.50
31.34	Providing and fixing thermal insulation of ceiling (under deck insulation) with Resin Bonded Fibre glass wool conforming to IS : 8193 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 12.5mm x 24g wire and mesh, for top most ceiling of building.	sqm	547.00
31.35	Providing and fixing thermal insulation with Resin Bonded Fibre glass wool conforming to IS : 8193, density 16kg/m ³ , 50mm thick, wrapped in 200G Virgin Polythene bags placed over existing false ceiling and held in position by criss-crossing GI wire.	sqm	263.00

Code No	Description	Unit	Rate Rs.
31.36	Thermal Insulation of roofing with Expanded polystyrene fixed with suitable adhesive to the false ceiling as per the directions of the Engineer-in-charge :		
31.36.1	With Type N - Normal 50 mm thick	sqm	289.50
31.36.2	With Type SE - Self Extinguishing type 50 mm thick	sqm	328.50
31.37	Providing and fixing 100 mm diameter and 60 cm long rain water spout in cement mortar 1:4 (1 cement : 4 fine sand)		
31.37.1	Stone ware spout	each	92.20
31.38	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 10x10x10cm 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. :		
31.38.1	100 mm diameter	each	260.00
31.38.2	150 mm diameter	each	264.50
31.39	Providing lead caulked joints to sand cast iron rain water pipes and fittings :		
31.39.1	100 mm dia. Pipe	each	358.50
31.39.2	150 mm dia. Pipe	each	492.00
31.40	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) :		
31.40.1	Sand cast iron plain shoes :		
31.40.1.1	150 mm diameter	each	655.00
31.41	Providing and fixing on wall face Unplasticised Rigid PVC Single socketed pipes 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.		
31.41.1	75 mm diameter	metre	199.00
31.41.2	110 mm diameter	metre	312.00
31.42	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.		
31.42.1	Coupler		
31.42.1.1	75 mm	each	116.00
31.42.1.2	110 mm	each	175.00
31.42.2	Single push fit Coupler :		
31.42.2.1	75 mm	each	123.00

Code No	Description	Unit	Rate Rs.
31.42.2.2	110 mm	each	175.00
31.42.3	Single tee with door		
31.42.3.1	75x75x75 mm	each	209.50
31.42.3.2	110x110x110 mm	each	363.50
31.42.4	Single tee without door		
31.42.4.1	75x75x75 mm	each	195.50
31.42.4.2	110x110x110 mm	each	327.50
31.42.5	Bend 87.5°		
31.42.5.1	75 mm bend	each	113.00
31.42.5.2	110 mm bend	each	158.00
31.42.6	Shoe (Plain)		
31.42.6.1	75 mm Shoe	each	198.50
31.42.6.2	110 mm Shoe	each	357.50
31.43	Providing and fixing Unplasticised -PVC pipe clips of approved design to Unplasticised - PVC rain water pipes by means of 50x50x50mm 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.		
31.43.1	75 mm	each	253.00
31.43.2	110 mm	each	260.50
31.44	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	51.60
31.45	Providing and fixing at all height false ceiling including providing and fixing of frame work made of special sections power pressed from M.S. sheet and galvanised in accordance with zinc coating of grade 350 as per IS : 277 and consisting of angle cleats of size 25mm wide x 1.6mm thick with flanges of 22mm and 37mm at 1200mm centre to centre one flange fixed to the ceiling with dash fastener 12.5mm diax40mm long with 6mm dia bolts to the angle hangers of 25x25x0.55mm of required length, and other end of angle hanger being fixed with nut and bolts to G.I. channels 45x15x0.9mm running at the rate of 1200mm centre to centre to which the ceiling section 0.5mm thick button wedge of 80mm with tapered flanges of 26mm each having clips of 10.5mm at 450mm centre to centre shall be fixed in a direction perpendicular to G.I. channel with connecting clips made out of 2.64mm diax230mm long G.I. wire at every junction including fixing the gypsum board with ceiling section and perimeter channels 0.5mm thick 27mm high having flanges of 20mm and 30mm long, the perimeter of ceiling fixed to wall/partition with the help of rawl plugs at 450mm centre to centre with 25mm long drive-all screws @ 230mm interval including jointing and fixing to a		

Code No	Description	Unit	Rate Rs.
	flush finish of tapered and square edges of the board with recommended filler, jointing tapes, finisher and two coats of primer suitable for board as per manufactures specification and also including the cost of making openings for light fittings, grills, diffusers, cut-outs made with frame of perimeter channels suitably fixed all complete as per drawing and specification and direction of the Engineer in-charge but excluding the cost of painting with :		
31.45.1	12.5 mm thick tapered edge gypsum board conforming to IS: 2095-Part I,	sqm	1,366.00
31.46	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	106.00
31.47	Providing & fixing UV stabilised fibreglass reinforced plastic sheet roofing upto 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.		
31.47.1	2mm thick corrugated (2.5" or 4.2" or 6") or step-down (2"or 3"or 6") as specified.	sqm	1,135.00
31.47.2	2mm thick flat.	sqm	1,140.00
31.48	Providing & fixing pressed clay tile (Mangalor tile) 20 mm nominal thickness and of approved size and as per approved pattern ceiling on steel frame work complete (steel frame work to be paid separately)	sqm	388.00
31.49	Providing & laying pressed clay tile ridge (Mangalore tile) of 20mm thickness of approved pattern ceiling over steel frame work complete (steel frame work to be paid separately)	sqm	155.00
31.50	Supply & installation of precoated galvanized iron profile sheets (size, shape and pitch of corrugation as approved by Engineer-in-charge) 0.50 mm +/- 5% total coated thickness (TCT), Zinc coating 120gsm as per IS: 277 in 240mpa 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 while 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 55mm) with EPDM seal or with polymer coated J or L hooks, bolts and nuts 8mm diameter with bitumen and G.I. limpet washers or with G.I. limpet washers filled with white lead 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	673.00

Code No	Description	Unit	Rate Rs.
31.51	Providing and fixing precoated galvanised steel sheet roofing accessories 0.50 mm +/- 5% total coated thickness (TCT), Zinc coating 120gsm as per IS: 277 in 240mpa 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 or with polymer coated J or L hooks, bolts and nuts and or G.I. seam bolts and nuts, G.I. plain and bitumen washers complete :		
31.51.1	Ridges plain (500 - 600mm).	metre	579.00
31.51.2	Flashings/ Aprons.(Upto 600 mm)	metre	535.00
31.51.3	North light curves.	metre	613.00
31.51.4	Barge board (Upto 300 mm).	metre	500.00
31.51.5	Crimp curve	sqm	621.00
31.51.6	Gutter .(600 mm overall girth).	metre	1,079.00
31.52	Providing and fixing False Ceiling Tiles of approved materials of size 595x595 mm in true horizontal level suspended on inter locking metal grid of hot dipped galvanised steel sections (galvanized @ 170 gsm/sqm.) consisting of main "T" runner suitably spaced at joints to get required length and of size 24x38mm made from 0.30mm thick (minimum) sheet spaced at 1200mm center to center and cross "T" of size 24x25mm made of 0.30mm thick (minimum) sheet, 1200mm long spaced between main "T" at 600mm center to center to form a grid of 1200x600 mm and secondary cross "T" of length 600mm and size 24x25mm made of 0.30 mm thick (minimum) sheet to be interlocked at middle of the 1200x600mm panel to form grids of 600x600mm and laying false ceiling tiles of approved texture in the grid including, wherever, 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 fixed to ceiling with 6 mm dia and 50mm long dash fasteners, 4mm GI adjustable rods with galvanised level clips spaced at 1200m center to center along main T, bottom exposed width of 24mm of all T-sections shall be pre-painted with polyester paint, all complete at all heights as per specifications drawings and as directed by Engineer-in-Charge. (The rate is excluding cost of tiles which will be paid separately).	sqm	758.00
31.53	Providing & fixing following False ceiling tiles of size 595 x 595 mm in true horizontal level suspended on inter locking metal grid of hot dipped galvanised steel sections (galvanized @ 170 gsm/sqm.) consisting of main "T" runner with suitably spaced joints to get required length and of size 24x38mm made from 0.30mm thick (minimum) sheet spaced at 1200mm center to center and cross "T" of size 24x25mm made of 0.30mm thick (minimum) sheet, spaced at 600mm center to center to form a grid of 1200x600 mm and secondary cross "T" of length 600mm and size 24x25mm made of 0.30 mm thick (minimum) sheet to be interlocked at middle of the 1200x600mm panel to form grids of 600x600mm and wall angle of		

Code No	Description	Unit	Rate Rs.
	size 21x21x0.30 mm and laying false ceiling tiles of approved texture in the grid including, wherever, 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 fixed to ceiling with 6 mm dia and 50mm long dash fasteners, 4mm GI adjustable rods with galvanised level clips spaced at 1200mm center to center along main T, bottom exposed width of 24mm of all T-sections shall be pre-painted with polyester paint, all complete at all heights as per specifications drawings and as directed by Engineer-in-Charge.		
31.53.1	12 mm thick tegular edge Glass Fibre Reinforced Gypsum false ceiling tiles	sqm	2,029.00
31.53.2	6mm thick calcium silicate perforated ceiling tiles	sqm	1,349.00
31.53.3	8mm thick calcium silicate perforated ceiling tiles	sqm	1,495.00
31.54	Providing and fixing following tiles false ceiling at all heights including providing and fixing of frame work made of special sections power pressed from M.S. sheet and galvanised in accordance with zinc coating of grade 350 as per IS : 277 and consisting of angle cleats of size 25mm wide x 1.6mm thick with flanges of 22mm and 37mm at 1200mm centre to centre one flange fixed to the ceiling with dash fastener 12.5mm dia x 40mm long with 6mm dia bolts to the angle hangers of 25x25x0.55mm of required length, and other end of angle hanger being fixed with nut and bolts to G.I. channels 45x15x0.9mm running at the rate of 1200mm centre to centre to which the ceiling section 0.5mm thick bottom wedge of 80mm with tapered flanges of 26mm each having clips of 10.5mm at 450mm centre to centre shall be fixed in a direction perpendicular to G.I. channel with connecting clips made out of 2.64mm dia x 230mm long G.I. wire at every junction including fixing the calcium silicate board with ceiling section and perimeter channels 0.5mm thick 27mm high having flanges of 20mm and 30mm long, the perimeter of ceiling fixed to wall/partition with the help of rawl plugs at 450mm centre to centre with 25mm long drive-all screws @ 230mm interval including jointing and fixing to a flush finish of tapered and square edges of the board with recommended filler, jointing tapes, finisher and two coats of primer suitable for board as per manufactures specification and also including the cost of making openings for light fittings, grills, diffusers, cut outs made with frame of perimeter channels suitably fixed all complete as per drawing and specification and direction of the Engineer in-charge but excluding the cost of painting of thickness of calcium silicate board as below:-		
31.54.1	6 mm thick calcium silicate board	sqm	1,212.00
31.54.2	8 mm thick calcium silicate board	sqm	1,320.00
31.54.3	6 mm thick calcium silicate perforated board	sqm	1,427.00
31.54.4	8 mm thick calcium silicate perforated board	sqm	1,580.00

Code No	Description	Unit	Rate Rs.
31.55	Providing & fixing following tiles of size 595 x 595 mm in true horizontal level suspended on inter locking metal grid of hot dipped galvanised steel sections (galvanized @ 120 gsm/sqm both side inclusive) consisting of main T runner with suitably spaced joints to get required length and of size 24x38mm made from 0.30mm thick (minimum) sheet spaced at 1200mm center to center and cross T of size 24x25mm made of 0.30mm thick (minimum) sheet, 1200mm long spaced between main T at 600mm center to center to form a grid of 1200x600 mm and secondary cross T of length 600mm and size 24x25mm made of 0.30 mm thick (minimum) sheet to be interlocked at middle of the 1200x600mm panel to form grids of 600x600mm and wall angle of size 21x21x0.30 mm and laying false ceiling tiles of approved texture in the grid including, wherever, 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 fixed to ceiling with 6 mm dia and 50mm long dash fasteners, 4mm GI adjustable rods with galvanised level clips spaced at 1200mm center to center along main T, bottom exposed width of 24mm of all T-sections shall be pre-painted with polyester paint, all complete at all heights as per specifications drawings and as directed by Engineer-in-Charge of thickness of tiles as mentioned below:-		
31.55.1	6 mm thick calcium silicate tiles	sqm	1,128.00
31.55.2	8 mm thick calcium silicate tiles	sqm	1,231.00
31.55.3	GI in Plain Tegular edge Global white colour 0.5 mm thick with 8 mm drop, having galvanizing of 100 gms/sqm (both sides inclusive) and electro statically polyester powder coated of thickness 60 microns (minimum).	sqm	2,338.00
31.55.4	GI perforated Tegular edge global white colour 0.5 mm thick with 8 mm drop 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)	sqm	2,432.00
31.56	Providing and fixing 15 mm thick densified tegular edged eco friendly light weight calcium silicate false ceiling tiles of approved texture as per direction of Engineer-in-charge of size 595 X 595 mm in true horizontal level suspended on inter locking metal grid of hot dipped galvanized steel sections (galvanizing @120 grams per sqm) consisting of main 'T' runner suitably spaced at joints to get required length and size of 24X38mm made from 0.33 mm thick (minimum) sheet, 1200mm centre to centre, and cross 'T' of size 24X32mm made out of 0.33mm (Minimum) sheet, spaced at 600mm centre to centre to form a grid of 1200X600mm and secondary cross 'T' of length 600mm and size 24X32mm made out of 0.33 mm thick (Minimum) sheet to be interlocked at middle of the 1200X600mm panel to form grid of size 600X600mm resting on periphery walls/partitions on a perimeter wall angle pre-coated steel of size (24X24X3000mm made of 0.40mm thick (minimum) sheet with the	Sqm	2,510.00

Code No	Description	Unit	Rate Rs.
	help of rawl plugs at 450mm centre to centre with 25mm long dry wall screws @ 230mm interval and laying 15mm thick densified edged calcium silicate ceiling tiles of approved texture in the grid including cutting /making opening for services like diffusers, grills, light fitting, fixtures, smoke detectors etc., wherever required, Main 'T' runners to be suspended from ceiling using 50 mm long M 6 dash fasteners, 6mm G.I. fully threaded rods with galvanised steel L cleat level adjusters of size 80x25x2mm, spaced at 1200mm centre to centre long main 'T' bottom exposed with 24mm of all T-sections shall be pre-painted with polyester baked paint, for all heights, as per specifications, drawing 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 tiles shall have NRC. Value 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/m0KC.		
31.57	Providing & Fixing of following Suspended Ceiling System in module size of 600 x 600 mm, Fire Performance UK Class 0/Class 1 (BS 476 Part 6 & 7), suitable for Green Building application, with Recycled content of 34 % The tile shall be laid on Silhouette profile grid system with 15 mm white/black flanges incorporating a 6 mm central reveal in white/black colour and with a web height of 45mm and a load carrying capacity of minimum 15.68 Kgs/M2 & minimum pull out strength of 100 kgs. Silhouette, Main Runners & Cross Tees to have mitred ends & "birds mouth" notches to provide mitred cruciform junctions. The T Sections have a Galvanizing of 90 grams per sqm and need to be installed with suspension system of make. The Tile & Grid system used together should carry a 10 year warranty. INSTALLATION :- To comprise main runner spaced at 1200 mm centres securely fixed to the structural soffit using suspension system (Specifications below) at 1200mm maximum centre. The First/Last suspension system at the end of each main runner should not be greater than 450 mm from the adjacent wall. Flush fitting 1200 mm long cross tees to be interlocked between main runners at 600 mm centre to form 1200 x 600 mm module. Cut cross tees longer than 600mm require independent support. 600 x 600 mm module to be formed by fitting 600 mm long flush fitting cross tees centrally between the 1200 mm cross tees. Perimeter trim to be wall angles of size 3000 x 19 x 19mm, secured to walls at 450 mm maximum centres. SUSPENSION SYSTEM accessories consisting of M6 Anchor Fasteners with Vertical Hangers made of Galvanised steel of size 26 x 26x 25x1.2 mm with a Galvanised Thickness of 80 gsm, A pre Straightened Hanger wire of dia-2.5 mm of 1.8 m length., thickness of 80 gsm and a tensile strength of 344-413 MPa, along with Adjustable hook clips of 0.8 mm thick, galvanised spring steel for 2.68 mm with a minimum pull strength of 110 kg. The adjustable clip also consists of a 3.5 mm aquiline wire to be used with the main runner.		

Code No	Description	Unit	Rate Rs.
31.57.1	15mm thick Mineral Fibre Anti Bacterial tiles with Bioguard (Bevelled Tegular) EDGE TILES WITH 15 mm Exposed GRID. The tiles should have Humidity Resistance (RH) of 95% Light Reflectance 90%, Thermal Conductivity K =0.052-0.057 w/m K, Colour White with Anti Microbial coating on the face of the tile	sqm	2,034.00
31.57.2	16mm thick Mineral Fibre Acoustical tiles with Bioguard (Bevelled Tegular) EDGE TILES WITH 15 mm Exposed GRID. The tiles should have Humidity Resistance (RH) of 99% NRC 0.5, Light Reflectance >85%, Thermal Conductivity K =0.052-0.057 w/m K, Colour White	sqm	1,944.00
31.58	Providing and fixing 300C Aluminium Panel with perforation of 2mm diameter and 5mm centre to centre to give 15% open area with Non woven textile False Ceiling system of approved colour consisting of Panel 300 mm wide X 30 mm deep X 0.7 mm thick with bevelled edges having panel length upto 6 mtrs, Coil Coated on a Continuous Paint Line, Double baked and roll formed for higher strength and good roll forming characteristics. The panel ends will be raised upto 29mm. Panel shall be clipped to a baked enamelled aluminium panel carrier of 41.5mm wide x 62mm deep x 0.95 mm thick in standard length of 5 mtrs. made of double baked stove enamelled aluminium magnesium alloy AA3005 black with cut outs to hold the panels. The Carrier shall be suspended by means of G.I. threaded rod of 6-mm diameter directly fixed to the Carrier. The Carrier tabs to be bent down to secure the panels at all Panel Carrier intersections. The panels will be installed in a module of 300MM. (Tensile strength of suspension-344/413 mpa and fastener strength-110kg) All Ceiling Panels shall adhere to GreenPro Certifications.	sqm	6,070.00
31.59	Providing and fixing of following tiles in false Ceiling System. The Tile will be manufactured on advanced includes several levelling stages in the manufacturing process by approved manufacturers. Tile ends will be raised with pips and slops to ensure positive engagement into the spring to enable for de-mounting of individual panels. The Tile sides will be sufficiently high to ensure a minimum deflection across the length of Tile. All Tiles will be bevel edged. The Tile shall be epoxy polyester powder coating in white colour. The Tile shall be clipped into clip in rail of 0.5mm thick GI. in form of a grid system using a cross connector. The clip in rail shall be supported from slab by means of rigid Suspension of 4mm G.I rod, Hold on Clamp with Clip. POWDER COATING SPECIFICATION: Aluminium PANELS, cleaned through eco friendly cleaning process and powder applied thru electrostatic charged Automatic Carona technology spray guns and cured in combination of Infrared & hot air oven in a certified plant as Akzo International approved applicator. The powder is conforming with the performance requirements of the AAMA2603.02 & Qualicoat Class 1 specifications. The coating thickness will be minimum 60 microns with properties of Salt Spray of 1500 hrs in exposure in SST Cabinet with Minimum blister rating 8. (Tensile strength of suspension-344/413 mpa and fastener strength-110kg) All Ceiling Panels shall adhere to GreenPro Certifications.		

Code No	Description	Unit	Rate Rs.
31.59.1	Perforated Metal Ceiling Tile 600mm x 600mm x 0.7mm thick aluminium alloy 3105 with bevelled edge of 4.15mm width and height of 32mm and perforated to 1.5mm dia with open area of 23%.	sqm	4,180.00
31.59.2	Un-perforated Metal Tile of 600mm x 600mm x 0.7mm thick aluminium alloy 3105 with bevelled edge of 4.15mm width height of 32mm.	sqm	3,525.00
31.59.3	Antibacterial Un-perforated Metal Tile of 600mm x 600mm x 0.7mm thick aluminium alloy 3105 with bevelled edge of 4.15mm width height of 32mm.	sqm	4,530.00
31.59.4	Perforated Metal Tile 600mm x 600mm x 0.5mm thick Galvanised Iron with bevelled edge of 4.15mm width height of 32mm, perforated to 1.5mm dia with open area of 23%.	sqm	3,685.00
31.59.5	Un-perforated Metal Tile 600mm x 600mm x 0.5mm thick Galvanised Iron with bevelled edge of 4.15mm width height of 32mm.	sqm	3,415.00
31.60	Supply & Fixing false Ceiling System with following tiles. The metal ceiling panels shall be downward accessible with a minimum of four (4) torsion springs per panel . The Plank will be manufactured on advanced CAD/CAM equipment that includes several levelling stages in the manufacturing process. Torsion Spring panel with two side legs die formed and two end legs die formed and punched to receive torsion springs (min two springs each end or side) for secure engagement into Tee Grid main runners which are factory punched to receive torsion springs. Planks will be square edged. The metal ceiling panels shall be downward accessible with a minimum of four (4) torsion springs per panel. The Plank shall be Polyester powder coated in desired colour. Main Runners: 24mm deep, inverted "Tee" sections, 3.6m long, with factory punched flanges to receive torsion spring assembly. Main Tee on center spacing to match panel length. Cross Runners: 24 mm deep, inverted "Tee" sections designed to interlock in to web of main tee section on designated spacing. Cross tee length to match panel length. Cross tees are spaced spacing 1200mm on center maximum. Suspension System: As per manufacturer standard considering type of plenum and its height. Paint finish – POWDER COATING SPECIFICATION: Aluminium PANELS, cleaned through eco friendly cleaning ,process and powder applied thru electrostatic charged Automatic Corona technology spray guns and cured in combination of Infrared & hot air oven in a certified plant as Akzo International approved applicator . The powder is conforming with the performance requirements of the AAMA2603.02 & Qualicoat Claa 1 specifications. The coating thickness will be minimum 60 microns with properties of Salt Spray of 1500 hrs in exposure in SST Cabinet with Minimum blister rating 8 Acoustic Felt (Optional): Non-woven felt made of glass-reinforced fibre glued over the perforation for sound absorption. NRC- 0.7. (Tensile strength of suspension-344/413 mpa and fastener strength-110kg) All Ceiling Panels shall adhere to GreenPro Certifications.		

Code No	Description	Unit	Rate Rs.
31.60.1	Torsion spring Plank 600mm x 1200mm x 0.7mm thick Aluminium Alloy 3105 perforated to 1.5mm dia and 22% area.	sqm	5,660.00
31.60.2	Torsion spring Plank 600mm x 600mm x 0.7mm thick Aluminium Alloy 3105 perforated to 1.5mm dia and 22% area.	sqm	5,640.00
31.60.3	Torsion spring Plank 600mm x 1200mm x 0.6mm thick GALVANISED IRON perforated to 1.5mm dia and 22% area.	sqm	4,520.00
31.61	Stone slab roofing on ground floor with fine grained stone slab 90mm average thickness from approved quarry including filling of joints slab in cement sand mortar 1:4 with ceiling pointing in cement sand mortar 1 : 3 complete as per specification for span:		
31.61.1	Up to 2.00 metre.	sqm	1,213.00
31.61.2	Above 2.00 metre and up to 2.50 metre	sqm	1,260.00
31.61.3	Above 2.50 metre and up to 3.00 metre	sqm	1,362.00
31.61.4	Above 3.00 metre and up to 3.30 metre	sqm	1,433.00
31.62	Grading roof for water proofing treatment with water proofing compound		
31.62.1	Cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	cum	6,250.00
31.62.2	Cement mortar 1:3 (1 cement : 3 coarse sand)	cum	5,640.00
31.62.3	Cement mortar 1:4 (1cement : 4 coarse sand)	cum	4,845.00
31.63	Providing & fixing UV stabilised fibreglass reinforced plastic sheet roofing upto 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. (B) 2mm thick flat.	sqm	1,094.00
31.64	Filling of sunk portion of roof with earthen pots of required height including filling voids with 1:3:6 light concrete, using brick bats complete levelling and dressing the surface by 50mm thick cement concrete 1:2:4 as per specification.	cum	2,640.00
31.65	Supply and fixing Bare Galvanised/ Prepainted iron 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 and including a metallic coating -Z-120 max, paint coating RMP, SMP, PVDF and paint thickness 18-22 micron top & 5-8 bottom as per Coating standard : JISG 3312, IS 1397-1993/227 and two coats of approved paint on overlapping of sheets 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	1,000.00

32.0 FINISHING

Code No	Description	Unit	Rate Rs.
32.1	Cement plastering including T&P, scaffolding, material and complete labour, including cost of water, curing, racking of joints etc. with 12 mm cement plaster of mix : including Providing /mixing of synthetic fibers compulsorily complying with IS 16481:2022 of 06 mm/12 mm length to be mixed @ 0.25% by weight of Cement i.e. 125 gms per 50 kg Cement up to 900 gms per cum of Concrete/ mortar		
32.1.1	1:4 (1 cement : 4 fine/ coarse sand)	sqm	227.00
32.1.2	1:6 (1 cement : 6 fine/ coarse sand)	sqm	213.50
32.2	Cement plastering including T&P, scaffolding, material and complete labour, including cost of water, curing, racking of joints etc. with 15 mm cement plaster on the rough side of single or half brick wall of mix : including Providing /mixing of synthetic fibers compulsorily complying with IS 16481:2022 of 06 mm/12 mm length to be mixed @ 0.25% by weight of Cement i.e. 125 gms per 50 kg Cement up to 900 gms per cum of Concrete/ mortar		
32.2.1	1:4 (1 cement : 4 fine/ coarse sand)	sqm	263.50
32.2.2	1:6 (1 cement : 6 fine/ coarse sand)	sqm	247.00
32.3	Cement plastering including T&P, scaffolding, material and complete labour, including cost of water, curing, racking of joints etc. with 20 mm cement plaster of mix : including Providing /mixing of synthetic fibers compulsorily complying with IS 16481:2022 of 06 mm/12 mm length to be mixed @ 0.25% by weight of Cement i.e. 125 gms per 50 kg Cement up to 900 gms per cum of Concrete/ mortar		
32.3.1	1:3 (1 cement : 3 fine/ coarse sand)	sqm	340.50
32.3.2	1:4 (1 cement : 4 fine/ coarse sand)	sqm	315.50
32.3.3	1:6 (1 cement : 6 fine/ coarse sand)	Sqm	294.50
32.4	Cement plastering including T&P, scaffolding, material and complete labour, including cost of water, curing, racking of joints etc. with 12 mm cement plaster finished with a floating coat of neat cement of mix : including Providing /mixing of synthetic fibers compulsorily complying with IS 16481:2022 of 06 mm/12 mm length to be mixed @ 0.25% by weight of Cement i.e. 125 gms per 50 kg Cement up to 900 gms per cum of Concrete/ mortar		
32.4.1	1:3 (1 cement : 3 fine/ coarse sand)	sqm	291.50
32.4.2	1:4 (1 cement : 4 fine/ coarse sand)	sqm	277.50
32.5	Cement plastering including T&P, scaffolding, material and complete labour, including cost of water, curing, racking of joints etc. with 15 mm cement plaster on rough side of single or half brick wall finished with a floating coat of neat cement of mix : including Providing		

Code No	Description	Unit	Rate Rs.
	/mixing of synthetic fibers compulsorily complying with IS 16481:2022 of 06 mm/12 mm length to be mixed @ 0.25% by weight of Cement i.e. 125 gms per 50 kg Cement up to 900 gms per cum of Concrete/ mortar		
32.5.1	1:3 (1 cement : 3 fine/ coarse sand)	sqm	330.50
32.5.2	1:4 (1 cement : 4 fine/ coarse sand)	sqm	314.50
32.6	Cement plastering including T&P, scaffolding, material and complete labour, including cost of water, curing, racking of joints etc. with 20 mm cement plaster on rough side of brick wall finished with a floating coat of neat cement of mix : including Providing /mixing of synthetic fibers compulsorily complying with IS 16481:2022 of 06 mm/12 mm length to be mixed @ 0.25% by weight of Cement i.e. 125 gms per 50 kg Cement up to 900 gms per cum of Concrete/ mortar		
32.6.1	1:3 (1 cement : 3 fine/ coarse sand)	sqm	365.00
32.7	Cement plastering including T&P, scaffolding, material and complete labour, including cost of water, curing, racking of joints etc. with 6 mm cement plaster of mix : including Providing /mixing of synthetic fibers compulsorily complying with IS 16481:2022 of 06 mm/12 mm length to be mixed @ 0.25% by weight of Cement i.e. 125 gms per 50 kg Cement up to 900 gms per cum of Concrete/ mortar		
32.7.1	1:3 (1 cement : 3 fine sand)	sqm	187.00
32.8	Cement plastering including T&P, scaffolding, material and complete labour, including cost of water, curing, racking of joints etc. with 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. including Providing /mixing of synthetic fibers compulsorily complying with IS 16481:2022 of 06 mm/12 mm length to be mixed @ 0.25% by weight of Cement i.e. 125 gms per 50 kg Cement up to 900 gms per cum of Concrete/ mortar	sqm	249.00
32.9	Neat cement punning	sqm	52.10
32.10	Extra for providing and mixing water proofing material in cement plaster work in proportion recommended by the manufacturers.	per 50 kg cement bag	40.00
32.11	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	50.10
32.12	Extra for plastering on circular work not exceeding 6 m in radius:		
32.12.1	In one coat	sqm	29.40
32.12.2	In two coats	sqm	44.10
32.13	Extra for plastering done on moulding cornices or architraves including neat finish to line and level:		
32.13.1	In one coat	sqm	447.50

Code No	Description	Unit	Rate Rs.
32.13.2	In two coats	sqm	738.00
32.14	Extra for plastering :		
32.14.1	Spherical ceiling	sqm	109.50
32.14.2	Groined ceiling	sqm	117.50
32.14.3	Flewing soffits	sqm	73.50
32.15	Providing and applying plaster of paris putty of 2 mm thickness over plastered surface to prepare the surface even and smooth complete	sqm	204.50
32.16	Extra for lining out plaster to imitate stone or concrete blocks walling	sqm	73.80
32.17	12 mm thick plain cement mortar bands in cement mortar 1:4 (1 cement : 4 fine sand) :		
32.17.1	Flush Band	cm per metre	4.70
32.17.2	Sunk Band	cm per metre	5.10
32.17.3	Raised Band	cm per metre	5.80
32.17.4	Moulded Band	cm per metre	9.95
32.18	18 mm thick plain cement mortar band in cement mortar 1:4 (1 cement : 4 fine sand):		
32.18.1	Flush Band	cm per metre	5.70
32.18.2	Sunk Band	cm per metre	6.25
32.18.3	Raised Band	cm per metre	7.10
32.18.4	Moulded Band	cm per metre	13.30
32.19	18 mm thick moulded cement mortar band in two coats under layer 12mm thick with cement mortar 1:5 (1 cement : 5 coarse sand) top layer 6mm thick with cement mortar 1:4 (1 cement : 4 fine sand).	cm per metre	13.30
32.20	Pointing on brick work or brick flooring with cement mortar 1:3 (1 cement : 3 fine sand) :		
32.20.1	Flush / Ruled/ Struck or weathered pointing.	sqm	149.50
32.20.2	Raised and cut pointing	sqm	249.50
32.21	Pointing on tile brick work with cement mortar 1:3 (1 cement :3 fine sand) :		
32.21.1	Flush/ Ruled/ Struck or weathered pointing	sqm	204.50
32.22	Pointing on stone work with cement mortar 1:3 (1 cement : 3 fine sand) :		

Code No	Description	Unit	Rate Rs.
32.22.1	Flush/ Ruled pointing	sqm	225.00
32.22.2	Raised and cut pointing	sqm	417.50
32.23	Raised and cut pointing on stone work in white cement mortar 1:3 (1 white cement : 3 marble dust)	sqm	438.50
32.24	Pointing on stone slab ceiling with cement mortar 1:2 (1 cement : 2 fine sand):		
32.24.1	Flush/ Ruled pointing	sqm	125.50
32.25	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	3.80
32.26	White washing with lime to give an even shade:		
32.26.1	New work (three or more coats)	sqm	25.70
32.27	Satna lime wash on walls one coat	sqm	10.10
32.28	Colour washing such as green, blue or buff to give an even shade :		
32.28.1	New work (two or more coats) with a base coat of white washing with lime	sqm	33.80
32.28.2	New work (two or more coats) with a base coat of whitening	sqm	33.60
32.29	Distempering with dry distemper of approved brand and manufacture (two or more coats) and of required shade on new work, over and including priming coat of whitening to give an even shade.	sqm	104.50
32.30	Distempering with oil bound washable distemper of approved brand and manufacture to give an even shade		
32.30.1	New work (two or more coats) over and including priming coat with cement primer.	sqm	136.50
32.31	Distempering with 1st quality acrylic washable distemper (ready mixed) of approved manufacturer and of required shade and colour complete. as per manufacturer's specification.		
32.31.1	Two or more coats on new work.	sqm	77.90
32.32	Applying one coat of cement primer of approved brand and manufacture on wall surface :		
32.32.1	Cement primer.	sqm	54.30
32.33	Finishing walls with water proofing cement paint of required shade :		
32.33.1	New work (Two or more coats applied @ 3.84 kg/10 sqm).	sqm	93.10
32.34	Finishing walls with textured exterior paint of required shade :		
32.34.1	New work (Two or more coats applied @ 3.28 ltr/10 sqm) over and including base coat of water proofing cement paint applied @ 2.20kg/10 sqm.	sqm	210.50
32.35	Finishing walls with Acrylic Smooth exterior paint of required shade :		
32.35.1	New work (Two or more coat applied @ 1.67 ltr/10 sqm over and including base coat of water proofing cement paint applied @ 2.20 kg/ 10 sqm).	sqm	144.00

Code No	Description	Unit	Rate Rs.
32.36	Finishing walls with Premium Acrylic Smooth exterior paint with Silicone additives of required shade		
32.36.1	New work (Two or more coats applied @ 1.43 ltr/ 10 sqm. over and including base coat of water proofing cement paint applied @ 2.20 kg/ 10 sqm).	sqm	132.50
32.37	Finishing walls with Deluxe Multi surface paint system for interiors and exteriors using Primer as per manufacturers specifications :		
32.37.1	Two or more coats applied @ 1.25 ltr/10 sqm. over and including one coat of Special primer applied @ 0.75 ltr / 10 sqm.	sqm	141.50
32.37.2	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 or manufacture	sqm	127.00
32.37.3	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 or manufacture	sqm	123.50
32.38	Extra for applying water proofing cement paint as primer applied @ 2.2 kg/ 10 sqm instead of primer for exterior finishing in Item No. 32.37.1	sqm	4.00
32.39	Applying priming coat :		
32.39.1	With ready mixed pink or Grey primer of approved brand and manufacture on wood work (hard and soft wood)	sqm	48.60
32.39.2	With ready mixed aluminium primer of approved brand and manufacture on resinous wood and plywood	sqm	47.90
32.39.3	With ready mixed red oxide zinc chromate primer of approved brand and manufacture on steel galvanised iron/steel works	sqm	43.00
32.39.4	With ready mixed red oxide zinc chromate primer of approved brand and manufacture on steel work (second coat)	sqm	22.70
32.40	Painting one thin coat with white lead of approved brand and manufacture on wet or patchy portion of plastered surfaces	sqm	68.50
32.41	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.		
32.41.1	On steel work	sqm	174.00
32.41.2	On concrete work	sqm	175.00
32.42	Painting on G.S. sheet with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade :		
32.42.1	New work (two or more coats) including a coat of approved steel primer but excluding a coat of mordant solution.	sqm	125.00
32.43	Applying a coat of mordant solution on G.S. sheet :		

Code No	Description	Unit	Rate Rs.
32.43.1	With a solution of 38 gms of copper acetate in a litre of soft water	sqm	38.60
32.43.2	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	38.30
32.44	Painting (two or more coats) on rain water, soil, waste and vent pipes and fittings with black anticorrosive bitumastic paint approved brand and manufacture over and including a priming of ready mixed zinc chromate yellow primer on new work :		
32.44.1	100 mm diameter pipes	metre	48.70
32.44.2	150 mm diameter pipes	metre	72.50
32.45	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.		
32.45.1	100 mm diameter pipes	metre	50.60
32.45.2	150 mm diameter pipes	metre	75.40
32.46	Painting with oil type wood preservative of approved brand and manufacture:		
32.46.1	New work (two or more coats)	sqm	34.80
32.47	Providing and applying two coats of fire retardant paint unthinned 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	332.00
32.48	Coal tarring two coats on new work using 0.16 and 0.12 litre coal tar per sqm in the first coat and second coat respectively.	sqm	48.40
32.49	Wall painting with plastic emulsion paint of approved brand and manufacture to give an even shade:		
32.49.1	Two or more coats on new work	sqm	117.50
32.50	Painting with synthetic enamel paint of approved brand and manufacture to give an even shade :		
32.50.1	Two or more coats on new work	sqm	114.00
32.51	Painting with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade:		
32.51.1	Two or more coats on new work over an under coat of suitable shade with ordinary paint of approved brand and manufacture.	sqm	159.50
32.52	Painting with aluminium paint of approved brand and manufacture to give an even shade .		
32.52.1	Two or more coats on new work	sqm	100.00
32.53	Painting with acid proof paint of approved brand and manufacture of required colour to give an even shade:		

Code No	Description	Unit	Rate Rs.
32.53.1	Two or more coats on new work.	sqm	108.00
32.54	Painting with black anti-corrosive bitumastic paint of approved brand and manufacture to give an even shade:		
32.54.1	Two or more coats on new work.	sqm	93.50
32.55	Floor painting with floor enamel paint of approved brand and manufacture of required colour to give an even shade:		
32.55.1	Two or more coats on new work.	sqm	129.00
32.56	Varnishing with varnish of approved brand and manufacture:		
32.56.1	Two or more coats of glue sizing with copal varnish over an under coat of flatting varnish.	sqm	164.00
32.56.2	Two or more coats glue sizing with spar varnish or an under coat of flatting varnish.	sqm	171.50
32.57	French spirit polishing :		
32.57.1	Two or more coats on new works including a coat of wood filler.	sqm	345.50
32.58	Polishing on wood work with ready mixed wax polish of approved brand and manufacture :		
32.58.1	New work	sqm	137.50
32.59	Floor polishing on masonry or concrete floors with wax polish of approved brand and manufacture.	sqm	63.90
32.60	Lettering with black Japan paint of approved brand and manufacture	per letter per cm height	4.45
32.61	Washed stone grit plaster on exterior walls of height upto 10 M. above level in two layers, under layer 12mm 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 15mm cement plaster 1:1/2:2 (1 cement : 1/2 coarse sand : 2 stone chipping 10mm 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	802.00
32.62	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 :		
32.62.1	15 mm wide and 15 mm deep groove	metre	52.50
32.62.2	20 mm wide and 15 mm deep groove	metre	53.10
32.63	Extra for washed grit plaster on exterior walls of height more than 10m from ground level for every additional height of 3 m or part thereof.	sqm	90.30

Code No	Description	Unit	Rate Rs.
32.64	Extra for washed stone grit plaster on circular work not exceeding 6m in radius (in two coats).	sqm	84.20
32.65	Forming groove of uniform size from 12x12mm and upto 25x15mm in plastered surface as per approved pattern using wooden battens, nailed to the under layer including removal of wooden battens, repairs to the edges of plaster panel and finishing the groove complete as per specifications and direction of the Engineer-in-Charge.	metre	52.50
32.66	Extra for using white cement in place of ordinary cement in the top layer of the item of washed stone grit plaster.	sqm	139.50
32.67	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	337.50
32.68	Add extra / deduct over items of cement concrete /cement mortar providing & mixing admixture of virgin synthetic polyester/ polyproline, fibrillated/ Monofilament fibres cut length 6 mm to 25 mm with effective diameter from 10 micron to 1 mm; melting point of 160 degree centigrade, having aspect ratio of 200 to 2000; specific gravity more than 1. It is required in specific ratio @ 0.25% (125 gm fibre in 50 kg cement) for use. Mix it directly with contents in rotating site mixes as per directions of the Engineer with all leads and lifts(confirming to IS : 16481 : 2016) - In case of deduction, non-requirement of fiber will be justified by Superintending Engineer.	Per Pack 125 gm	64.00

33.0 REPAIRS TO BUILDINGS

Code No	Description	Unit	Rate Rs.
33.1	Repairs to plaster of thickness 12mm to 20mm in patches of area 2.5 sq. metres 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 within 50metres lead :		
33.1.1	With cement mortar 1:4 (1 cement : 4 fine sand)	sqm	351.00
33.1.2	With cement mortar 1:4 (1 cement : 4 coarse sand).	sqm	354.00
33.2	Repair to damaged plaster with high-performance curing free. Quick setting cement mortar & confirming to ASTM C 1600 in ratio of 1:4 with following properties of cement: Compressive strength of 20 MPa within 4 hours, curing free, Bond strength of 4 MPa within 24 hours, Non-shrink & Nontoxic in following steps- i) Chopping loose and cracked plaster to required depth, cleaning the exposed surface with wire brush, cleaning of plaster surface with water as necessary and getting dried. ii) Plastering the surface with above mentioned high-performance cement sand mortar 1:4 upto depth of 25mm complete with all scaffolding. iii) No curing has to be done as the high-performance cement used should be curing free. (this item is to be used in only emergency situation after decided by Engineer in-charge)	sqm	1,033.00
33.3	Providing and applying treatment of plaster and masonry cracks with pre-mixed, ready to use, geo polymer based mortar & confirming to ASTM C:1600 upto 15mm width and 15mm depth by making V-Groove with following property- Curing free, compressive strength of 15 MPa within 2 hours, Quick setting and with bond strength of 4 MPa within 24 Hours with all scaffolding. (This item is to be used in only emergency situation after decided by Engineer in-charge)	metre	209.50
33.4	Providing and laying treatment of wear & tear concrete surface with pre-mixed, ready to use, geo polymer based mortar & confirming to ASTM C: 1600 upto 10mm thickness with following property- Curing free, compressive strength of 15 MPa within 2 hours, Quick setting, and Bond strength of 4 MPa within 24 Hours and repaired surface should be ready to use within 3 hours. (This item is to be used in only emergency situation after decided by Engineer in-charge)	sqm	3,350.00
33.5	Fixing chowkhats in existing opening including embedding chowkhats in floors or walls cutting masonry for holdfasts embedding hold fasts in cement concrete blocks 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 within 50 metres lead :		

Code No	Description	Unit	Rate Rs.
33.5.1	Door chowkhats	each	1,146.00
33.5.2	Window chowkhats	each	737.00
33.5.3	Clerestory window chowkhats	each	549.00
33.6	Fixing chowkhat in existing opening in brick / RCC wall with dash fasteners of appropriate size/ chemical fastener (3nos on each vertical member of door chowkhat and 2 nos. on each vertical member of window 1.20 metre height as per CPWD specification including cost of dash fasteners/ chemical fastener.	each	144.50
33.7	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.		
33.7.1	For door/ window/ clerestory window.	sqm	826.00
33.8	Renewing glass panes, with putty and nails wherever necessary:		
33.8.1	Float glass panes of thickness 4 mm	sqm	904.00
33.8.2	Float glass panes of thickness 5.5 mm	sqm	1,141.00
33.9	Renewing glass panes, with wooden fillets wherever necessary:		
33.9.1	Float glass panes of thickness 4 mm	sqm	1,273.00
33.9.2	Float glass panes of thickness 5.5 mm	sqm	1,510.00
33.10	Renewing glass panes and refixing existing wooden fillets:		
33.10.1	Float glass panes of thickness 4 mm	sqm	992.00
33.10.2	Float glass panes of thickness 5.5 mm	sqm	1,229.00
33.11	Supplying and fixing new wooden fillets wherever necessary:		
33.11.1	2nd class teak wood fillets	metre	54.60
33.11.2	Hollock wood fillets.	metre	49.20
33.12	Renewal of old putty of glass panes (length)	metre	40.10
33.13	Refixing old glass panes with putty and nails	sqm	552.00
33.14	Fixing old glass panes with wooden fillets (excluding cost of fillets)	sqm	511.00
33.15	Providing and fixing 16 mm M.S. Fan clamps of standard shape and size in existing R.C.C. slab including cutting chase and making good and painting exposed portion of the clamps complete.	each	371.00
33.16	Re-grading terracing of mud phaska covered with tiles or brick, in cement 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) within 50 metres lead.	sqm	438.00
33.17	Replacing sand stone slabs in roofing laid in cement mortar 1:4 (1		

Code No	Description	Unit	Rate Rs.
	cement : 4 coarse sand) including necessary repairs and cement pointing with same mortar complete including disposal of rubbish to dumping ground within 50 metres of lead :		
33.17.1	Red/ white sand stone slabs 30 to 50 mm thick.	sqm	1,008.00
33.18	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 within 50 metres lead :		
33.18.1	Sal wood battens.	cum	74,600.00
33.19	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 within 50 metres lead :		
33.19.1	Not exceeding 4.00 metres in length.		
33.19.1.1	Sal wood beams	cum	78,200.00
33.19.1.2	Hollock wood beams	cum	62,000.00
33.19.2	Above 4.00 metres and upto 5.00 metres length.		
33.19.2.1	Sal wood beams	cum	79,800.00
33.19.2.2	Hollock wood beams	cum	63,600.00
33.20	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 within 50 metres lead.	sqm	45.30
33.21	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 :		
33.21.1	With F.P.S. brick tiles	sqm	80.70
33.21.2	With modular brick tiles	sqm	81.80
33.22	Taking out wind ties from roof including cutting out rusted bolts, nuts etc. and removing materials to any distance within compound and stacking.	kg	3.45
33.23	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	96.60
33.24	Renewing bottom rail and/or top rubber of collapsible gate including making good all damages and applying priming coat of zinc chromate yellow primer of approved brand and manufacturer.	kg	218.50
33.25	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.		
33.25.1	Wheel 50 mm dia. and below.	per wheel	170.50

Code No	Description	Unit	Rate Rs.
33.25.2	Wheel above 50 mm dia.	per wheel	280.00
33.26	Pumping out water caused by springs, tidal or river seepage, broken water mains or drains and the like.	kilo litre	151.50
33.27	Mud mortar	cum	491.00
33.28	Brick work with bricks of class designation 75 in mud mortar	cum	4,585.00
33.29	Providing and fixing 25 mm thick shutters for cup board etc. :		
33.29.1	Panelled or panelled & glazed shutters :		
33.29.1.1	Superior class teak wood including nickel plated bright finished M.S. piano hinges with necessary screws.	sqm	4,560.00
33.29.1.2	Ist class teak wood including nickel plated bright finished M.S. piano hinges with necessary screws.	sqm	3,925.00
33.29.2	Glazed shutters :		
33.29.2.1	Superior class teak wood including nickel plated bright finished M.S. piano hinges with necessary screws.	sqm	4,545.00
33.29.2.2	Ist class teak wood including nickel plated bright finished M.S. piano hinges with necessary screws.	sqm	3,860.00
33.30	Providing and fixing plain jaffri door and window shutters including bright or/and black enamelled M.S. butt hinges with necessary screws 35x10mm laths placed 35mm apart (frames to be paid separately) including fixing 50x12mm beading complete with :		
33.30.1	Second class teak wood.	sqm	2,900.00
33.31	Providing and fixing curtain rods of 1.25mm thick brass plates with two brass brackets fixed with brass screws and wooden plugs etc. wherever necessary complete.		
33.31.1	20 mm diameter.	metre	229.00
33.31.2	25 mm diameter.	metre	267.50
33.32	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	102.00
33.33	Providing joists (karries) including hoisting fixing in position and applying wood preservative on unexposed surface etc. complete with:		
33.33.1	Sal wood.	cum	73,600.00
33.33.2	Hollock wood.	cum	57,600.00
33.34	Providing and fixing bright finished brass single acting spring hinges with necessary screws etc. complete :		
33.34.1	150 mm	each	506.00
33.34.2	125 mm	each	400.00
33.34.3	100 mm	each	321.50

Code No	Description	Unit	Rate Rs.
33.35	Providing and fixing bright finished brass double acting spring hinges with necessary screws etc. complete :		
33.35.1	150 mm	each	699.00
33.35.2	125 mm	each	551.00
33.35.3	100 mm	each	475.50
33.36	Providing and fixing bright finished brass flush bolts with necessary screws etc. complete :		
33.36.1	250 mm	each	207.00
33.36.2	150 mm	each	172.50
33.36.3	100 mm	each	125.50
33.37	Providing and fixing 150 mm bright finished floor brass door stopper with rubber cushion, screws etc. to suit shutter thickness complete	each	226.00
33.38	Providing and fixing bright finished brass hard drawn hooks and eyes :		
33.38.1	300 mm	each	89.00
33.38.2	250 mm	each	83.70
33.38.3	200 mm	each	123.50
33.38.4	150 mm	each	69.00
33.38.5	100 mm	each	61.40
33.39	Providing and fixing bright finished brass fan light pivot with necessary screws etc. complete.	each	45.90
33.40	Providing and fixing 300 mm long bright finished brass chain with hook for fan light including necessary screws etc. complete.	each	51.00
33.41	Providing and fixing bright finished brass quadrant stay 300mm long with necessary screws etc. complete.	each	162.50
33.42	Providing and fixing bright finished brass helical door spring (superior quality).	each	433.00
33.43	Providing and fixing chromium plated brass butt hinges with necessary screws etc. complete.		
33.43.1	125x70x4 mm (ordinary type)	each	163.00
33.43.2	100x70x4 mm (ordinary type)	each	144.00
33.43.3	75x65x4 mm (heavy type)	each	139.50
33.43.4	75x40x2.5 mm (ordinary type)	each	77.00
33.43.5	50x40x2.5 mm (ordinary type)	each	36.60
33.44	Providing and fixing 85x42mm chromium plated brass pull bolt lock with necessary screws, nuts, bolts and washers etc. complete.	each	252.50
33.45	White washing with lime to give an even shade :		
33.45.1	Old work (two or more coats)	sqm	14.90

Code No	Description	Unit	Rate Rs.
33.45.2	Old work (one or more coats)	sqm	8.95
33.46	Removing white or colour wash by scrapping and sand papering and preparing the surface smooth including necessary repairs to scratches etc. complete	sqm	11.60
33.47	Distempering with dry distemper of approved brand and manufacture (one or more coats) and of required shade on old work to give an even shade.	sqm	44.80
33.48	Distempering with oil bound washable distemper of approved brand and manufacture to give an even shade :		
33.48.1	Old work (one or more coats)	sqm	45.70
33.49	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	14.70
33.50	Painting on G.S. sheet with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade :		
33.50.1	Old work (one or more coats)	sqm	62.90
33.51	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 :		
33.51.1	75 mm diameter pipes	metre	36.60
33.52	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 :		
33.52.1	75 mm diameter pipes	metre	17.00
33.53	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 :		
33.53.1	75 mm diameter pipes	metre	38.10
33.54	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 :		
33.54.1	75 mm diameter pipes	metre	18.20
33.54.2	100 mm diameter pipes	metre	23.50
33.54.3	150 mm diameter pipes	metre	34.10
33.55	Painting with oil type wood preservative of approved brand and manufacture :		
33.55.1	Old work (one or more coats)	sqm	26.40
33.56	Wall painting with plastic emulsion paint of approved brand and manufacture to give an even shade :		

Code No	Description	Unit	Rate Rs.
33.56.1	One or more coats on old work.	sqm	75.60
33.57	Painting with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade :		
33.57.1	One or more coats on old work.	sqm	72.60
33.58	Painting with aluminium paint of approved brand and manufacture to give an even shade :		
33.58.1	One or more coats on old work.	sqm	65.10
33.59	Painting with acid proof paint of approved brand and manufacture of required colour to give an even shade :		
33.59.1	One or more coats on old work.	sqm	70.50
33.60	Painting with black anti-corrosive bitumastic paint of approved brand and manufacture to give an even shade :		
33.60.1	One or more coats on old work.	sqm	61.80
33.61	French spirit polishing :		
33.61.1	One or more coats on old work.	sqm	174.50
33.62	Polishing on wood work with ready made wax polish of approved brand and manufacture :		
33.62.1	Old work	sqm	69.00
33.63	Re-lettering with black Japan paint of approved brand and manufacture.	per letter per cm height	2.80
33.64	Painting (one or more coats) with black Japan paint of approved brand and manufacture to give an even shade.	sqm	63.20
33.65	Providing and fixing C.P. brass chain and rubber plug complete for sink or wash basin :		
33.65.1	32 mm dia	each	72.90
33.65.2	40 mm dia	each	72.90
33.66	Distempering with 1st quality acrylic washable distemper (ready mixed) of approved manufacturer and of required shade and colour complete. as per manufacturer's specification.		
33.66.1	One or more coats on old work.	sqm	40.80
33.67	Finishing walls with water proofing cement paint of required shade :		
33.67.1	Old work (one or more coats applied @ 2.20 kg/10 sqm) over priming coat of primer applied @ 0.80 ltrs/10 sqm complete including cost of Priming coat.	sqm	87.50
33.68	Finishing walls with textured exterior paint of required shade :		
33.68.1	Old work (Two or more coats on existing cement paint surface applied @ 3.28 ltr/10 sqm.	sqm	173.00
33.68.2	Old work (One or more coats) applied @ 1.82 ltr/10 sqm.	sqm	105.50

Code No	Description	Unit	Rate Rs.
33.69	Finishing walls with Acrylic Smooth exterior paint of required shade:		
33.69.1	Old work (Two or more coat applied @ 1.67 ltr/ 10 sqm) on existing cement paint surface).	sqm	106.50
33.69.2	Old work (One or more coat applied @ 0.90 ltr/10 sqm).	sqm	68.00
33.70	Finishing walls with Premium Acrylic Smooth exterior paint with Silicone additives of required shade		
33.70.1	Old work (Two or more coats applied @ 1.43 ltr/ 10 sqm) over existing cement paint surface.	sqm	95.10
33.70.2	Old work (one or more coats applied @ 0.83 ltr/10 sqm).	sqm	63.40
33.71	Painting (one or more coats) on rain water, soil, waste and vent pipes and fittings with black anticorrosive bitumastic paint approved brand and manufacture on old work :		
33.71.1	100 mm diameter pipes	sqm	22.50
33.71.2	150 mm diameter pipes	sqm	32.60
33.72	Varnishing with varnish of approved brand and manufacture:		
33.72.1	One or more coats with copal varnish.	sqm	66.30
33.72.2	One or more coats with spar varnish.	sqm	70.70
33.73	Melamine polishing on wood work (one or more coat).	sqm	107.50
33.74	Varnishing with flatting varnish of approved brand and manufacture one or more coats on old work.	sqm	65.40
33.75	Providing and fixing double scaffolding system (cup lock type) on the exterior side, upto seven story height made with 40mm 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 challies, 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. (To be used for maintenance work judiciously . necessary deduction for scaffolding in the existing item to be done.)	sqm	202.00
33.76	Repair to damaged RCC slabs, beams and columns etc for strengthening with cement mortar 1 : 2 in following steps i) Chopping lose and cracked concrete to required depth, cleaning the exposed surface of steel and concrete with wire brush and sand papering , cleaning of concrete surface with water as necessary and getting dried. ii) Applying Epoxy primer on the exposed steel bars. iii) Applying Epoxy hardener and resin mix (as per manufacturer's specification) on concrete and steel bars with brush. iv) Spreading		

Code No	Description	Unit	Rate Rs.
	dry cement mortar 1 : 2 mix over epoxy treated wet surface and allow it to dry for one day. v) Plastering the surface with cement sand mortar 1 : 3 upto depth of 30mm complete. vi) Cure the plastered surface for 15 days All work including scaffolding etc. complete in all respect.	sqm	2,315.00
33.77	Mechanised cleaning of storage tanks comprises of following 6 stage as mentioned below : 1. Mechanical dewatering 2. Desalting removal of leftover dirty water and sludge with sludge pump 3. Cleaning of wall, ceiling and floor by high pressure water jet with help of equipments which creates a pressure of 100-150 bar 4. Removal of remaining sludge from floor with the help of industrial vacuum cleaner. 5. Spraying of non-toxic, bio degradable ecofriendly and bacterial agent certified by a govt approved laboratory to disinfect the tank from all harmful pathogens. The dose should be safe as per the UECD guidelines & 23 adopted on 17th December 2001. 6. Treatment of inside tank by exposing UV radiation to kill further suspended or floating bacteria if any		
33.77.1	Upto 500 ltr.	each	974.00
33.77.2	Above 500 ltr. to 1000 Ltr.	each	1,460.00
33.77.3	Above 1000 ltr.	each	1,947.00

34.0 WATER SUPPLY (Building)

Code No	Description	Unit	Rate Rs.
34.1	Providing and fixing Polyethylene-Aluminium- Polyethylene (PE-AL-PE) Composite Pressure Pipes conforming to IS - 15450 U.V. stabilised 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		
34.1.1	1216 (16 mm OD) pipe	metre	247.50
34.1.2	1620 (20 mm OD) pipe	metre	282.00
34.1.3	2025 (25 mm OD) pipe	metre	350.50
34.1.4	2532 (32 mm OD) pipe	metre	447.00
34.1.5	3240 (40 mm OD) pipe	metre	616.00
34.1.6	4050 (50 mm OD) pipe	metre	783.00
34.2	Providing and fixing Polyethylene-Aluminium-Polyethylene (PE-AL-PE) Composite Pressure Pipes conforming to IS - 15450 U.V. stabilised 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 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.		
34.2.1	1216 (16 mm OD) pipe	metre	423.00
34.2.2	1620 (20 mm OD) pipe	metre	453.00
34.2.3	2025 (25 mm OD) pipe	metre	528.00
34.2.4	2532 (32 mm OD) pipe	metre	628.00
34.3	Providing and fixing Polyethylene-Aluminium-Polyethylene (PE-AL-PE) Composite Pressure Pipes conforming to IS - 15450 - 2004 U.V. stabilised 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.		

Code No	Description	Unit	Rate Rs.
	External work		
34.3.1	1216 (16 mm OD) pipe	metre	220.50
34.3.2	1620 (20 mm OD) pipe.	metre	243.00
34.3.3	2025 (25 mm OD) pipe.	metre	298.50
34.3.4	2532 (32 mm OD) pipe.	metre	373.00
34.3.5	3240 (40 mm OD) pipe.	metre	513.00
34.3.6	4050 (50 mm OD) pipe.	metre	680.00
34.4	Providing and fixing 3 layer PP-R (Poly propylene Random copolymer) pipes SDR 7.4 U V 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 work - Exposed on wall		
34.4.1	PN - 16 Pipe, 16 mm OD	metre	214.00
34.4.2	PN - 16 Pipe, 20 mm OD	metre	223.00
34.4.3	PN - 16 Pipe, 25 mm OD	metre	326.00
34.4.4	PN - 16 Pipe, 32 mm OD	metre	409.50
34.4.5	PN - 16 Pipe, 40 mm OD	metre	579.00
34.4.6	PN - 16 Pipe, 50 mm OD	metre	765.00
34.5	Providing and fixing 3 layer PP-R (Poly propylene Random copolymer) pipes SDR 7.4 U V 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 walls etc.,		
34.5.1	PN - 16 Pipe, 16 mm OD	metre	378.00
34.5.2	PN - 16 Pipe, 20 mm OD	metre	390.50
34.5.3	PN - 16 Pipe, 25 mm OD	metre	465.50
34.5.4	PN - 16 Pipe, 32 mm OD	metre	578.00
34.6	Providing and fixing 3 layer PP-R (Poly propylene Random copolymer) pipes SDR 7.4 U V 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 trenching, refilling & testing of joints complete as per direction of Engineer in-charge. External work		
34.6.1	PN - 16 Pipe, 16 mm OD	metre	187.50

Code No	Description	Unit	Rate Rs.
34.6.2	PN - 16 Pipe, 20 mm OD	metre	196.50
34.6.3	PN - 16 Pipe, 25 mm OD	metre	262.50
34.6.4	PN - 16 Pipe, 32 mm OD	metre	346.00
34.6.5	PN - 16 Pipe, 40 mm OD	metre	476.00
34.6.6	PN - 16 Pipe, 50 mm OD	metre	662.00
34.6.7	PN - 16 Pipe, 63mm OD	metre	1,000.00
34.6.8	PN - 16 Pipe, 75 mm OD	metre	1,380.00
34.6.9	PN - 16 Pipe, 90 mm OD	metre	1,951.00
34.6.10	PN - 10 Pipe, 110 mm OD (SDR - 11)	metre	2,795.00
34.6.11	PN - 10 Pipe, 160 mm OD (SDR - 11)	metre	7,720.00
34.7	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 testing of joints complete as per direction of Engineer in-charge. Internal work - Exposed on wall		
34.7.1	15 mm nominal outer dia .Pipes.	metre	236.00
34.7.2	20 mm nominal outer dia .Pipes.	metre	295.00
34.7.3	25 mm nominal outer dia .Pipes.	metre	359.50
34.7.4	32 mm nominal outer dia .Pipes.	metre	512.00
34.7.5	40 mm nominal outer dia .Pipes.	metre	653.00
34.7.6	50 mm nominal outer dia .Pipes.	metre	978.00
34.8	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.,		
34.8.1	15 mm nominal outer dia .Pipes.	metre	390.50
34.8.2	20 mm nominal outer dia .Pipes.	metre	453.00
34.8.3	25 mm nominal outer dia .Pipes.	metre	540.00
34.8.4	32 mm nominal outer dia .Pipes.	metre	715.00
34.9	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings. This included jointing of pipes & fittings with one step CPVC solvent cement, trenching, refilling &		

Code No	Description	Unit	Rate Rs.
	testing of joints complete as per direction of Engineer in-charge. External work		
34.9.1	15 mm nominal outer dia .Pipes.	metre	196.50
34.9.2	20 mm nominal outer dia .Pipes.	metre	243.00
34.9.3	25 mm nominal outer dia .Pipes.	metre	318.00
34.9.4	32 mm nominal outer dia .Pipes.	metre	448.00
34.9.5	40 mm nominal outer dia .Pipes.	metre	550.00
34.9.6	50 mm nominal outer dia .Pipes.	metre	875.00
34.9.7	62.50 mm nominal inner dia Pipes.	metre	1,881.00
34.9.8	75 mm nominal inner dia .Pipes.	metre	2,401.00
34.9.9	100mm nominal inner dia .Pipes.	metre	3,455.00
34.10	Providing and fixing G.I. pipes complete with G.I. fittings and clamps, including cutting and making good the walls etc. Internal work - Exposed on wall		
34.10.1	15 mm dia. nominal bore	metre	264.50
34.10.2	20 mm dia. nominal bore	metre	320.00
34.10.3	25 mm dia. nominal bore	metre	385.50
34.10.4	32 mm dia. nominal bore	metre	483.00
34.10.5	40 mm dia. nominal bore	metre	639.00
34.10.6	50 mm dia. nominal bore	metre	725.00
34.11	Concealed pipe including painting with anti corrosive bitumastic paint, cutting chases and making good the wall.		
34.11.1	15 mm dia nominal bore	metre	407.00
34.11.2	20 mm dia nominal bore	metre	450.00
34.12	Providing and fixing G.I. pipes complete with G.I. fittings including trenching and refilling etc. External work :		
34.12.1	15 mm dia. nominal bore	metre	222.50
34.12.2	20 mm dia. nominal bore	metre	260.50
34.12.3	25 mm dia. nominal bore	metre	317.50
34.12.4	32 mm dia. nominal bore	metre	384.50
34.12.5	40 mm dia. nominal bore	metre	489.00
34.12.6	50 mm dia. nominal bore	metre	522.00
34.12.7	65 mm dia. nominal bore	metre	659.00
34.12.8	80 mm dia. nominal bore	metre	776.00
34.13	Making connection of G.I. distribution branch with G.I. main of following sizes by providing and fixing tee, including cutting and		

Code No	Description	Unit	Rate Rs.
	threading the pipe etc. complete :		
34.13.1	25 to 40 mm nominal bore	each	630.00
34.13.2	50 to 80 mm nominal bore	each	1,182.00
34.14	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).	each	570.00
34.15	Providing and fixing brass bib cock of approved quality :		
34.15.1	15 mm nominal bore	each	334.00
34.15.2	20 mm nominal bore	each	405.00
34.16	Providing and fixing brass stop cock of approved quality :		
34.16.1	15 mm nominal bore	each	357.00
34.16.2	20 mm nominal bore	each	443.50
34.17	Providing and fixing gun metal gate valve with C.I. wheel of approved quality (screwed end) :		
34.17.1	25 mm nominal bore	each	592.00
34.17.2	32 mm nominal bore.	each	963.00
34.17.3	40 mm nominal bore	each	1,249.00
34.17.4	50 mm nominal bore	each	2,280.00
34.17.5	65 mm nominal bore	each	4,295.00
34.17.6	80 mm nominal bore	each	9,050.00
34.18	Providing and fixing ball valve (brass) of approved quality, High or low pressure, with plastic floats complete :		
34.18.1	15 mm nominal bore	each	316.50
34.18.2	20 mm nominal bore	each	379.50
34.18.3	25 mm nominal bore	each	531.00
34.19	Providing and fixing gun metal non- return valve of approved quality (screwed end) :		
34.19.1	25 mm nominal bore		
34.19.1.1	Horizontal	each	876.00
34.19.1.2	Vertical	each	705.00
34.19.2	32 mm nominal bore		
34.19.2.1	Horizontal	each	1,577.00
34.19.2.2	Vertical	each	1,106.00
34.19.3	40 mm nominal bore		
34.19.3.1	Horizontal	each	1,793.00
34.19.3.2	Vertical	each	1,358.00

Code No	Description	Unit	Rate Rs.
34.19.4	50 mm nominal bore		
34.19.4.1	Horizontal	each	2,725.00
34.19.4.2	Vertical	each	2,281.00
34.19.5	65 mm nominal bore		
34.19.5.1	Horizontal	each	6,530.00
34.19.5.2	Vertical	each	3,620.00
34.19.6	80 mm nominal bore		
34.19.6.1	Horizontal	each	9,170.00
34.19.6.2	Vertical	each	5,030.00
34.20	Providing and fixing brass ferrule with C.I. mouth cover including boring and tapping the main :		
34.20.1	15 mm nominal bore	each	223.00
34.20.2	20 mm nominal bore	each	283.00
34.20.3	25 mm nominal bore	each	364.00
34.21	Providing and fixing unplasticised PVC connection pipe with brass unions :		
34.21.1	30 cm length		
34.21.1.1	15 mm nominal bore	each	50.30
34.21.1.2	20 mm nominal bore	each	60.30
34.21.2	45 cm length		
34.21.2.1	15 mm nominal bore	each	62.10
34.21.2.2	20 mm nominal bore	each	76.40
34.22	Providing and fixing C.P. brass shower rose with 15 or 20 mm inlet :		
34.22.1	100 mm diameter	each	86.80
34.22.2	150 mm diameter	each	111.50
34.23	Laying in position centrifugally cast (spun) iron S&S or flanged pipes (excluding cost of pipe)	quintal	236.50
34.24	Laying in position S&S or flanged C.I. special such as tees, bends, collars, tapers and caps etc. (excluding cost of specials).	quintal	445.00
34.25	Providing and laying S&S C.I. standard specials such as tees, bends, collars, tapers, caps etc. (Heavy class) :		
34.25.1	Upto 300 mm dia.	quintal	5,540.00
34.25.2	Over 300 mm dia.	quintal	5,680.00
34.26	Providing and laying flanged C.I. standard specials such as tees, bends, collars, tapers, caps etc., suitable for flanged jointing as per IS : 1538 :		
34.26.1	Upto 300 mm dia.	quintal	8,220.00

Code No	Description	Unit	Rate Rs.
34.26.2	Over 300 mm dia.	quintal	8,930.00
34.27	Providing and laying S&S centrifugally cast (spun) iron pipes (Class LA) conforming to IS - 1536 :		
34.27.1	100 mm dia. pipe	metre	1,353.00
34.27.2	125 mm dia. pipe	metre	1,674.00
34.27.3	150 mm dia. pipe	metre	1,959.00
34.27.4	200 mm dia. pipe	metre	3,430.00
34.27.5	250 mm dia. pipe	metre	4,490.00
34.27.6	300 mm dia. pipe	metre	6,030.00
34.27.7	350 mm dia. pipe	metre	7,240.00
34.27.8	400 mm dia. pipe	metre	9,530.00
34.27.9	450 mm dia. pipe	metre	11,550.00
34.27.10	500 mm dia. pipe	metre	13,400.00
34.27.11	600 mm dia. pipe	metre	18,750.00
34.28	Providing lead caulked joints to spun iron or C.I. pipes and specials including testing of joints but excluding the cost of pig lead :		
34.28.1	100 mm diameter pipe	each	346.50
34.28.2	125 mm diameter pipe	each	514.00
34.28.3	150 mm diameter pipe	each	519.00
34.28.4	200 mm diameter pipe	each	690.00
34.28.5	250 mm diameter pipe	each	862.00
34.28.6	300 mm diameter pipe	each	1,038.00
34.28.7	350 mm diameter pipe	each	1,056.00
34.28.8	400 mm diameter pipe	each	1,390.00
34.28.9	450 mm diameter pipe	each	1,561.00
34.28.10	500 mm diameter pipe	each	1,650.00
34.28.11	600 mm diameter pipe	each	2,240.00
34.29	Supplying pig lead at site of work.	quintal	14,550.00
34.30	Constructing masonry Chamber 30x30x50 cm, inside with 75 class designation 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 cement concrete slab 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) 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 :		

Code No	Description	Unit	Rate Rs.
34.30.1	With bricks	each	1,341.00
34.31	Constructing masonry Chamber 60x60x75 cm, inside with 75 class designation 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 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) 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 :		
34.31.1	With F.P.S. bricks	each	8,010.00
34.32	Constructing masonry Chamber 90x90x100 cm, inside with 75 class designation 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 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) 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 :		
34.32.1	With F.P.S. bricks	each	13,900.00
34.33	Constructing masonry Chamber 120x120x100 cm, inside with 75 class designation 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 1:2:4 mix (1 cement :2 coarse sand : 4 graded stone aggregate 20 mm nominal size) 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 :		
34.33.1	With F.P.S. bricks	each	19,250.00
34.34	Constructing masonry Chamber 60x60x75 cm, inside with 75 class designation 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 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) 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 :		
34.34.1	With F.P.S. bricks	each	7,500.00

Code No	Description	Unit	Rate Rs.
34.35	Constructing masonry Chamber 60x45x50 cm, inside with 75 class designation 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 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) 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 :		
34.35.1	With F.P.S. bricks	each	7,240.00
34.36	Painting G.I. pipes and fittings with synthetic enamel white paint over a ready mixed priming coat, both of approved quality for new work :		
34.36.1	15 mm diameter pipe.	metre	12.90
34.36.2	20 mm diameter pipe.	metre	15.70
34.36.3	25 mm diameter pipe.	metre	20.10
34.36.4	32 mm diameter pipe.	metre	24.60
34.36.5	40 mm diameter pipe.	metre	28.60
34.36.6	50 mm diameter pipe.	metre	34.60
34.37	Repainting G.I. pipes and fittings with synthetic enamel white paint of approved quality :		
34.37.1	15 mm diameter pipe.	metre	6.05
34.37.2	20 mm diameter pipe.	metre	7.30
34.37.3	25 mm diameter pipe	metre	9.25
34.37.4	32 mm diameter pipe	metre	11.20
34.37.5	40 mm diameter pipe	metre	13.00
34.37.6	50 mm diameter pipe	metre	15.70
34.38	Painting G.I. pipes and fittings with two coats of anti-corrosive bitumastic paint of approved quality :		
34.38.1	15 mm diameter pipe	metre	7.45
34.38.2	20 mm diameter pipe	metre	9.05
34.38.3	25 mm diameter pipe	metre	11.50
34.38.4	32 mm diameter pipe	metre	14.00
34.38.5	40 mm diameter pipe	metre	16.00
34.38.6	50 mm diameter pipe	metre	19.50
34.38.7	65 mm diameter pipe	metre	24.20
34.38.8	80 mm diameter pipe	metre	28.30
34.39	Providing and filling fine sand of grading zone V or coarser grade all-round the G.I. pipes in external work.	Cum	1,698.00

Code No	Description	Unit	Rate Rs.
34.40	Providing and filling sand of grading zone V or coarser grade all-round the G.I. pipes in external work.		
34.40.1	15 mm diameter pipe	metre	125.50
34.40.2	20 mm diameter pipe	metre	127.50
34.40.3	25 mm diameter pipe	metre	130.50
34.40.4	32 mm diameter pipe	metre	134.00
34.40.5	40 mm diameter pipe	metre	136.00
34.40.6	50 mm diameter pipe	metre	141.00
34.40.7	65 mm diameter pipe	metre	222.50
34.40.8	80 mm diameter pipe	metre	229.00
34.40.9	100 mm diameter pipe	metre	243.00
34.40.10	150 mm diameter pipe	metre	361.50
34.41	Boring with 100 mm diameter casting pipe for hand pump/ tube well in all soils except ordinary hard rocks requiring blasting including removing the casing pipe after the hand pipe/tube well is lowered and tested :		
34.41.1	Upto 6 metres depth.	metre	512.00
34.41.2	Beyond 6 m and upto 12 m depth.	metre	607.00
34.41.3	Beyond 12 m and upto 18 m depth.	metre	706.00
34.42	Providing and placing in position filters of 40 mm diameter G.I. pipe with brass strainer of approved quality.	metre	699.00
34.43	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	449.50
34.44	Providing and placing in position hand pump of approved quality for 40 mm diameter G.I. pipe complete with all accessories.	each	1,091.00
34.45	Providing and fixing G.I. Union in G.I. pipe including cutting and threading the pipe and making long screws etc. complete (New work)		
34.45.1	15 mm nominal bore	each	255.50
34.45.2	20 mm nominal bore	each	285.50
34.45.3	25 mm nominal bore	each	324.00
34.45.4	32 mm nominal	each	391.00
34.45.5	40 mm nominal bore	each	428.00
34.45.6	50mm nominal bore	each	620.00
34.45.7	65mm nominal bore	each	959.00
34.45.8	80 mm nominal bore	each	1,241.00
34.46	Providing and fixing G.I. Union in existing G.I. pipe line, cutting and threading the pipe and making long screws including excavation,		

Code No	Description	Unit	Rate Rs.
	refilling the earth or cutting of wall and making good the same complete wherever required :		
34.46.1	15 mm nominal bore.	each	626.00
34.46.2	20 mm nominal bore.	each	656.00
34.46.3	25 mm nominal bore.	each	694.00
34.46.4	32 mm nominal bore.	each	762.00
34.46.5	40 mm nominal bore.	each	799.00
34.46.6	50 mm nominal bore.	each	1,125.00
34.46.7	65 mm nominal bore.	each	1,465.00
34.46.8	80 mm nominal bore.	each	1,746.00
34.47	Providing and placing on terrace (at all floor levels) polyethylene water storage tank ISI : 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	8.80
34.48	Providing and fixing C.P. brass bib cock of approved quality conforming to IS:8931		
34.48.1	15 mm nominal bore.	each	508.00
34.49	Providing and fixing C.P. brass long nose bib cock of approved quality conforming to IS standards and weighing not less than 810 gms.		
34.49.1	15 mm nominal bore.	each	714.00
34.50	Providing and fixing C.P. brass long body bib cock of approved quality conforming to IS standards and weighing not less than 690 gms.		
34.50.1	15 mm nominal bore	each	627.00
34.51	Providing and fixing C.P. brass stop cock (concealed) of standard design and of approved make conforming to IS:8931.		
34.51.1	15 mm nominal bore.	each	762.00
34.52	Providing and fixing C.P. brass angle valve for basin mixer and geyser points of approved quality conforming to IS:8931		
34.52.1	15 mm nominal bore	each	546.00
34.53	Providing and fixing PTMT bib cock of approved quality and colour.		
34.53.1	15mm nominal bore, 86 mm long. Weighing not less than 88 gms.	each	147.00
34.53.2	15 mm nominal bore, 122mm long. Weighing not less than 99 gms.	each	204.50
34.53.3	15 mm nominal bore, 165mm long. Weighing not less than 110 gms.	each	233.00
34.53.4	15mm nominal bore, 90mm long. Weighing not less than 93 gms.	each	190.00

Code No	Description	Unit	Rate Rs.
34.54	Providing and fixing PTMT stop cock of approved quality and colour.		
34.54.1	15 mm nominal bore, 86mm long. Weighing not less than 88 gms.	each	147.00
34.54.2	20mm nominal bore, 89mm long. Weighing not less than 88 gms.	each	175.50
34.54.3	Concealed stop cock, 15mm nominal bore, 108mm long. Weighing not less than 108 gms.	each	225.50
34.55	Providing and fixing PTMT pillar cock of approved quality and colour		
34.55.1	15mm nominal bore, 107mm long. Weighing not less than 110 gms.	each	242.00
34.55.2	15mm nominal bore, 125mm long foam flow. Weighing not less than 120 gms.	each	206.50
34.56	Providing and fixing PTMT, push cock of approved quality and colour.		
34.56.1	15 mm nominal bore, 98mm long. Weighing not less than 75 gms.	each	125.50
34.56.2	15 mm nominal bore, 80mm long. Weighing not less than 46 gms.	each	118.50
34.57	Providing and fixing PTMT grating of approved quality and colour.		
34.57.1	Circular type.		
34.57.1.1	100 mm nominal dia.	each	41.60
34.57.1.2	125 mm nominal dia with 25 mm waste hole.	each	48.80
34.57.2	Rectangular type with openable circular lid.		
34.57.2.1	150 mm nominal size square 100 mm diameter of the inner hinged round grating .	each	74.50
34.58	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.		
34.58.1	15 mm nominal bore, 105 mm long. Weighing not less than 138 gms.	each	223.50
34.58.2	20 mm nominal bore, 120 mm long. Weighing not less than 198 gms.	each	309.50
34.58.3	25 mm nominal bore, 152mm long. Weighing not less than 440 gms.	each	596.00
34.58.4	40mm nominal bore, 206 mm long. Weighing not less than 690 gms.	each	960.00
34.58.5	50mm nominal bore, 242mm long. Weighing not less than 1240 gms.	each	1,545.00
34.59	Providing and fixing PTMT angle stop cock 15 mm nominal bore. Weighing not less than 85 gms.	each	183.00
34.60	Providing and fixing PTMT swivelling shower, 15mm nominal bore. Weighing not less than 40gms.	each	145.50
34.61	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	152.50

Code No	Description	Unit	Rate Rs.
34.62	Providing and fixing Unplasticised P.V.C. connection pipe with PTMT Nuts collar and bush of approved quality and colour.		
34.62.1	15 mm nominal bore with 30cm length.	each	74.60
34.62.2	15 mm nominal bore with 45 cm length.	each	90.70
34.63	Providing and fixing PTMT extension nipple for water tank pipe, fittings of approved quality and colour.		
34.63.1	15 mm nominal bore. Weighing not less than 32 gms.	each	33.40
34.63.2	20mm nominal bore. Weighing not less than 40gms.	each	54.80
34.63.3	25mm nominal bore. Weighing not less than 62 gms.	each	83.40
34.64	Cutting holes upto 30x30 cm in walls including making good the same :		
34.64.1	With F.P.S. bricks.	each	289.50
34.65	Cutting holes upto 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	298.00
34.66	Making chases upto 7.5x7.5 cm in walls including making good and finishing with matching surface after housing G.I. pipe etc.	metre	135.50
34.67	Making hole upto 20x20 cm and embedding pipes upto 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	122.50
34.68	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 upto 50 metre :		
34.68.1	80 mm diameter C.I. pipe.	metre	243.50
34.68.2	100 mm diameter C.I. pipe.	metre	254.50
34.68.3	125 mm diameter C.I. pipe.	metre	265.00
34.68.4	150 mm diameter C.I. pipe.	metre	275.50
34.68.5	200 mm diameter C.I. pipe.	metre	308.00
34.68.6	250 mm diameter C.I. pipe.	metre	339.50
34.68.7	300 mm diameter C.I. pipe.	metre	368.00
34.68.8	350 mm diameter C.I. pipe.	metre	395.50
34.68.9	400 mm diameter C.I. pipe.	metre	420.50
34.68.10	450 mm diameter C.I. pipe.	metre	446.50
34.68.11	500 mm diameter C.I. pipe.	metre	469.50
34.68.12	600 mm diameter C.I. pipe.	metre	511.00

Code No	Description	Unit	Rate Rs.
34.69	Labour for cutting C.I. pipe with steel saw.		
34.69.1	80 mm diameter C.I. pipe.	each cut	103.50
34.69.2	100 mm diameter C.I. pipe.	each cut	138.50
34.69.3	125 mm diameter C.I. pipe.	each cut	191.50
34.69.4	150 mm diameter C.I. pipe.	each cut	260.50
34.69.5	200 mm diameter C.I. pipe.	each cut	347.00
34.69.6	250 mm diameter C.I. pipe.	each cut	432.50
34.69.7	300 mm diameter C.I. pipe.	each cut	520.00
34.69.8	350 mm diameter C.I. pipe.	each cut	605.00
34.69.9	400 mm diameter C.I. pipe.	each cut	692.00
34.69.10	450 mm diameter C.I. pipe.	each cut	777.00
34.69.11	500 mm diameter C.I. pipe	each cut	864.00
34.69.12	600 mm diameter C.I. pipe.	each cut	1,034.00

35.0 DRAINAGE (Building)

Code No	Description	Unit	Rate Rs.
35.1	Providing, laying and jointing glazed stoneware pipes grade 'A' with stiff mixture of cement mortar in the proportion of 1:1 (1 cement : 1 fine sand) including testing of joints etc. complete :		
35.1.1	100 mm diameter	metre	435.00
35.1.2	150 mm diameter	metre	761.00
35.1.3	200 mm diameter	metre	1,170.00
35.1.4	230 mm diameter	metre	1,343.00
35.1.5	250 mm diameter	metre	1,883.00
35.1.6	300 mm diameter	metre	2,305.00
35.2	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:		
35.2.1	100 mm diameter S.W. pipe	metre	641.00
35.2.2	150 mm diameter S.W. pipe	metre	784.00
35.2.3	200 mm diameter S.W. pipe	metre	914.00
35.2.4	230 mm diameter S.W. pipe	metre	1,000.00
35.2.5	250 mm diameter S.W. pipe	metre	1,057.00
35.3	Providing and laying cement concrete 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size) upto haunches of S.W. pipes including bed concrete as per standard design :		
35.3.1	100 mm diameter S.W. pipe	metre	304.50
35.3.2	150 mm diameter S.W. pipe	metre	493.50
35.3.3	200 mm diameter S.W. pipe	metre	580.00
35.3.4	230 mm diameter S.W. pipe	metre	637.00
35.3.5	250 mm diameter S.W. pipe	metre	675.00
35.3.6	300 mm diameter S.W. pipe	metre	779.00
35.4	Providing and fixing square-mouth S.W. gully trap grade 'A' 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 :		
35.4.1	100x100 mm size P type		
35.4.1.1	With bricks class designation 75	each	1,907.00
35.4.1.2	With Sewer bricks conforming to IS : 4885	each	1,901.00

Code No	Description	Unit	Rate Rs.
35.4.2	150 x 100 mm size P type.		
35.4.2.1	With bricks class designation 75	each	1,947.00
35.4.2.2	With sewer bricks conforming to IS : 4885	each	1,941.00
35.4.3	180x150 mm size P type		
35.4.3.1	With bricks class designation 75	each	2,049.00
35.4.3.2	With Sewer bricks conforming to IS : 4885	each	2,043.00
35.5	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 unserviceable materials into municipal dumps:		
35.5.1	100 mm diameter	metre	55.20
35.5.2	150 mm diameter	metre	60.60
35.5.3	200 mm diameter	metre	64.20
35.5.4	230 mm diameter	metre	66.00
35.5.5	250 mm diameter	metre	67.80
35.5.6	300 mm diameter	metre	71.40
35.5.7	350 mm diameter	metre	82.50
35.5.8	400 mm diameter	metre	90.20
35.5.9	450 mm diameter	metre	93.80
35.6	Constructing brick masonry manhole in cement mortar 1:4 (1 cement : 4 coarse sand) R.C.C. top slab with 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), foundation concrete 1:4:8 mix (1 cement : 4 coarse sand : 8 graded stone aggregate 40mm nominal size) inside plastering 12mm 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 20mm nominal size) finished with a floating coat of neat cement complete as per standard design :		
35.6.1	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) :		
35.6.1.1	With bricks with class designation 75	each	9,770.00
35.6.1.2	With Sewer bricks conforming to IS : 4885	each	9,750.00
35.6.2	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) :		
35.6.2.1	With bricks class designation 75	each	21,400.00
35.6.2.2	With Sewer bricks conforming to IS : 4885	each	21,300.00

Code No	Description	Unit	Rate Rs.
35.6.3	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) :		
35.6.3.1	With bricks class designation 75	each	27,100.00
35.6.3.2	With Sewer bricks conforming to IS : 4885	each	27,100.00
35.7	Extra for depth for manholes		
35.7.1	Size 90x80 cm		
35.7.1.1	With bricks class designation 75	metre	6,540.00
35.7.1.2	With Sewer bricks conforming to IS : 4885	metre	6,490.00
35.7.2	Size 120x90 cm		
35.7.2.1	With bricks class designation 75	metre	7,830.00
35.7.2.2	With Sewer bricks conforming to IS : 4885	metre	7,770.00
35.8	Supplying and fixing C.I. cover without frame for manholes :		
35.8.1	455x610 mm rectangular C.I. cover (light duty) the weight of the cover to be not less than 23 kg.	each	1,481.00
35.8.2	500 mm diameter C.I. cover (medium duty) the weight of the cover to be not less than 58 kg.	each	3,495.00
35.8.3	560 mm diameter C.I. cover (heavy duty) the weight of the cover to be not less than 108 kg.	each	6,610.00
35.9	Providing and fixing in position precast R.C.C. manhole cover and frame of required shape and approved quality		
35.9.1	L D- 2.5		
35.9.1.1	Rectangular shape 600x450mm internal dimensions	each	1,307.00
35.9.1.2	Square shape 450mm internal dimensions	each	1,031.00
35.9.1.3	Circular shape 450mm internal diameter	each	1,407.00
35.9.2	M D - 10		
35.9.2.1	Square shape 450mm internal dimension	each	1,261.00
35.9.2.2	Circular shape 500mm internal diameter	each	1,716.00
35.10	Supplying and fixing C.I. cover 300x300 mm without frame for gully trap (standard pattern) the weight of cover to be not less than 4.5kg.	each	443.00
35.11	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 into municipal dumps within 50 m lead :		
35.11.1	Rectangular manhole 90x80 cm and 45 cm deep	each	871.00
35.11.2	Rectangular manhole 120x90 cm and 90 cm deep	each	1,373.00
35.11.3	Rectangular arch type manhole 140x90cm and 2.45m deep	each	2,052.00

Code No	Description	Unit	Rate Rs.
35.11.4	Circular manhole 122 cm diameter and 1.68 m deep	each	1,141.00
35.12	Extra for depth of manholes dismantled:		
35.12.1	Rectangular manhole 90x80 cm and 45 cm deep	metre	393.00
35.12.2	Rectangular manhole 120x90 cm and 90 cm deep	metre	468.00
35.12.3	Rectangular arch type manhole 140x90 cm and 2.45m deep (upto 4.25 m depth).	metre	370.50
35.12.4	Circular manhole 122 cm diameter and 1.68 m deep (upto 2.29 m depth)	metre	423.00
35.13	Constructing brick masonry road gully chamber 50x45x60 cm with bricks of class designation 75 in cement mortar 1:4 (1 cement : 4 coarse sand) including 500x450 mm precast R.C.C. horizontal grating with frame complete as per standard design :		
35.13.1	With bricks	each	4,615.00
35.14	Constructing brick masonry road gully chamber 45x45x77.5 cm with bricks of class designation 75 in cement mortar 1:4 (1 cement : 4 coarse sand) with precast R.C.C. vertical grating complete as per standard design :		
35.14.1	With bricks	each	5,190.00
35.15	Constructing brick masonry road gully chamber 110x50x77.5 cm with bricks of class designation 75 in cement mortar 1:4 (1 cement : 4 coarse sand) including 500x450 mm precast R.C.C. horizontal grating with frame and vertical grating complete as per standard design :		
35.15.1	With bricks	each	8,940.00
35.16	Constructing brick masonry chamber for underground C.I. inspection chamber and bends with 75 class designation bricks in cement mortar 1:4 (1 cement : 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 1:2:4 mix (1 cement : 2 coarse sand : 4 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 1:3 (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 :		
35.16.1	Inside dimensions 455x610 mm and 45 cm deep for single pipe line :		
35.16.1.1	With bricks	each	5,370.00
35.16.2	Inside dimensions 500x700 mm and 45 cm deep for pipe line with one or two inlets :		
35.16.2.1	With bricks	each	6,390.00

Code No	Description	Unit	Rate Rs.
35.16.3	Inside dimensions 600x 850 mm and 45 cm deep for pipe line with three or more inlets :		
35.16.3.1	With bricks	each	7,410.00
35.17	Extra for depth beyond 45 cm of brick masonry chamber :		
35.17.1	For 455x610 mm size		
35.17.1.1	With bricks	metre	4,540.00
35.17.2	For 500x700 mm size		
35.17.2.1	With bricks	metre	4,955.00
35.17.3	For 600x850 mm size		
35.17.3.1	With bricks	metre	5,770.00
35.18	Making soak pit 2.5 m diameter 3.0 metre deep with 45 x 45 cm dry brick honey comb shaft with bricks of class designation 75 and S.W. drain pipe 100 mm diameter, 1.8 m long complete as per standard design.		
35.18.1	With bricks	each	20,100.00
35.19	Constructing soak pit 1.20x1.20x1.20m filled with brickbats including S.W. drain pipe 100 mm diameter and 1.20 m long complete as per standard design.	each	2,295.00
35.20	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 :		
35.20.1	100 mm dia	each	364.50
35.20.2	150 mm dia	each	510.00
35.21	Providing and fixing precast dense cement concrete M-20 Grade(Vibro-pressed) drain section block of different size as per approved drawing, design and strength as per IS:2185 (part I) of grade 'D' (5.00 N/mm ²) proper quality of additive/admixture like plasticizer etc. added to produce high quality and durable drain section Blocks of 'L' shape 'U' shape etc. over 50mm thick CC M15 base course with fixing and joining with C.M.1:4 in proper grade and level complete in all respect. (cost of earth work, steel & welded mesh shall be paid extra).		
35.21.1	40mm thick	sqm	508.00
35.21.2	60mm thick	sqm	582.00
35.21.3	80mm thick	sqm	717.00
35.22	Cleaning and removal of earth, silt, sludge, kankar, boulder, building material and garbage in existing nallah/drains including construction of bypass arrangement to bypass water with 1.5m lift from ground level and lead upto 50 m including foul & saturated condition where pumping out or bailing out of water is required, including shoring, shuttering where required and dewatering. Making access for		

Code No	Description	Unit	Rate Rs.
	disposal and dressing disposal side as per the directed of the Engineer.		
35.22.1	For Depth upto 1.50 m	cum	406.00
35.22.2	For depth above 1.50 m and upto 3.00 m	cum	472.50
35.22.3	For depth above 3.00 m and upto 4.50 m	cum	505.00
35.22.4	For depth above 4.50 m and upto 6.00 m	cum	595.00
35.22.5	For depth above 6.00 m and upto 7.50 m	cum	661.00
35.22.6	For depth above 7.50 m and upto 9.00 m	cum	732.00

36.0 SANITARY INSTALLATIONS

Code No	Description	Unit	Rate Rs.
36.1	Providing and fixing water closet squatting pan (Indian type W.C. pan) with 100mm sand cast Iron P or S trap, 10 litre low level white P.V.C. flushing cistern 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 :		
36.1.1	White Vitreous china Orissa pattern W.C. pan of size 580x440mm with integral type foot rests.	each	5,090.00
36.1.2	Stainless Steel AISI-304(18/8) Orissa pattern W.C. pan of size 585x480 mm with flush pipe and integrated type foot rests.	each	8,460.00
36.2	Providing and fixing white vitreous china pedestal type water closet (European type W.C. pan) with seat and lid, 10 litre low level white P.V.C. flushing cistern 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 :		
36.2.1	W.C. pan with ISI marked white solid plastic seat and lid	each	4,870.00
36.2.2	W.C. pan with ISI marked black solid plastic seat and lid	each	4,815.00
36.3	Providing and fixing white vitreous china pedestal type water closet (European type) with seat and lid, 10 litre low level white vitreous china flushing cistern & C.P. flush bend with fittings & C.I. brackets, 40mm flush bend, overflow arrangement with specials of standard make and mosquito proof coupling of approved municipal design complete including painting of fittings and brackets, cutting and making good the walls and floors wherever required :		
36.3.1	W.C. pan with ISI marked white solid plastic seat and lid.	each	6,310.00
36.3.2	W.C. pan with ISI marked black solid plastic seat and lid.	each	6,250.00
36.4	Providing and fixing white vitreous china flat back or wall corner type lipped front urinal basin of 430x260x350mm and 340x410x265mm sizes respectively with automatic flushing cistern with standard flush pipe and C.P. brass spreaders with brass unions and G.I clamps complete, including painting of fittings and brackets, cutting and making good the walls and floors wherever required :		
36.4.1	One urinal basin with 5 litre white P.V.C. automatic flushing cistern.	each	4,850.00
36.4.2	Range of two urinal basins with 5 litre white P.V.C. automatic flushing cistern.	each	7,690.00
36.4.3	Range of three urinal basins with 10litre white P.V.C. automatic flushing cistern.	each	10,500.00
36.4.4	Range of four urinal basins with 10 litre white P.V.C. automatic flushing cistern.	each	14,550.00

Code No	Description	Unit	Rate Rs.
36.5	Providing and fixing white vitreous china flat back half stall urinal of size 580x380x350mm with white PVC automatic flushing cistern, with fittings, standard size C.P. brass flush pipe, spreaders with unions 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 walls and floors wherever required :		
36.5.1	Single half stall urinal with 5 litre P.V.C. automatic flushing cistern.	each	9,310.00
36.5.2	Range of two half stall urinals with 5 litre P.V.C. automatic flushing cistern.	each	14,150.00
36.5.3	Range of three half stall urinals with 10 litre P.V.C. automatic flushing cistern.	each	17,600.00
36.5.4	Range of four half stall urinals with 10 litre P.V.C. automatic flushing cistern.	each	20,900.00
36.6	Providing and fixing one piece construction white vitreous china squatting plate with an integral longitudinal flushing pipe, white P.V.C. automatic flushing cistern, with fittings, standard size G.I. flush pipe for back and front flush with standard spreader pipes with fittings, G.I clamps and C.P. brass coupling complete including painting of fittings and cutting and making good the walls and floors etc. wherever required :		
36.6.1	Single squatting plate with 5 litre P.V.C. automatic flushing cistern.	each	6,700.00
36.6.2	Range of two squatting plates with 5 litre P.V.C. automatic flushing cistern.	each	9,680.00
36.6.3	Range of three squatting plates with 10 litre P.V.C. automatic flushing cistern.	each	12,650.00
36.6.4	Range of four squatting plates with 10 litre P.V.C. automatic flushing cistern.	each	15,050.00
36.7	Providing and fixing wash basin with C.I. brackets, 15 mm C.P. brass pillar taps, 32 mm C.P. brass waste of standard pattern, including painting of fittings and brackets, cutting and making good the walls wherever require :		
36.7.1	White Vitreous China Wash basin size 630x450 mm with a pair of 15 mm C.P. brass pillar taps.	each	2,810.00
36.7.2	White Vitreous China Wash basin size 630x450 mm with a single 15 mm C.P. brass pillar tap.	each	2,545.00
36.7.3	White Vitreous China Wash basin size 550x400 mm with a pair of 15 mm C.P. brass pillar taps.	each	2,705.00
36.7.4	White Vitreous China Flat back wash basin size 550x400 mm with single 15 mm C.P. brass pillar tap.	each	2,440.00
36.7.5	White Vitreous China Angle back wash basin size 600x480 mm with single 15 mm C.P. brass pillar tap.	each	2,493.00

Code No	Description	Unit	Rate Rs.
36.7.6	White Vitreous China Angle back wash basin size 400x400 mm with single 15 mm C.P. brass pillar tap.	each	2,144.00
36.7.7	White Vitreous China Flat back wash basin size 450x300 mm with single 15 mm C.P. brass pillar tap.	each	2,099.00
36.7.8	White Vitreous China Surgeon type wash basin of size 660x460 mm with a pair of 15 mm C.P. brass pillar taps with elbow operated levers.	each	4,340.00
36.7.9	White Vitreous China Surgeon type wash basin of size 660x460 mm with single 15 mm C.P. brass pillar taps with elbow operated levers ISI marked.	each	3,520.00
36.7.10	Stainless Steel AISI-304(18/8) Round basin 405x355 mm with single 15 mm C.P. brass pillar tap.	each	4,040.00
36.7.11	Stainless Steel AISI-304(18/8) Wash basin 530x345 mm with single 15 mm C.P. brass pillar tap.	each	3,760.00
36.8	Providing and fixing white vitreous china pedestal for wash basin completely recessed at the back for the reception of pipes and fittings.	each	1,317.00
36.9	Providing and fixing kitchen sink with C.I. brackets, C.P. brass chain with rubber plug, 40 mm C.P. brass waste complete, including painting the fittings and brackets, cutting and making good the walls wherever required :		
36.9.1	White glazed fire clay kitchen sink of size 600x450x250 mm.	each	3,815.00
36.10	Providing and fixing Stainless Steel A ISI 304 (18/8) kitchen sink as per IS 13983 with C.I. brackets and stainless steel plug 40 mm including painting of fittings and brackets, cutting and making good the walls wherever required :		
36.10.1	Kitchen sink with drain board		
36.10.1.1	510x1040 mm bowl depth 250mm.	each	5,330.00
36.10.1.2	510x1040 mm bowl depth 225mm.	each	5,400.00
36.10.1.3	510x1040 mm bowl depth 200mm.	each	5,230.00
36.10.1.4	510x1040 mm bowl depth 178mm.	each	5,000.00
36.10.2	Kitchen sink without drain board		
36.10.2.1	610x510 mm bowl depth 200 mm.	each	4,145.00
36.10.2.2	610x460 mm bowl depth 200 mm.	each	3,645.00
36.10.2.3	470x420 mm bowl depth 178 mm.	each	3,000.00
36.11	Providing and fixing white vitreous china laboratory sink with C.I. brackets, C.P. brass chain with rubber plug 40mm C.P brass waste and 40mm C.P. brass trap with necessary fittings complete including painting of fittings and brackets, cutting and making good the wall wherever required :		
36.11.1	Size 450x300x150mm	each	3,120.00

Code No	Description	Unit	Rate Rs.
36.11.2	Size 600x450x200mm	each	4,150.00
36.12	Providing and fixing draining board with C.I. brackets including painting of brackets, cutting and making good the walls wherever required :		
36.12.1	White glazed fire clay draining board of size 600x450x25mm	each	1,209.00
36.13	Providing and fixing white vitreous china water closet squatting pan (Indian type)		
36.13.1	Long pattern W.C. pan of size 580 mm	each	1,411.00
36.13.2	Orissa pattern W.C. pan of size 580x440 mm	each	2,175.00
36.14	Extra for using coloured W.C. pan instead of white W.C. pan		
36.14.1	Orissa pattern W.C. pan 580x440 mm	each	1,114.00
36.15	Providing and fixing white vitreous china pedestal type (European type/ wash down type) water closet pan.	each	1,945.00
36.16	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	1,329.00
36.17	Providing and fixing a pair of white vitreous china foot rests of standard pattern for squatting pan water closet:		
36.17.1	250x130x30 mm	pair	227.00
36.17.2	250x125x25 mm	pair	197.00
36.18	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.		
36.18.1	10 litre capacity - White	each	1,060.00
36.18.2	10 litre capacity - coloured	each	1,117.00
36.19	Providing and fixing controlled flush, low level cistern made of vitreous china with all fittings complete.		
36.19.1	10 litre (full flush) capacity-white	each	2,007.00
36.19.2	10 litre (full flush) capacity-coloured	each	2,625.00
36.20	Providing and fixing solid plastic seat with lid for pedestal type W.C. pan complete :		
36.20.1	White solid plastic seat with lid	each	483.00
36.20.2	Black solid plastic seat with lid	each	426.00
36.21	Extra for providing coloured other than black solid P.V.C. plastic seat and cover in European type W.C. pan, instead of white plastic seat and cover.	each	118.50
36.22	Providing and fixing G.I. inlet connection for flush pipe connecting with W.C. pan.	each	113.50

Code No	Description	Unit	Rate Rs.
36.23	Providing and fixing white vitreous china flat back or wall corner type lipped front urinal basin of 430x260x350mm and 340x410x265mm sizes respectively.	each	1,278.00
36.24	Providing and fixing white vitreous china squatting plate urinal with integral rim longitudinal flush pipe.	each	2,845.00
36.25	Providing and fixing white vitreous china wash basin including making all connections but excluding the cost of fittings :		
36.25.1	Flat back wash basin of size 630x450mm.	each	1,056.00
36.25.2	Flat back wash basin of size 550x400mm.	each	952.00
36.25.3	Angle back wash basin of size 600x480mm.	each	1,005.00
36.25.4	Angle back wash basin of size 400x400mm.	each	657.00
36.25.5	Flat back wash basin of size 450x300mm.	each	611.00
36.25.6	Surgeon type wash basin of size 660x460mm.	each	1,480.00
36.26	Providing and fixing kitchen sink including making all connections excluding cost of fittings.		
36.26.1	White glazed fire clay sink of size 600x450x250mm.	each	2,545.00
36.27	Providing and fixing white vitreous china laboratory sink including making all connections excluding cost of fittings:		
36.27.1	Size 450x300x150 mm.	each	1,647.00
36.27.2	Size 600x450x200 mm.	each	2,680.00
36.28	Providing and fixing P.V.C. waste pipe for sink or wash basin including P.V.C. waste fittings complete.		
36.28.1	Semi rigid pipe		
36.28.1.1	32 mm dia	each	64.60
36.28.1.2	40 mm dia	each	78.90
36.28.2	Flexible pipe		
36.28.2.1	32 mm dia	each	71.80
36.28.2.2	40 mm dia	each	71.80
36.29	Providing and fixing 100 mm sand cast Iron grating for gully trap.	each	44.50
36.30	Providing and fixing in position 25mm diameter mosquito proof coupling of approved municipal design.	each	45.40
36.31	Providing and fixing 600x450 mm bevelled 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	1,125.00
36.32	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 :		

Code No	Description	Unit	Rate Rs.
36.32.1	Circular shape 450mm dia.	each	1,213.00
36.32.2	Rectangular shape 453x357mm	each	1,021.00
36.32.3	Oval shape 450x350mm (outer dimensions)	each	1,077.00
36.32.4	Rectangular shape 1500x450 mm	each	1,738.00
36.33	Providing and fixing 600x120x5mm glass shelf with edges round of supported on anodised aluminium angle frame with C.P. brass brackets and guard rail complete fixed with 40 mm long screws, rawl plugs etc., complete.	each	667.00
36.34	Providing and fixing toilet paper holder :		
36.34.1	C.P. brass	each	434.50
36.34.2	Vitreous china	each	409.00
36.35	Providing and fixing soil, waste and vent pipes :		
36.35.1	100 mm dia.		
36.35.1.1	Sand cast iron S&S pipe as per IS: 1729.	metre	1,144.00
36.35.1.2	Centrifugally cast (spun) iron socketed pipe as per IS: 3989.	metre	1,135.00
36.35.2	75 mm diameter :		
36.35.2.1	Sand cast iron S&S pipe as per IS: 1729.	metre	959.00
36.35.2.2	Centrifugally cast (spun) iron socketed pipe as per IS: 3989.	metre	992.00
36.36	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 :		
36.36.1	75 mm dia pipe	each	120.50
36.36.2	100 mm dia pipe	each	142.00
36.37	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 10x10x10cm of 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) including cost of cutting holes and making good the walls etc. :		
36.37.1	For 100 mm dia. Pipe	each	260.00
36.37.2	For 75 mm dia. Pipe	each	250.00
36.38	Providing and fixing bend of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete.		
36.38.1	100 mm		
36.38.1.1	Sand cast iron S&S as per IS - 1729	each	526.00
36.38.1.2	Sand cast iron S&S as per IS - 3989	each	465.00
36.38.2	75 mm dia		
36.38.2.1	Sand cast iron S&S as per IS - 1729	each	405.00
36.38.2.2	Sand cast iron S&S as per IS- 3989	each	375.00

Code No	Description	Unit	Rate Rs.
36.39	Providing and fixing plain bend of required degree.		
36.39.1	100 mm		
36.39.1.1	Sand cast iron S&S as per IS - 1729	each	457.50
36.39.1.2	Sand cast iron S&S as per IS : 3989	each	542.00
36.39.2	75 mm		
36.39.2.1	Sand cast iron S&S as per IS -1729	each	331.00
36.39.2.2	Sand cast iron S&S as per IS - 3989	each	284.00
36.40	Providing and fixing heel rest sanitary bend		
36.40.1	100 mm dia		
36.40.1.1	Sand cast iron S&S as per IS - 1729	each	406.00
36.40.1.2	Sand cast iron S&S as per IS - 3989	each	435.00
36.40.2	75 mm		
36.40.2.1	Sand cast iron S&S as per IS - 1729	each	345.00
36.40.2.2	Sand cast iron S&S as per IS - 3989	each	369.50
36.41	Providing and fixing double equal junction of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete :		
36.41.1	100x100x100x100mm		
36.41.1.1	Sand cast iron S&S as per IS - 1729	each	880.00
36.41.1.2	Sand cast iron S&S as per IS - 3989	each	904.00
36.41.2	75x75x75x75 mm		
36.41.2.1	Sand cast iron S&S as per IS - 1729	each	666.00
36.41.2.2	Sand cast iron S&S as per IS - 3989	each	728.00
36.42	Providing and fixing double equal plain junction of required degree.		
36.42.1	100x100x100x100 mm		
36.42.1.1	Sand cast iron S&S as per IS - 1729	each	772.00
36.42.1.2	Sand cast iron S&S as per IS - 3989	each	880.00
36.42.2	75x75x75x75 mm		
36.42.2.1	Sand cast iron S&S as per IS - 1729	each	531.00
36.42.2.2	Sand cast iron S&S as per IS - 3989	each	668.00
36.43	Providing and fixing single equal plain junction of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete.		
36.43.1	100x100x100 mm		
36.43.1.1	Sand cast iron S&S as per IS - 1729	each	588.00
36.43.1.2	Sand cast iron S&S as per IS - 3989	each	742.00

Code No	Description	Unit	Rate Rs.
36.43.2	75x75x75 mm		
36.43.2.1	Sand cast iron S&S as per IS - 1729	each	452.50
36.43.2.2	Sand cast iron S&S as per IS - 3989	each	567.00
36.44	Providing and fixing single equal plain junction of required degree :		
36.44.1	100x100x100 mm		
36.44.1.1	Sand cast iron S&S as per IS - 1729	each	510.00
36.44.1.2	Sand cast iron S&S as per IS - 3989	each	680.00
36.44.2	75x75x75 mm		
36.44.2.1	Sand cast iron S&S as per IS - 1729	each	392.50
36.44.2.2	Sand cast iron S&S as per IS - 3989	each	492.50
36.45	Providing and fixing double unequal junction of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete :		
36.45.1	100x100x75x75 mm		
36.45.1.1	Sand cast iron S&S as per IS - 1729	each	903.00
36.45.1.2	Sand cast iron S&S as per IS - 3989	each	1,249.00
36.46	Providing and fixing double unequal plain junction of required degree:		
36.46.1	100x100x75x75 mm		
36.46.1.1	Sand cast iron S&S as per IS – 1729	each	819.00
36.46.1.2	Sand cast iron S&S as per IS - 3989	each	1,149.00
36.47	Providing and fixing single unequal junction of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete :		
36.47.1	100x100x75 mm		
36.47.1.1	Sand cast iron S&S as per IS - 1729	each	658.00
36.47.1.2	Sand cast iron S&S as per IS - 3989	each	956.00
36.48	Providing and fixing single unequal plain junction of required degree:		
36.48.1	100x100x75 mm		
36.48.1.1	Sand cast iron S&S as per IS – 1729	each	596.00
36.48.1.2	Sand cast iron S&S as per IS - 3989	each	826.00
36.49	Providing and fixing double equal plain invert branch of required degree:		
36.49.1	100x100x100x100 mm		
36.49.1.1	Sand cast iron S&S as per IS - 1729	each	787.00
36.49.1.2	Sand cast iron S&S as per IS - 3989	each	765.00

Code No	Description	Unit	Rate Rs.
36.49.2	75x75x75x75 mm		
36.49.2.1	Sand cast iron S&S as per IS - 1729	each	592.00
36.49.2.2	Sand cast iron S&S as per IS - 3989	each	615.00
36.50	Providing and fixing single equal plain invert branch of required degree:		
36.50.1	100x100x100 mm		
36.50.1.1	Sand cast iron S&S as per IS - 1729	each	596.00
36.50.1.2	Sand cast iron S&S as per IS - 3989	each	610.00
36.50.2	75x75x75 mm		
36.50.2.1	Sand cast iron S&S as per IS - 1729	each	476.50
36.50.2.2	Sand cast iron S&S as per IS - 3989	each	476.50
36.51	Providing and fixing double unequal invert branch of required degree :		
36.51.1	100x100x75x75 mm		
36.51.1.1	Sand cast iron S&S as per IS - 1729	each	826.00
36.51.1.2	Sand cast iron S&S as per IS - 3989	each	1,042.00
36.52	Providing and fixing single unequal plain invert branch of required degree :		
36.52.1	100x100x75 mm		
36.52.1.1	Sand cast iron S&S as per IS - 1729	each	710.00
36.52.1.2	Sand cast iron S&S as per IS - 3989	each	796.00
36.53	Providing and fixing sand cast iron S&S off sets as per IS: 1729		
36.53.1	76 mm off sets		
36.53.1.1	With 75 mm dia. pipe	each	354.00
36.53.1.2	With 100 mm dia. pipe	each	399.50
36.53.2	114 mm off sets		
36.53.2.1	With 75 mm dia. pipe	each	435.00
36.53.2.2	With 100 mm dia. Pipe	each	558.00
36.53.3	152 mm off sets		
36.53.3.1	With 75 mm dia. Pipe	each	525.00
36.53.3.2	With 100 mm dia. pipe	each	671.00
36.54	Providing and fixing sand cast iron S&S off sets as per IS: 3989.		
36.54.1	75 mm off sets		
36.54.1.1	With 75 mm dia. pipe	each	338.00

Code No	Description	Unit	Rate Rs.
36.54.2	150 mm off sets		
36.54.2.1	With 75 mm dia. pipe	each	423.00
36.54.2.2	With 100 mm dia. pipe	each	577.00
36.55	Providing and fixing door piece, insertion rubber washer 3mm thick, bolts & nuts complete :		
36.55.1	100 mm		
36.55.1.1	Sand cast iron S&S as per IS - 1729	each	596.00
36.55.1.2	Sand cast iron S&S as per IS - 3989	each	642.00
36.55.2	75 mm		
36.55.2.1	Sand cast iron S&S as per IS - 1729	each	444.00
36.55.2.2	Sand cast iron S&S as per IS - 3989	each	582.00
36.56	Providing and fixing terminal guard:		
36.56.1	100 mm		
36.56.1.1	Sand cast iron S&S as per IS - 1729	each	326.50
36.56.1.2	Sand cast iron S&S as per IS - 3989	each	349.00
36.56.2	75 mm		
36.56.2.1	Sand cast iron S&S as per IS - 1729	each	245.50
36.56.2.2	Sand cast iron S&S as per IS - 3989	each	299.50
36.57	Providing and fixing collar:		
36.57.1	100 mm		
36.57.1.1	Sand cast iron S&S as per IS - 1729	each	273.50
36.57.1.2	Sand cast iron S&S as per IS - 3989	each	357.50
36.57.2	75 mm		
36.57.2.1	Sand cast iron S&S as per IS - 1729	each	192.50
36.57.2.2	Sand cast iron S&S as per IS- 3989	each	238.00
36.58	Providing lead caulked joints to sand cast iron/ centrifugally cast (spun) iron pipes and fittings of diameter:		
36.58.1	100 mm	each	358.50
36.58.2	75 mm	each	300.50
36.58.3	50 mm	each	239.50
36.59	Providing and fixing M.S. stays and clamps for sand cast iron/ centrifugally cast (spun) iron pipes of diameter :		
36.59.1	100 mm	each	105.00
36.59.2	75 mm	each	64.00
36.59.3	50 mm	each	56.40

Code No	Description	Unit	Rate Rs.
36.60	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 :		
36.60.1	100 mm inlet and 100 mm outlet		
36.60.1.1	Sand cast iron S&S as per IS: 3989.	each	1,391.00
36.60.1.2	Sand Cast iron S&S as per IS: 1729.	each	1,246.00
36.60.2	100 mm inlet and 75 mm outlet		
36.60.2.1	Sand cast iron S&S as per IS - 3989	each	1,407.00
36.60.2.2	Sand Cast iron S&S as per IS- 1729.	each	1,169.00
36.61	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 12.5 mm nominal size) including necessary plaster and pointing in cement mortar 1:4 (1 cement : 4 coarse sand) :		
36.61.1	100 mm dia.	metre	460.50
36.61.2	75 mm dia.	metre	330.50
36.61.3	50 mm dia.	metre	217.00
36.62	Painting C.I. cistern with bitumastic or any other anti-corrosive paint inside and white paint over a coat of zinc chromate yellow primer (of approved quality) on the outside surface of the cistern flush pipe, other fittings, etc. complete for new work.	each	751.00
36.63	Re-painting C.I. cistern with bitumastic or any other anti-corrosive paint inside and white paint on the outside surface of the cistern, flush pipe, other fittings, etc. complete including polishing of wooden seat and lid and cleaning of W.C. pan with acid wherever necessary.	each	479.50
36.64	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	211.50
36.65	Painting sand cast iron/ centrifugally cast (spun) iron soil, waste vent pipes and fittings with paint of any colour such as chocolate grey, or buff etc. over a coat of primer (of approved quality) for new work :		
36.65.1	100 mm diameter pipe	metre	58.70
36.65.2	75 mm diameter pipe	metre	44.40
36.66	Repainting sand cast iron/ centrifugally cast iron (spun) iron, soil, waste, vent pipes and fittings with paint of any colour such as chocolate, grey or buff etc :		
36.66.1	100 mm diameter pipe	metre	26.90
36.66.2	75 mm diameter pipe	metre	20.10
36.67	Repainting bath tub of size 1700x730x430mm with enamel paint.	each	658.00

Code No	Description	Unit	Rate Rs.
36.68	Providing and fixing vitreous china dual purpose closet suitable for use as squatting pan or European type water closet (Anglo Indian W.C pan) with seat lid with C.P. brass hinges and rubber buffers, 10 litre low level flushing cistern with fitting and brackets, 40mm flush bend 20mm over flow pipe with specials of standard make and mosquito proof coupling of approved municipal design complete, including painting of fittings and brackets, cutting and making good the walls and floors wherever required :		
36.68.1	White vitreous china dual purpose WC pan with white solid plastic seat and lid with white vitreous china flushing cistern and C.P. flush bend.	each	8,340.00
36.69	Providing and fixing PTMT Waste Coupling for wash basin and sink, of approved quality and colour.		
36.69.1	Waste coupling 31mm of 79mm length and 62mm breadth weighing not less than 45gms.	each	93.20
36.69.2	Waste coupling 38mm of 83mm length and 77mm breadth, weighing not less than 60gms.	each	122.00
36.70	Providing and fixing PTMT Bottle Trap for Wash basin and sink.		
36.70.1	Bottle trap 31mm single piece moulded with height of 270mm, effective length of tail pipe 260mm from the centre of the waste coupling 77mm breadth with 25mm minimum water seal, weighing not less than 260gms.	each	414.50
36.70.2	Bottle trap 38mm single piece moulded with height of 270mm, effective length of tail pipe 265mm from the centre of the waste coupling 77mm breadth with 25mm minimum water seal, weighing not less than 263gms.	each	421.50
36.71	Providing and fixing PTMT liquid soap container 109mm wide, 125mm high and 112mm 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	202.50
36.72	Providing and fixing PTMT towel ring trapezoidal shape 215mm long, 200mm wide with a minimum distances of 37mm from wall face with concealed fittings arrangement of approved quality and colour. Weighing not less than 88 gms.	each	214.50
36.73	Providing and fixing PTMT towel rail complete with brackets fixed to wooden cleats with CP brass screws with concealed fitting arrangement of approved quality and colour.		
36.73.1	450MM long towel rail with total length of 495mm, 78mm wide and effective height of 88mm, weighing not less than 170gms.	each	604.00
36.73.2	600mm long towel rail with total length of 645mm, width 78mm and effective height of 88mm, weighing not less than 190gms.	each	654.00
36.74	Providing and fixing PTMT shelf 440 mm long, 124 mm width and 36 mm height of approved quality and colour. Weighing not less than 300 gms.	each	711.00

Code No	Description	Unit	Rate Rs.
36.75	Providing and fixing PTMT 15 mm Urinal spreader size 95x69x100 mm with 1/2" BSP thread and shapes. Weighing not less than 60 gms.	each	159.50
36.76	Providing and fixing PTMT urinal cock of approved quality and colour.		
36.76.1	15 mm nominal bore, 80mm long. 42 mm high and 30mm wide with BSP female threads weighing not less than 48 gms.	each	168.50
36.77	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 50x5mm flat of specified shape, projecting 75mm outside the wall surface and fixed on wall with 4nos, 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 30mm x1.6mm galvanised M.S. flats of specified shape and of total length 420mm and shall be fixed with M.S. nuts, bolts, & washers of size 25x6mm, one bolts on each side of the pipe.		
36.77.1	Total bracket length 580mm of approved shape and design (for single, 100mm dia pipe).	each	270.50
36.77.2	Total bracket length 810mm of approved shape and design (for two, 100mm dia pipes).	each	333.00
36.77.3	Total bracket length 1040mm of approved shape and design (for three, 100mm dia pipes).	each	396.00

37.0 ALUMINIUM WORK

Code No	Description	Unit	Rate Rs.
37.1	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, fixed with rawl plugs and screws or with fixing clips, or with expansion hold fasteners including necessary filling up of gaps at junctions, at top, bottom and sides with required PVC/neoprene felt etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, Aluminium snap beading for glazing / panelling, C.P. brass / stainless steel screws, all complete as per architectural drawings and the directions of Engineer-in-charge. (Glazing and panelling to be paid for separately) :		
37.1.1	For fixed portion.		
37.1.1.1	Anodised aluminium (anodised transparent or dyed to required shade according to IS: 1868, Minimum anodic coating of grade AC 15)	kg	447.00
37.1.1.2	Powder coated aluminium (minimum thickness of powder coating 50 micron)	kg	472.50
37.1.1.3	Polyester powder coated aluminium (minimum thickness of polyester powder coating 50 micron)	kg	483.00
37.1.2	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 PVC / neoprene gasket required (Fittings shall be paid for separately).		
37.1.2.1	Anodised aluminium (anodised transparent or dyed to required shade according to IS: 1868, Minimum anodic coating of grade AC 15)	kg	482.50
37.1.2.2	Powder coated aluminium (minimum thickness of powder coating 50 micron)	kg	508.00
37.1.2.3	Polyester powder coated aluminium (minimum thickness of polyester powder coating 50 micron)	kg	521.00
37.2	Providing and fixing 12mm 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 aluminium 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.		
37.2.1	Pre-laminated particle board with decorative lamination on one side and balancing lamination on other side.	sqm	1,084.00

Code No	Description	Unit	Rate Rs.
37.2.2	Pre-laminated particle board with decorative lamination on both sides.	sqm	1,138.00
37.3	Providing and fixing glazing in aluminium door, window, ventilator shutters and partitions etc. with PVC/ 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) :		
37.3.1	With float glass panes of 4.0 mm thickness	sqm	1,041.00
37.3.2	With float glass panes of 5.50 mm thickness	sqm	1,278.00
37.3.3	With float glass panes of 8 mm thickness	sqm	1,630.00
37.4	Providing and fixing double action hydraulic floor spring of approved brand and manufacture IS : 6315 marked, for doors including cost of cutting floors as required, embedding in floors 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.		
37.4.1	With stainless steel cover plate	each	2,031.00
37.4.2	With brass cover plate	each	2,424.00
37.5	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 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	655.00
37.6	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 60mm long and expansion hold fasteners 12.5 mm dia. 40mm long complete as per direction of Engineer -in-charge.	each	94.50
37.7	Providing and fixing machine moulded aluminium covering of approved pattern & design, made out of machine cut aluminium sheet and machine holed for receiving screws, over expansion joints on vertical surfaces/ceilings with full threaded, cadmium plated steel screws 4mm dia. stem, 30mm long and aluminium washers 2mm thick, 15mm 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.		
37.7.1	Anodised aluminium sheet 2.5mm thick (anodised transparent or dyed to required shade according to IS: 1868, Minimum anodic coating of grade AC 15)	kg	587.00

Code No	Description	Unit	Rate Rs.
37.7.2	Powder coated aluminium sheet 2.5mm thick (minimum thickness of powder coating 50 micron)	kg	613.00
37.8	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.		
37.8.1	Upto 5mm depth and 5 mm width	metre	73.30
37.9	Extra for applying additional anodic coating AC 25 instead of AC 15 to aluminium extruded sections.		
37.9.1	For fixed portion	kg	8.55
37.9.2	For shutters of doors, windows & ventilators.	kg	8.55
37.10	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	4,015.00
37.11	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.		
37.11.1	205 X 19 mm	each	264.00
37.11.2	255 X 19 mm	each	302.50
37.11.3	355 X 19 mm	each	345.50
37.11.4	510 X 19 mm	each	682.00
37.11.5	710 X 19 mm	each	1,198.00
37.12	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.		
37.12.1	Anodized (AC 15) aluminium tubular handle bar	each	644.00
37.12.2	Powder coated minimum thickness 50 micron aluminium tubular handle bar.	each	684.00
37.12.3	Polyester powder coated minimum thickness 50 micron aluminium tubular handle bar	each	700.00
37.13	Providing and fixing 100mm brass locks (best make of approved quality) for aluminium doors including necessary cutting and making good etc. complete.	each	559.00
37.14	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 a with extruded built up standard tubular sections of approved make conforming to IS: 733 and IS : 1285 fixed with rawl plugs and stainless steel screws etc.	kg	460.50

Code No	Description	Unit	Rate Rs.
37.15	Providing fixing aluminium casement windows fastener of required length for aluminium windows with necessary screws etc. complete.		
37.15.1	Anodized (AC 15) aluminium	each	72.90
37.15.2	Powder coated minimum thickness 50 micron aluminium.	each	72.90
37.15.3	Polyester powder coated minimum thickness 50 micron aluminium .	each	81.50
37.16	Providing fixing aluminium round shape handle of outer dia 100mm with SS screws etc. Complete as per direction of Engineer-in-charge		
37.16.1	Anodized (AC 15) aluminium	each	97.20
37.16.2	Powder coated minimum thickness 50 micron aluminium	each	101.50
37.16.3	Polyester powder coated minimum thickness 50 micron aluminium .	each	104.50
37.17	Providing and fixing expanded grill made of aluminium as per design and drawing having members section of size 7.5mm x 6.0mm and opening of size 102mm x 99mm to aluminium window/vent with required screws, Y and H aluminium sec (as per drawing) at the ends and middle joints respectively complete in all respect as per direction of engineer in-charge.		
37.17.1	Anodised aluminium (anodised transparent 81 dyed to required shade according to IS : 1868. (Minimum anodic coating of grade AC 15, Anodizing to be got done from approved Anodizer)	sqm	2,043.00
37.17.2	Powder coating aluminium (minimum thickness of powder coating 50 micron)	sqm	2,115.00
37.17.3	Polyester Powder coating aluminium (minimum thickness of powder coating 50 micron)	sqm	2,259.00
37.18	S&f fixed wire gauge of stainless steel of 14 mesh x 24 gauge to the aluminium window by Aluminium beading 20x3mm with suitable screws at not exceeding 150mm distance at all heights with all lead and lift with scaffolding.	sqm	781.00
37.19	Providing & Fixing in position, 1000 mm wide Auto-glow Aluminium extruded strips on auditorium steps as per Design & Instructions & Complete in all aspects. Make Piccolo or Nexus	No	1,473.00
37.20	Providing and Fixing Roller Blinds AMI Make or approved make & shade of 38mm round Aluminium channel with Blackout fabric & tilting with chain (Ball) system with all necessary fixtures and fitting etc. complete. (Sample to be final by Engineer In-charge prior execution of work)	sqm	2,247.00
37.21	Providing and Fixing Vertical Blinds of approved Make and shade of 100mm regular fabric with powder coated aluminium channel with tilting PVC chain & bottom weight plate with all necessary fixtures and fitting etc. complete. (Sample to be final by Engineer In-charge prior execution of work)	sqm	1,073.00

38.0 WATER PROOFING

Code No	Description	Unit	Rate Rs.
38.1	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 22mm to 25mm thick approved and specified rough stone slab over a 25mm 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 levelling course (levelling course to be paid separately). Joints sealed and grouted with cement slurry mixed with water proofing compound . ii) 2nd layer of 25mm 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 10mm to 12mm nominal size spreading @ 8 cudm/sqm thoroughly embedded in the 2nd layer.		
38.1.1	Using rough Kota stone.	sqm	1,171.00
38.2	Providing and laying integral cement based treatment for water proofing on the vertical surface by fixing specified stone slab 22 mm to 25mm thick with cement slurry mixed with water proofing compound conforming to IS:2645 in recommended proportions with a gap of 20mm (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) 20mm thick with neat cement punning mixed with water proofing compound in recommended proportion complete at all levels and as directed by Engineer-in-charge :		
38.2.1	Using rough Kota stone	sqm	1,504.00
38.3	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 20mm 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.	sqm	623.00

Code No	Description	Unit	Rate Rs.
	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.)		
38.4	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 :		
38.4.1	Serrated with central bulb (225mm wide, 8-11mm thick).	metre	391.00
38.4.2	Dumb bell with central bulb (180mm wide, 8mm thick).	metre	337.00
38.4.3	Kickers (320mm wide, 5mm thick).	metre	368.00
38.5	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	413.50
38.6	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 30cm 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	506.00
38.7	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 300mm height including cleaning the surface before treatment. b) Laying brick bats with mortar using broken bricks/brick bats 25 mm to 115mm size with 50% of cement mortar 1:5 (1 cement : 5 coarse sand) admixed with water proofing compound conforming to		

Code No	Description	Unit	Rate Rs.
	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 2.75kg/ 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 3mm 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 :		
38.7.1	With average thickness of 120mm and minimum thickness at khurra as 65 mm.	sqm	1,223.00
38.8	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 6mm and down size or pea-sized gravel spread at 6 cubic diameter per square metre including preparation of surface but excluding grading complete with :		
38.8.1	Bitumen felt (hessian base) type 3 grade I conforming to IS : 1322.	sqm	435.00
38.9	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) conforming to IS : 1322 and sixth and final course of stone grit 6 mm and down size or pea sized gravel spread at 6 cubic dm per sqm including preparation of surface but excluding grading, complete.	sqm	680.00
38.10	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 6mm and down size or pea sized gravel spread at 6cu.dm per sqm including preparation of surface, excluding grading, compete.	sqm	770.00

Code No	Description	Unit	Rate Rs.
38.11	Providing and laying six courses water proofing treatment with bitumen felt over roofs consisting of first, third and fifth courses of blow 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 6mm and down size or pea sized gravel spread at 6 cubic dm per sqm including preparation of surface but excluding grading, complete.	sqm	770.00
38.12	Supplying and applying bituminous solution primer on roof and or wall surface at 0.24 litre per sqm.	sqm	45.90
38.13	Deduct for omitting in water proofing treatment final course of spreading stone grit 6mm down size or pea sized gravel :		
38.13.1	At 6 cudm per sqm.	sqm	8.75
38.13.2	At 8 cudm per sqm.	sqm	11.40
38.14	Grading roof for water proofing treatment with		
38.14.1	Cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	cum	5,630.00
38.14.2	Cement mortar 1:3 (1 cement : 3 coarse sand)	cum	11,000.00
38.14.3	Cement mortar 1:4 (1cement : 4 coarse sand)	cum	10,200.00
38.15	Providing and laying in situ seven course water proofing treatment with APP (Atactic poly-propylene) modified Polymeric membrane over roof consisting of first coat of bitumen primer @ 0.40Kg 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 1.5mm thick of 2.25 Kg/sqm weight consisting of five layers prefabricated with centre core as 20micron HMHDPE film sandwiched on both sides with polymeric mix and the polymeric mix is protected on both side with 20micron HMHDPE film. 7th, the top most layer shall be finished with brick tiles of class designation 100 grouted with cement mortar 1:3 (1cement:3 fine sand) mixed with 2% integral water proofing compound by weight of cement over a 12mm layer of cement mortar 1:3 (1 cement : 3 fine sand) and finished neat which shall be paid for separately.	sqm	598.00
38.16	Providing and laying in situ five course water proofing treatment with APP (Atactic Polypropylene) modified Polymeric membrane over roof consisting of first coat of bitumen primer @ 0.40Kg 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 2.0mm thick of 3.00 Kg/sqm weight consisting of five layers prefabricated with centre core as 100micron HMHDPE film sandwiched on both sides with polymeric mix and the polymeric mix is protected on both side with 20micron HMHDPE film. 5th, the top most layer shall be finished with brick tiles of class designation 100 grouted with cement mortar 1:3 (1 cement : 3 fine sand) mixed with		

Code No	Description	Unit	Rate Rs.
	2% integral water proofing compound by weight of cement over a 12mm layer of cement mortar 1:3 (1 cement : 3 fine sand) and finished neat which shall be paid for separately.	sqm	444.00
38.17	Providing and laying in situ seven course water proofing treatment with APP (Atactic Polypropylene) modified Polymeric membrane over roof consisting of first coat of bitumen primer @ 0.40Kg 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 2.0mm thick of 3.00 Kg/sqm weight consisting of five layers prefabricated with centre core as 100micron HMHDPE film sandwiched on both sides with polymeric mix and the polymeric mix is protected on both side with 20micron HMHDPE film. 7th, the top most layer shall be finished with brick tiles of class designation 100 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 which shall be paid for separately.	sqm	702.00
38.18	Providing and fixing APP (Atactic Polypropylene Polymer) modified prefabricated five layer 2mm thick water proofing membrane, black finished reinforced with glass fibre matt consisting of a coat of bitumen primer for bitumen membrane @ 0.40 ltr/sq. mtr. by the same membrane manufacture of density at 25°C, 0.87 - 0.89 kg/ ltr 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 : Joint strength in longitudinal and transverse direction at 23°C as 350/300 N/ 5cm. 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.		
38.18.1	2mm (for corrugated roof sheets)	sqm	414.00
38.19	Providing and laying APP (Atactic Polypropylene Polymer) modified prefabricated five layer, 3mm thick water proofing membrane, black finished reinforced with glass fibre matt consisting of a coat of bitumen primer for bitumen membrane @ 0.40 ltr/sqm. by the same membrane manufactured of density at 25°C, 0.87 - 0.89 kg/ltr 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 : Joint strength in longitudinal and transverse direction at 23°C as 350/300 N/5cm. 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		

Code No	Description	Unit	Rate Rs.
	manufacturer of membrane :		
38.19.1	3 mm thick	sqm	524.00
38.20	Providing and laying APP (Atactic Polypropylene Polymer) modified prefabricated five layer 3mm thick water proofing membrane, black finished reinforced with non-woven polyester matt consisting of a coat of bitumen primer for bitumen membrane @ 0.40 ltr/sqm. by the same membrane manufacture of density at 25°C, 0.87-0.89 kg/ltr 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 :		
38.20.1	3 mm thick	sqm	556.00
38.21	Extra for covering top of membrane with Geotextile, 120gsm non woven, 100% polyester of thickness 1 to 1.25mm bonded to the membrane with intermittent touch by heating the membrane by Butane Torch as per manufactures recommendation [for Item No. 38.18 to 38.20].	sqm	81.10

39.0 HORTICULTURE

Code No	Description	Unit	Rate Rs.
39.1	Trenching in specified soil upto a depth of 60 cm. including removal and stacking of serviceable materials and then disposal by spreading and neatly levelling within a lead of 50 metres and making up the trenched area to proper levels by filling with earth or earth mixed with sludge or/and farm-yard manure before and after flooding with water (excluding cost of imported earth and sludge or farm-yard manure).	cum	356.50
39.2	Preparation of mounds of various size and shape by available excavated/surplus/earth in layers not exceeding 20 cm in depth, breaking clods, watering of each layer, dressing etc.lead upto 50 meters and lift upto 1.5 m as per direction of officers in-charge.	cum	391.00
39.3	Supplying and stacking good earth at site of work. Note: 1) Loading, unloading and carriage to be paid extra as per actual lead. 2) Earth measured in stacks will be reduced by 20% foe payment	cum	324.50
39.4	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	698.00
39.5	Supplying and stacking of well decayed cow dung manure at site.	cum	698.00
39.6	Supply at site of work/ store- deoiled neem cake duly packed in used gunny bags.	quintal	475.50
39.7	Supplying sludge duly stacked at site/ store.	cum	125.50
39.8	Rough dressing the trenched ground including breaking of clods.	sqm	1.35
39.9	Uprooting weeds from the trenched area after 10 to 15 days of its flooding with water including disposal of uprooted vegetation.	sqm	4.50
39.10	Fine dressing the ground.	sqm	3.45
39.11	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	47.80
39.12	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. (The good earth shall be paid separately)		
39.12.1	In rows 15 cm apart in either direction	sqm	37.30
39.12.2	In rows 7.5 cm apart in either direction	sqm	64.50
39.12.3	In rows 30 cm apart in either direction	sqm	22.90
39.13	Labour Charges for Grassing with 'Carpet' grass (selection no. 1)/'Doobs' grass including watering and maintenance of the lawn for 30 days or more till the grass forms a thick lawn free from weeds		

Code No	Description	Unit	Rate Rs.
	and fit for moving including supplying good earth if needed.(The good earth shall be paid separately)		
39.13.1	In rows 5 cm apart in either direction	sqm	15.20
39.13.2	With grass Turf	sqm	11.60
39.14	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 growth after 10 to 15 days and then fine dressing for planting new grass, including disposal of all rubbish with all leads and lifts.	sqm	56.90
39.15	Filling mixture of earth and sludge farm-yard manure in the desired proportion in trenches, flooding with water and levelling (cost of supplying earth and sludge or farm yard manure and labour for mixing not included in this rate).	sqm	17.10
39.16	Flooding the ground with water including making kiaries and dismantling the same.	sqm	1.70
39.17	Turfing slopes of new banks with rough grassing including preparation of ground by loosening soil with kassi, flooding with water, rough dressing, fine dressing, supplying and spreading farm yard manure at the rate of 0.18 cum per 100 sqm and supplying and planting doob grass roots at 15 cm apart, complete.		
39.17.1	Of Old banks	sqm	66.00
39.17.2	Of New banks	sqm	59.20
39.18	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	88.10
39.19	Maintenance of lawns or Turfing of slopes (rough grassing) for a period of one year including watering etc.	sqm	150.00
39.20	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	98.70
39.21	Maintenance of Lawns with Fine Grassing for the First Year	sqm	144.50
39.22	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	367.50
39.23	Maintenance of Hedge for one year	metre	296.50
39.24	Planting Flowering Plants and Shrubs in Central Verge.	km	79,200.00
39.25	Maintenance of Flowering Plants and Shrubs in Central Verge for one Year.	km	3,18,300.00

Code No	Description	Unit	Rate Rs.
39.26	Maintenance of Shrubs - Complete maintenance of shrub for 12 months including weeding, hoeing, watering, pruning application of good earth, manure, insecticides, fungicides & fertilizers , security of plants disposal of garden rubbish from the premises to the approved municipal dumping ground replacing casualty of plants(occurred due to any reason) by healthy plants.	per sqm per year	317.50
39.27	Maintenance of Plants (other than Road side Plantation) -Complete maintenance of plants with watering for 12 months including weeding, hoeing, watering, pruning application of good earth, manure, insecticides, fungicides & fertilizers , security of plants disposal of garden rubbish from the premises to the approved municipal dumping ground replacing casualty of plants occurred due to any reason) by healthy plants.	per sqm per year	320.00
39.28	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	24.20
39.29	Digging holes in all kinds of soil and refilling the same with the excavated earth mixed with well decayed farm yard manure (cost of well decayed farm yard manure to be paid separately).		
39.29.1	Hole 1.2 m dia and 1.2 m deep	each	866.00
39.29.2	Hole 0.9 m dia and 0.9 m deep	each	363.50
39.29.3	Hole 0.6 m dia and 0.6 m deep	each	113.00
39.29.4	Holes 0.45 m dia, and 0.45 m deep	each	64.10
39.30	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	1,682.00
39.31	Half brick circular tree guard, in 2nd class brick, internal diameter 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	2,038.00
39.32	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	40.70
39.33	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	1,026.00

Code No	Description	Unit	Rate Rs.
39.34	Providing and fixing of RCC pre cast tree guard consisting of four panels of size 1800mm (Height) X 600mm (Width) X 35mm (thickness); Size of opening: 100mm X 100mm. All the panels shall be manufactured with monolithic legs of size 50 x 35 mm; the legs of the panels shall be 0.5 m below ground level. All the four Panels shall have a space for display of Name etc. preferably at middle level. RCC panels to be manufactured with M-30 grade of concrete using vibro-compaction process using jointless FRP moulds so as to achieve shuttering finish. RCC panels are to be suitably reinforced to promote long use and to prevent damage during handling, transportation & erection as per drawing & specifications.	each	2,099.00
39.35	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	12,350.00
39.36	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	2,960.00
39.37	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	3,980.00
39.38	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. 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	2,695.00
39.39	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. 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	4,220.00

Code No	Description	Unit	Rate Rs.
39.40	Planting trees as compensatory afforestation at the rate of 290 trees per hectare at a spacing of 6 m by grubbing and levelling 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	1,77,700.00
39.41	Supply and planting following in poly bags / earthen pots well branched, well established & free from disease of 300 mm min. height ground covers at site in 0.3 m dia holes, 0.3 m deep dug in the ground, mixing the soil with decayed farm yard/sludge manure, backfilling the hole watering etc as required.		
39.41.1	Wedelia trilobata (SunFlower Family)	sqm	265.50
39.41.2	Alternanthera green (Parrot Leaf)	sqm	449.50
39.41.3	Iresine herbstii (Blood Leaf)	sqm	265.50
39.41.4	Ophiopogon Black (Lily Turf, Mondograss)	sqm	286.50
39.41.5	Asparagus myerii (Fox Tail)	sqm	411.00
39.41.6	Lantana sellowiana	sqm	226.50
39.41.7	Rhoeo spathacea 'Compacta' (Oyster, Boat Lily)	sqm	145.50
39.41.8	Golden duranta	sqm	286.50
39.41.9	Pennisetum setaceum (Fountain Grass)	sqm	274.00
39.42	Supply and planting following in poly bags / earthen pots well branched, well established & free from disease of 900 mm min. height plants at site in 0.60 m dia holes, 1 m deep dug in the ground, mixing the soil with decayed farm yard/sludge manure, backfilling the hole watering etc as required.		
39.42.1	Ficus panda	each	681.00
39.42.2	Tecoma capensis (Ratanjot)	each	499.50
39.42.3	Clerodendron inermii (Choti Aari)	each	499.50
39.42.4	Tabernaemontana variegated (Chandni)	each	499.50
39.42.5	Hamelia patens (Firebush, Thal Kamal)	each	463.50
39.42.6	Hibiscus variegated (Guddal)	each	478.00
39.43	Supply and planting following in poly bags / earthen pots well branched, well established & free from disease of 600 mm min. height shrubs at site in 0.45 m dia holes, 0.45 m deep dug in the ground, mixing the soil with decayed farm yard/sludge manure, backfilling the hole watering etc as required.		
39.43.1	Rhaphis excelsa with 3-4 suckers (Lady Palm)	each	1,251.00
39.43.2	Furcaria with 10-12 leaves (cactus)	each	1,459.00
39.43.3	Agave with 10-12 leaves (Kamal Cactus)	each	1,675.00
39.43.4	Phoenix sylvestris (Date Palm)	each	2,297.00

Code No	Description	Unit	Rate Rs.
39.44	Supply and planting following species best quality container grown healthy trees of 2 mt. min. height, well established & free from disease at site in 0.90 m dia holes, 1 m deep dug in the ground, mixing the soil with decayed farm yard/sludge manure, backfilling the hole watering etc as required.		
39.44.1	Plumeria alba (Champa)	each	1,439.00
39.44.2	Gulmohar(Delonix regia)	each	1,247.00
39.44.3	Neem(Azadirachta indica)	each	1,048.00
39.44.4	Jacaranda mimosifolia (Neelli Gulmohar)	each	1,048.00
39.44.5	Bauhinia blakeana (Arckid)	each	1,077.00
39.44.6	Erythrina variegata (Lantern Tree)	each	1,048.00
39.44.7	Bottle Brush(Callistemon Lanciolatous)	each	1,105.00
39.44.8	Mangifera indica (Mango)	each	1,131.00
39.44.9	Yucca	each	1,439.00
39.44.10	Bignonia Venusta	each	1,014.00
39.44.11	Quis quallis indica (Madhu Malti)	each	1,000.00
39.44.12	Morning glory (Ipomea)	each	1,014.00
39.44.13	Vernonium (Parla Bel)	each	1,014.00
39.44.14	Bougain villea	each	1,014.00
39.44.15	Green fucaria	Each	800.00
39.44.16	Table palm	Each	800.00
39.44.17	Euphorbla millii	Each	400.00
39.44.18	Acacia senegal	Each	1,150.00
39.44.19	Moringa concanensis	Each	550.00
39.44.20	Salvadora persica	Each	1,500.00
39.44.21	Topihari golden & bottle brush	Each	700.00
39.44.22	Tinospora cordifolia	Each	350.00
39.44.23	Pergularia daemia	Each	350.00
39.44.24	Crown -of -thorns	Each	400.00
39.45	Supply and planting following species best quality container grown healthy trees of 3 mt. min. height, well established & free from disease at site in 1.20 m dia holes, 1.20 m deep dug in the ground, mixing the soil with decayed farm yard/sludge manure, backfilling the hole watering etc as required.		
39.45.1	Plumeria alba (Champa) 3 M height minimum	each	1,609.00
39.45.2	Gulmohar(Delonix regia)	each	1,522.00
39.45.3	Neem(Azadirachta indica)	each	1,522.00

Code No	Description	Unit	Rate Rs.
39.45.4	Jacaranda mimosifolia (Neelli Gulmohar)	each	1,522.00
39.45.5	Bauhinia blakeana (Arckid)	each	1,502.00
39.45.6	Erythrina variegata (Lantern Tree)	each	2,380.00
39.45.7	Bottle Brush(Callistemon Lanciolatous)	each	1,522.00
39.45.8	Mangifera indica (Mango)	each	1,513.00
39.45.9	Yucca	each	2,173.00
39.46	Providing & laying 1500 Microns thick 6 m wide HDPE Geo membrane, over the synthetic clay liner having Thickness 1.5mm, Density .94g/cm³, Tensile Strength at yield 23 Nmm/ width and at break 42 Nmm/ width, Elongation at Yield 13%, Elongation at Break 700%, Tear Resistance 175 N, Puncture Resistance 490 N, Carbon Black Content 2.5 and Carbon Black dispersion at Satisfactory level.	sqm	520.00
39.47	Providing & laying synthetic clay liner in excavated trench.	sqm	440.00
39.48	Supplying, erecting and fixing in position specified precast RCC bench made of RCC grade M-30 consisting of 2 Nos. "L" shaped base support of thickness 100 mm back height 1000mm, front height 450 mm, base width 420mm and 5 Nos. RCC planks of size of 1500x100 x 50 mm and 1 Nos RCC planks of 150x200x50mm including joining all parts with galvanised nuts and bolts of suitable size. All bolts to be sealed after assembly with nice finish and appearance and level complete in all respect as per direction of engineer in-charge. Every bench should have a manufacturer's logo of appropriate size Engraved at suitable place.	each	8,860.00
39.49	Supply and fixing different type of steel pre-fabricated garden bench/ jhula/ slides and other children play items made of steel duly painted as per approved design and specifications by engineer in-charge made of MS pipe, Flats, rectangular hollow section or other steel sections duly welded and or nut bolted where ever required, rubbing and buffing welded joints to make safe for use of children and painted in approved pattern complete as required.	kg	103.00
39.50	Supply of different sized pots at site store including loading unloading & transportation etc. complete.		
39.50.1	Cement pot / Plastic pot 300 mm size	each	171.50
39.50.2	Cement pot / Plastic pot 350 mm size	each	247.50
39.50.3	Cement pot / Plastic pot 375 mm size	each	302.50
39.50.4	Cement pot / Plastic pot 450 mm size	each	531.00
39.50.5	Cement pot / Plastic pot 525 mm size	each	936.00
39.51	Supply of different sized earthen pots at site/store including loading unloading & transportation etc. complete		
39.51.1	Earthen pot 150 mm size	each	20.90
39.51.2	Earthen pot 225 mm size	each	34.10

Code No	Description	Unit	Rate Rs.
39.51.3	Earthen pot 300 mm size	each	49.50
39.51.4	Earthen pot 350 mm size	each	143.00
39.51.5	Earthen pot 225 mm size(Kundi shape)	each	34.10
39.51.6	Earthen pot 300 mm size(Kundi shape)	each	51.70
39.51.7	Earthen pot 350 mm size(Kundi shape)	each	143.00
39.52	Supply of different sized lawn mower including transportation etc. as store complete.		
39.52.1	300 mm size Hand Lawn Mower(Roller Type)	each	4,940.00
39.52.2	350 mm size Hand Lawn Mower(Roller Type)	each	5,490.00
39.52.3	300 mm Electric Lawn Mower	each	20,600.00
39.52.4	350 mm Electric Lawn Mower	each	22,900.00
39.52.5	400 mm Electric Lawn Mower	each	25,200.00
39.52.6	450 mm Electric Lawn Mower	each	28,600.00
39.52.7	500 mm Electric Lawn Mower	each	32,000.00
39.52.8	Electric Lawn Mower sarfex 16 EL	each	34,300.00
39.52.9	Electric Lawn Mower sarfex 18 EL	each	41,200.00
39.52.10	Electric Lawn Mower sarfex 21 EL	each	45,800.00
39.53	Supply of flower Garlands & Flower petal's including transportation at site.(Complete)		
39.53.1	Merigold Garland A Class (Big flowers) 2 feet long	each	85.80
39.53.2	Merigold Garland B Class (Small flowers) 1.5 feet long	each	57.20
39.53.3	Green Garland (Ashok Leaf) 2 feet long	each	17.60
39.53.4	Rose Garland 1.5 feet long	each	143.00
39.53.5	Jalusi Garland(VIP A Class) Double fold	each	572.00
39.53.6	Jalusi Garland(VIP B Class) Single fold	each	457.50
39.53.7	Mogra Garland 1.5 feet long	each	143.00
39.53.8	Kunj Garland 1.0 feet long	each	171.50
39.53.9	Rose petal's	kg	457.50
39.53.10	Merigold petal's	kg	286.00
39.53.11	Crisanthimum petal's	kg	343.00
39.53.12	Chandni flower	kg	343.00
39.53.13	Mogra Flower	kg	515.00
39.53.14	Kunj Flower	kg	543.00
39.54	Supply of Cut Flower at site including transportation Complete		
39.54.1	Tata Rose	each	17.60

Code No	Description	Unit	Rate Rs.
39.54.2	Carnation	each	20.90
39.54.3	Gladioli	each	23.10
39.54.4	Tube rose single	each	13.20
39.54.5	Tube rose double	each	17.60
39.54.6	Illum Asiatic	each	85.80
39.54.7	Illum Oriental	each	143.00
39.54.8	An thorium	each	85.80
39.54.9	Arched Mix	each	46.20
39.54.10	Zarbera	each	23.10
39.54.11	Dasy	each	28.60
39.54.12	Chrysanthemum	each	23.10
39.54.13	Candytuft	each	4.40
39.54.14	Aster	each	6.60
39.54.15	Lotus	each	46.20
39.55	Supply of Chemical Fertilizers at store in bags weighing 50 kg. each including loading unloading & transporation etc.		
39.55.1	Urea	bag	307.00
39.55.2	DAP	bag	1,032.00
39.55.3	Super Phosphate	bag	325.50
39.55.4	Murrate of Photash	bag	489.50
39.55.5	Straw Meal	bag	978.00
39.56	Supply of Insecticides & Pesticides at store in dust / liquid form complete.		
39.56.1	Methyl Parathion 2%. 50 kg bag	bag	543.00
39.56.2	Karathion (Liquid). 250ml packing	each	543.00
39.56.3	Metacid (Liquid).	Litre	401.50
39.56.4	Roger (Liquid).	Litre	304.50
39.56.5	Cholorophyriphos 20 Ec.	Litre	353.00
39.56.6	Bauiston 50 %. 100 grams packing	each	109.00
39.57	Supply of Graden Tools & Implements at store complete :		
39.57.1	Spade weighing 1.5 kg. with Handle.	each	135.50
39.57.2	Khurpa weighing 500 gm with Handle.	each	75.90
39.57.3	Gurvana weighing 800 gm. with Handle	each	86.90
39.57.4	Hedge Shear (kamani Steel)	each	543.00
39.57.5	Secateur	each	218.00

Code No	Description	Unit	Rate Rs.
39.57.6	Garden Rack with Handle.	each	135.50
39.57.7	Pick - Axe.	each	131.00
39.58	Supply of P.V.C. hose pipe of different sizes at store including transportation etc complete :		
39.58.1	50 mm dia	metre	131.00
39.58.2	38 m dia	metre	109.00
39.58.3	25 mm dia	metre	64.90
39.58.4	17 mm dia	metre	53.90
39.58.5	12.5 mm dia	metre	41.80
39.59	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 in-charge. T&P and all required materials shall be arranged by the contractor and nothing extra shall be paid on this account. NOTE: Girth of tree shall be measured at a height of 1m above ground level.		
39.59.1	Girth of trees upto 50cm.	each	4,395.00
39.59.2	Girth of trees beyond 50cm and upto 90cm.	each	7,020.00
39.59.3	Girth of trees beyond 90cm and upto 150cm.	each	12,900.00
39.59.4	Girth of trees beyond 150cm.	each	29,600.00

40.0 HERITAGE WORK

Code No	Description	Unit	Rate Rs.
40.1	Excavation carefully by manual means up to 2.00 mtr. Depth without damaging the buried architectural parts of the monument/structure and stacking all the intact parts at proper place for reuse at the time of restoration work as per direction of Engineer in-charge with in 50mtr.lead.	cum	371.00
40.2	Lime Sand Mortar 1:2 (1 Lime putty : 2 Sand) including preparation of mortar by traditional practice (by grinding)	cum	2,900.00
40.3	Lime Surkhi Mortar 1:2 (1 Lime putty : 2 Surkhi) including preparation of mortar by traditional practice (by grinding)	cum	2,064.00
40.4	Cément Sand Mortar 1:3 (1 Cément : 3 Sand)	cum	5,220.00
40.5	P & L Lime Surkhi Plaster lime surkhi mortar 1:2 (1 Lime : 2 Surkhi) including preparation of mortar by traditional practice (by grinding) in specified course for base coarse and subsequent course & Loi, tamping, beating, curing till the shrinkage cracks are disappear. The work is to be done with all lead as the work is of restoration nature as per Jaipur practice including adding gur, methi & gugal on old walls including removal of all old loose and decade plaster, each coat to be done after 3 days of previous coat.		
40.5.1	33 mm thick in four coats	sqm	415.00
40.5.2	45 mm thick in four coats	sqm	448.50
40.5.3	75 mm thick in seven coats	sqm	706.00
40.6	P & L Lime Sand Plaster with lime sand mortar 1:2 (1 Lime : 2 Sand) including preparation of mortar by traditional practice (by grinding) in specified course for base coarse and subsequent course & Loi, tamping, beating, till the shrinkage cracks are disappear. The work is done with all leads as the work is of restoration nature as per Jaipur practice including adding gur, methi & gugal on old walls including removal of all old loose and decade plaster, each coat to be done after 3 days of previous coat.		
40.6.1	25 mm thick in three coats	sqm	325.00
40.6.2	33 mm thick in four coats	sqm	438.50
40.6.3	45 mm thick in four coats	sqm	482.00
40.6.4	75 mm thick in seven coats	sqm	766.00
40.7	Making Mehrab's, Arches, pillars, highly decorative creepers, flower of small sizes etc.in lime Surkhi plaster (1:2) as per B248old traditional practices (Arches, Mehrab's) in three coats for base course and subsequent course and Loi tamping, beating till the shrinkage cracks are disappear than making ornamental flowering/design etc. The work is to done with all leads and lifts as per work of restoration nature as per Jaipur practice.	sqm	883.00

Code No	Description	Unit	Rate Rs.
40.8	Add extra over item no. 40.5 to 40.6 for Lime plaster work done over Spherical or groin ceiling/ladao ceiling of domes.	%	80.00
40.9	Add extra over item no. 40.5 to 40.6 for Lime plaster work done over flat ceiling.	%	20.00
40.10	Add extra over item no. 40.5 to 40.6 for Lime plaster work done over curved/circular masonry work (curved or circular surface.)	%	25.00
40.11	Deduct for plaster work over item no. 40.5 to 40.6 if lime kara is to be done on plaster as finishing coat.	%	5.00
40.12	Flush and ruled pointing in Cement Mortar 1:3 over joints of dressed stone cladding, chajjas, jali etc. with cement, sand & colour including racking the joints as per traditional practice including all leads and lifts.	sqm	193.00
40.13	Flush and ruled pointing over joints of dressed stone cladding, chajjas, jali etc. including racking the joints as per traditional practice including all leads and lifts with grinded mortar of lime putty and surkhi mixed in 1:2 ratio and gur, methi, gugal etc. are to be mixed as per traditional practice.	sqm	214.00
40.14	Flush and ruled pointing over joints of dressed stone cladding, chajjas, jali etc. including racking the joints as per traditional practice including all leads and lifts with grinded mortar of lime putty and fine sand mixed in 1:2 ratio and gur, methi, gugal etc. are to be mixed as per traditional practice	sqm	231.00
40.15	Araish plaster (as per Jaipur practice) 1:2 (1 lime : 2 Zikki) on lime plaster or plane back ground including preparation of lime for 6 months by slaking of lime with curd and changing the water every week. The Kara plaster of not more than 6 mm thick is to be left the maximum of 3 months to appear the shrinkage & temperature cracks. Over the Kara plaster 2mm layer of grinded lime putty is to be done and is to be rubbed Gently by Akik stone. Then adding Khoppra & Ghee and inserting the design of colour boarder all round.	sqm	3,485.00
40.16	Coloured plain Araish work 1:2 (1 lime : 2 zikki) on lime plaster or plane back ground including preparation of lime for 6 months by slaking of lime with curd and changing the water every week. The Kara plaster of not more than 6mm thick is to be left the maximum of 3 months to appear the shrinkage & temperature cracks. Over the Kara plaster 2mm layer of grinded lime putty is to be done and is to be rubbed Gently by Akik stone. Then adding Khoppra & Ghee and inserting the design of colour boarder all round including desired colour stone pigment to match the existing colour.	sqm	3,845.00
40.17	Khamira Colour Washing as per old traditional practice to prepare the Khamira the lime should be slaked at least for 7-10 days and regularly it should be stirred by adding cured, Gugal, for non-synthetic colour adding gum (babool gum) as per specification. Then applying prepared solution on walls three to four thin coats as desired finishing.	sqm	190.00

Code No	Description	Unit	Rate Rs.
40.18	Stucco work in lime, Surkhi, mortar (1:2) as per existing design work/ traditional practices by skilled craftsman, the stucco work should be done as per restoration nature, the mortar should be prepared by grinding mill adding gur, methi & gugal.. The thickness varies from 50 mm to 100mm as per the design (minimum rectangular surface area to be measured).	sqm	5,260.00
40.19	Providing & applying Lime kara 1:2 (1lime cream : 2 Zikki powder) grinding mortar with grinding mill/manually on lime base, on ceiling and all flat surface in two coats. First coat applying 3 mm to 4 mm thick and curing properly at least 7 days, second finishing coat done after 7 days of previous coat as per traditional practice.(thickness not more than 6 mm.)	sqm	703.00
40.20	Add extra for Lime Kara work (on lime plaster base) other than flat surface as per traditional practice with all lead & lift with fine finishing complete in all respect on :		
40.20.1	Domical surface/spherical/domical ceiling.	sqm	176.00
40.20.2	Curved surface.	sqm	70.30
40.21	Providing & applying "Lime Kara on stone work only" having carving stone work /decorative stone work (stone pillars, stone arches, railing etc.) as per traditional practice, as per specifications with grinded mortar in two coats with finishing complete in all respect.	sqm	1,392.00
40.22	Tuman masonry by brick bats/ stones in grinded mortar of Lime Surkhi mortar 1:2/lime sand mortar 1:2 including racking and removal of all old loose plaster and cleaning the wall surface properly as per direction of Engineer In-charge.	sqm	503.00
40.23	Making Kangura on top of the wall as per Jaipur traditional practice with tile brick bats/stones in grinded Lime Surkhi mortar 1:2 thickness of kangoora 15cm & height 45cm, finishing with lime Surkhi mortar 1:2 complete in all respect up to 10.00 meter from ground level including all scaffolding, lead & lift.	metre	1,755.00
40.24	Removing of old lime plaster up to 75 mm thick in patches with height up to 4.5 m. Disposal up to 100 meter lead	sqm	103.00
40.25	Scraping & Removing of white wash/ distemper/algli etc. from plain plaster & surfaces gently with care to keep intact the old designs.	sqm	56.30
40.26	Scraping & Removing of white wash/ distemper/oil paint /algli etc. from lime plaster highly decorative, ornamental and stucco work with at most care by using fine sand paper under the close supervision to keep intact the old designs.	sqm	175.50
40.27	Vaulted roofing (Ladao) with grinded lime sand/Surkhi mortar prepared as per traditional practice including centering shuttering (Dhoola) the layer of lime mortar and brick bats/stone should 25 cm thick and each layer should be done after 1 week complete with top finishing.	sqm sqm	9,080.00

Code No	Description	Unit	Rate Rs.
40.28	Providing and fixing stone Patties (slab) on roofing including removing broken patties carefully and replacement new slab with Kharanja, ralthal and lime dhar as per traditional practice. Span about 3.30 mtr. To 5.50 mtr. 100 mm to 150 mm thick of approved stone.	sqm	5,880.00
40.29	Providing and laying lime Dhar on roofing as per Rajasthan, Jaipur traditional practice with lime, Surkhi, old lime powder, brick aggregate 12 to 20mm (1:2:2:2) and using Methi, Gur, Hemp, Belgiri etc. including beating and temping 100 to 150 mm thick as per specifications. Including dismantling of old deteriorated roofing	sqm	1,778.00
40.30	Painting on Stucco work with stone colours including base coat of khameera as per traditional practice (minimum rectangular to be measured).	sqm	958.00
40.31	Rubbing / removal of lime plaster on stone works by abrasive method		
40.31.1	Up to 1" thick layer	sqm	591.00
40.31.2	above 1" thick layer	sqm	894.00
40.32	Cleaning of Araish by Tee pole	sqm	1,171.00
40.33	Washing Marble Stucco by Tee pole	sqm	828.00
40.34	De-vegetation from monument by removing bushes, trees including complete uprooting from the wall & roofs/structures carefully including suitable chemical treatment to roots to avoid further growth including disposal of rubbish with in 50 mtr. Lead as per direction of Engineer in-charge.	sqm	437.00
40.35	Providing and fixing double leaf door wooden shutters made of Ist grade wood as per traditional design (Deshi pattern) planks thickness 40mm and width of Binies, Andheri 50mm and 35mm, including Adwa etc. with fittings (nails, sankal, kunda, cheri, handle and patti etc.) as per existing matching/ as per approved design with moulding/ carving complete in all respect :		
40.35.1	M.P teak wood grade Ist	sqm	8,710.00
40.35.2	Sheesham wood grade Ist	sqm	7,270.00
40.35.3	Babool wood grade Ist	sqm	4,665.00
40.36	Providing and fixing double leaf Window wooden shutters made of Ist grade wood as per traditional design (Deshi pattern) planks thickness 25mm and width of Binies, Andheri 35mm and 25mm, including Adwa etc. with fittings (nails, sankal, kunda, cheri, handle and patti etc.) as per existing matching/ as per approved design with moulding/ carving complete in all respect : Sheesham wood grade Ist.		
40.36.1	M.P teak wood grade Ist	sqm	7,640.00
40.36.2	Sheesham wood grade Ist	sqm	6,750.00
40.36.3	Babool wood grade Ist	sqm	5,140.00

Code No	Description	Unit	Rate Rs.
40.37	Add extra for brass fittings inplace of M.S./ G.I fittings over item no. 20.35 & item no. 40.36		
40.37.1	For doors (deshi pattern double leaf shutters)	sqm	446.50
40.37.2	For windows (deshi pattern double leaf window shutters)	sqm	421.00
40.38	Providing and applying breathable, non-reactive, transparent, antifungal, UV resistant, alkaline stable, impregnable silane-siloxane or equivalent based water repellent coating on exposed absorbing substrate like stone surface/ concrete surface/ mineral painted surface / exposed brick surface / lime surface in two or more coats to give uniform finish surface in all heights, horizontal, inclined, vertical and on ceiling complete in all respect and making it complete water-proof as per direction of the Engineer-in-charge.	sqm	232.00
40.39	Providing and applying ceilent adhesive to existing cracks by suitable silicon or equivalent ceilent complete in all respect and making it complete water-proof as per direction of the Engineer-in-charge.	metre	361.00
40.40	To expose the original surface of stone art / Chiselling work / Fresco paintings /tempera painting carefully by removing upper coatings of whitewash /paint / distemper / plastering / wooden and metal frames etc. without any harm to the original hidden art work & further strengthen the original art work with a suitable coating of preservative and making it water tight as per direction of Engineer-In-charge.	sqm	801.00
40.41	Water proofing with consolidation of basic substrata, making it complete water proof with Protekta series of compounds or equivalent as per manufacturers specifications and as per direction of engineer in-charge	sqm	559.00
40.42	Water proofing with consolidation of sand stone, making it complete water proof with Protekta series of compounds or equivalent as per manufacturers specifications and as per direction of engineer in-charge	sqm	385.00
40.43	Chemical treatment of sand stone to clean from yellowness, blackness, algal growth, dust, dirt oily accretions, lime & gypsum deposits, filling of cracks/ joining of gaps/ pointing, strengthening of weak stone, removal of salt effect and application of preservative coating to prevent algal growth and make the stone water proof.	sqm	949.00
40.44	Chemical treatment of marble stone to clean from yellowness, blackness, algal growth, dust, dirt oily accretions, lime & gypsum deposits, filling of cracks/ joining of gaps/ pointing, strengthening of weak stone, removal of salt effect and application of preservative coating to prevent algal growth and make the stone water proof.	sqm	1,021.00
40.45	Chemical treatment of arais surface to clean from yellowness, blackness, algal growth, dust, dirt oily accretions, lime & gypsum deposits, filling of gaps & cracks and application of preservative coating to prevent algal growth and make the surface water proof.	sqm	664.00

Code No	Description	Unit	Rate Rs.
40.46	Conservation of plain araish in monuments by cleaning of the painted surface from dust, dirt, greasy & oily all types of accretions with the help of suitable chemicals, removal of cracks and holes, consolidation of plaster, filling of the lacunae in the plaster, treatment of salt effect, restoration of the lost portions and providing a preservative coating.	sqm	2,220.00
40.47	Conservation of coloured araish with designs in fresco technique in monuments by cleaning of the painted surface from dust, dirt, greasy & oily accretions with the help of suitable chemicals, removal of cracks and holes, consolidation of plaster, filling of the lacunae in the plaster, treatment of salt effect, retouching of the lost portions and providing a preservative coating.	sqm	2,805.00
40.48	Conservation of fresco paintings in monuments by cleaning of the painted surface from all types of stains, dust, dirt, greasy & oily accretions etc. with the help of suitable chemicals, removal of cracks, consolidation of flaking paint layer and plaster, filling of the lacunae in the plaster, treatment of salt effect and altered paint layer retouching of the lost portions and providing a preservative coating.	sqm	7,280.00
40.49	Conservation of oil paintings & portraits in monuments by cleaning of the painted surface from all types of stains, dust, dirt, greasy & oily accretions etc. with the help of suitable chemicals, removal of cracks and holes, consolidation of flaking paint layer and plaster, filling of the lacunae in the plaster, treatment of salt effect, retouching of the lost portions and providing a preservative coating.	sqm	8,490.00
40.50	Exposition of the original surface of fresco paintings/tempra paintings by careful removal of upper coating of whitewash/paint/distemper/plaster, araish etc. without any harm to the original hidden art work, conservation of the paintings & strengthen the original art work with the preservative coating and making it water proof as per direction of the Chemist-in-charge.	sqm	9,210.00
40.51	Conservation of intricate carving work in Plaster of Paris by cleaning the surface from dust, dirt, greasy oily and all types of accretions etc. with the help of suitable chemicals, filling of lacunae, removal of cracks and holes, restoration of lost portions with the same designs & materials and providing a preservative coating.	sqm	2,320.00
40.52	Restoration of Jamia glass work by cleaning the surface with the help of chemicals, replacement of the broken/ lost glasses with the same type, filling of POP along the edges according to the designs and preserve (rates are upto 10% damages on wall excluding gold work)		
40.52.1	On wall	sqm	22,600.00
40.52.2	On Gardana	sqm	24,900.00
40.52.3	On Ceiling.	sqm	27,100.00
40.53	Conservation of oil paintings and portraits on glass by clearing with the help of suitable chemicals, retouching of the lost portions, providing mica sheet behind the glass and filling of POP along the edges according to the original designs preserve.	sqm	16,300.00

Code No	Description	Unit	Rate Rs.
40.54	Restoration of wooden doors with polychrome art in oil colour by cleaning the paintings with the help of suitable chemicals , consolidation of the wood and flecking paint layer, filling of the gaps and cracks in the wood, retouching of the paintings by the same technique and design wherever required with the help of same material (originally used) and provide of a preservative coating.	sqm	15,650.00
40.55	Control of infestation (Bio-deterioration) from termites, insects, rodents, micro-organism etc. in museums and monuments.	sqm	9.30
40.56	Removal , providing and re fixing of stone inverted lamcha (lattoo) with stone base and moulded as per existing design with fine finishing in grinded lime mortar 1:2 i/c all lead and lift complete in all respect. dia - 200 mm and Height 250mm	each	1,650.00
40.57	Removal & fixing of stone base moulded as per existing design with fine finishing fixing in grinded lime mortar (1:2) i/c all lead a lift complete in all respect.- Extra for carving (Pan Patti) 100 mm thick to 150 mm thick	metre	5,200.00
40.58	Removal/Clean Ornamental Stone with Diamond/Surgical tool Kits of the original surface of stone carving & traditional Mewar work of Biradari including Todies ,lamcha ,etc by careful removal of upper coating of lime Khara /whitewash/paint/distemper/plaster, araish etc. without any harm to the original hidden art work, conservation of the traditional & strengthen the original art work with the preservative coating and making it water proof as per direction of the Conservation.	sqm	2,980.00
40.59	Providing and fixing fine dressed sand stone/approved stone Traditional work as per existing matching geometrical design including moulding work with fine finishing, fixing with thambli by proper adhesive and white cement with pigment including making groove etc. complete in all respect.	sqm	9,500.00
40.60	Lime concrete terracing on roofs with 25mm nominal size brick aggregate and 50% lime mortar 1:1:1:1 (1lime putty: 1coarse sand:1surkhi:1khakha/brick jeera) rammed and finished with gur and belgiri treatment complete including rounding of junctions with parapet wall shall be well in traditional lime chakki / grinding mill concrete shall be beating tamping for seven days including curing all lift and lead complete.	cum	1,000.00
40.61	Propping with steel to support the leaned structure (roof and wall) using pipes, channels, angles, girders , wooden wages to prevent further leaning/ collapse ,mode of measurement(1.the plan area of the propping shall be for payment purpose. 2. the payment will be made once only for execution of all item such work.)	sqm	550.00
40.62	Removal of existing damaged/ deteriorated parts of Alcoves (ornamental stone mandir), providing & refixing of 'Alcoves' of approved sand stone with dressing complete as per existing design/ pattern/ approved design, fixing with lime mortar 1:2 with proper brass pinning and fixing including all lead and lift complete in all respect as per direction of engineer in-charge.	each	40,000.00

Code No	Description	Unit	Rate Rs.
40.63	Providing new /restoration of decorative sandstone columns as per the original details found on site of size around 2.1 to 2.5 metres in height & (square/ rectangular upto 200 mm x 400mm). The damaged portions of the original column to be carefully dismantled without damaging the adjacent areas, & replacing the same with new detail of the same size & design. Sample of the terra cotta column to be shown to the Engineer in-charge for approvals before procuring & fixing the same on site. Item to include all necessary anchoring details, scaffolding if required etc. complete. Mode of Measurement: Item to be paid each restored/new column for using plain	each	22,250.00
40.64	Add extra for Decorative/Ornamental Stone Carving Work with fine finish making motifs, flowers, geometrical designs etc.as per direction of Engineer in-Incharge.	sqm	1,805.50
40.65	Providing and fixing fine dressed sand stone " Gardana of sand Stone " on top of the wall at varandha as per existing matching , fixing in grinded lime surkhi mortar 1:2 including pointing in cream and stone powder 1:1 with an admixture of pigment to match the shade of stone complete in all respect. above 100 mm to 150 mm thick plain with fine dressing.	metre	3,100.00
40.66	Chiselling with surgical tools from existing Niches / Mehrab surface 75-100 mm depth with care on top of the Gate both side and making plain surface with Grove to fix the New Carved Stone as per existing matching with all respects	sqm	4,410.00
40.67	Restoration & Retrofitting of Broken Stone slab or piece without removing the stone from its original place and realign the cracked & disturbed stone with the help of manual or mechanical jacking and support on both side of the crack up to 1 meter or as per the site condition. The crack stone should be carefully realigned by expert stone craftsmen considering its structural loading and place of installation within the structure and without damaging the adjacent areas. The stone crack further stitched by SS rod/clamp by cutting the groove on both side of the crack and after stitching finishing the groove by filling it matching stone dust and adhesive. The stone crack portion to be shown to the Architect/Engineer in-charge for approvals before executing the same on site and should be completed in all respect. Mode of Measurement: Item to be paid for the length of clamp stitching groove and Cost of SS clamp to be paid extra as per BOQ.	metre	5,000.00
40.68	Providing and fixing fine dressed Nimbaheda sand stone " Ornamental Todies" with ornamentation on both side & including lamcha as per existing matching stone with carving & moulding work with fine finishing , fixing in grinded lime surkhi mortar 1:2 including scaffolding, lead & lift complete in all respect.SIZE (0.72X0.55 X 0.20)	each	17,900.00

Code No	Description	Unit	Rate Rs.
40.69	Removal , providing and fixing of stone pipe holder 150mm thick (Nimbahera) Stone (for railing , flag and canopy pipes ect)moulded as per existing design with fine finishing fixing in grinded lime mortar 1:2 i/c all lead and lift complete in all respect. as per direction of engineering in-charge / architect complete	each	1,650.00
40.70	Removal , providing and re fixing of stone dasa moulded as per existing design with fine finishing fixing in grinded lime mortar 1:2 i/c all lead and lift complete in all respect. extra for carving (pan patti)-100mm thick	metre	5,200.00
40.71	Providing & fixing bamboo base deck at water surface level in lake to provide supporting platform for working and to support wall scaffolding above water level. The deck will include bamboo frame work under water. Horizontal MS frame and MS sheet covering to stop damage malba and other material to fall in water and maintaining in serviceable condition for the required duration. The work includes provision of floating pontoon to carry material in and out of water, the bamboo base deck shall be stiffened with bracings, runners, connectors, with nearby structures etc. wherever location with essential safety features for the workmen etc. complete as per directions of engineer in-charge	sqm	876.00
40.72	Providing and fixing fine dressed Nimbaheda sand stone "Ornamental Todies" with ornamentation on both side & including lamcha as per existing matching stone with carving & moulding work with fine finishing , fixing in grinded lime surkhi mortar 1:2 including scaffolding, lead & lift complete in all respect.SIZE (0.72X0.55 X 0.20)	each	17,900.00

41.0 SOLID WASTE MANAGEMENT

Code No	Description	Unit	Rate Rs.
41.1	Door to door collection of segregated solid waste from source in segregated manner (wet and dry separately) and transportation of collected wet and dry solid waste separately to the relevant processing site up to 15km from municipal boundary & monitoring through IoT based hardware integration, to monitor the real-time progress of the waste collection in terms of percentage route covered, along with establishment of Centralized Control Room including of service for mobile application for citizens and web portal & mobile application for Authority during the tenure of contract period as per the direction of Engineer-in-charge, including fuel charges, remuneration of manpower (driver & Helper), maintenance cost for each vehicle etc.		
41.1.1	Vehicles provided by Local Body		
41.1.1.1	Population upto 20,000	per HH per month	142.00
41.1.1.2	Population between 20,000 to 50,000	per HH per month	122.00
41.1.1.3	Population between 50,000 to 1,00,000	per HH per month	115.00
41.1.1.4	Population between 1,00,000 to 5,00,000	per HH per month	107.00
41.1.1.5	Population more than 5,00,000	per HH per month	106.00
41.1.2	Vehicles provided by the concessionaire		
41.1.2.1	Population upto 20,000	per HH per month	189.00
41.1.2.2	Population between 20,000 to 50,000	per HH per month	161.00
41.1.2.3	Population between 50,000 to 1,00,000	per HH per month	154.00
41.1.2.4	Population between 1,00,000 to 5,00,000	per HH per month	145.00
41.1.2.5	Population more than 5,00,000	per HH per month	144.00
41.2	Bio-mining of Old Municipal waste/ legacy waste including excavation of old dumped waste and make windrow of legacy waste thereafter stabilization of the waste through bio-remediation using bio-culture, screening of the stabilized waste to recover all valuable resources (like organic fines, bricks, stones, plastics, metals, clothes, rags etc.) followed by its sustainable management		

Code No	Description	Unit	Rate Rs.
	through recycling, co-processing and disposal of inerts, good earth, other segregated material and Transportation of RDF upto 100 KM as per the guidelines of Central Pollution Control Board, 2019 and amended time to time	cum of legacy waste	470.00

42.0 TRAFFIC SIGNALS

Code No	Description	Unit	Rate Rs.
42.1	P & F 4.5 mm thick M.S. traffic post with outer dia. 114.3mm, medium class and confirming to IS:1239(P-I) 5Mtr. Long (0.8 Mtr. Below ground level) suitable for fiber cap and M.S. base plate 300 mm x 300 mm x 6 mm including excavation of pit and grouting with P.C.C. of ratio 1:3:6 from bottom of the pole and up to 30 cm. above the ground level and 40 cm. dia. Including painting with rubber paint below ground level and red oxide on exposed surface and finishing with traffic yellow enamel paint in two coats complete as required.	Each	4,326.00
42.2	P & F solid state blinker caution unit weather proof box and pole clips with flashing rate 40-60 flashes per minute.	Each	2,716.00
42.3	P&FM.S. Cantilever swaged pole suitable for mounting signal head assembly of overall height 9.0 Mtr. (1.5 meter. Below ground level) with M.S. based plate of size 400mm x 400mm x 7mm including excavation of pit and grouting with P.C.C. of Ratio 1:3:6 from the bottom of the pole and up to 50cm above the ground level of 40 cm dia. Including painting with rubber coat below ground level and red oxide on exposed surface and finishing with two coats of traffic yellow enamel paint complete in all respect as required. The pole shall confirm following specifications as per IS:(1239 P-I) Top, middle, bottom length 1.80 Mtr, 3.60 Mtr., 6.0 Mtr. Respectively, outer dia. 88.9 mm, 114.3 mm, 139.7 mm respectively, thickness 4.05 mm, 4.5mm, respectively.	Each	16,045.00
42.4	S.I.T.C. of programmable three digit digital countdown timer with 5mm dia. Red colored LEDs of high intensity (visible clearly at day time) of reputed make with digit size 150mm x 300mm approx. and quantity of LEDs be approx. 800 no.s including interconnection with traffic signal controller and housing the LED assembly in sheet metal box of size approx. 750mm x 550mm with detachable pole arms clamps etc. as required.	Each	11,886.00
42.5	S.I.T.C. of following colour retrofit LED matrices traffic light of modular size 300 mm dia, Covered with front clear acrylic sheet and back with aluminum body, InP/InGaN based 5mm dia. Coloured LEDs of ultra bright. Super intensity (visible clearly at day time up to distance 300-600 meter, viewing angle of 30 degree). The unit shall be suitable for working on A.C. supply (160-240 V) and life cycle approx. 10 yrs with power consumption below 24 watts, suitable for fast switching.		
42.5.1	Red/Amber Round (unit of 200-220 Nos LEDs)	Each	4,517.00
42.5.2	Green Arrow (Unit of 120-130 Nos LEDs)	Each	6,537.00
42.5.3	Red/Green pedestrian(Unit of 75- 80Nos LEDs)	Each	2,912.00
42.5.4	Add extra for SITC of M.S. housing for LED matrices	Each	1,415.00

Code No	Description	Unit	Rate Rs.
42.6	All in all maintenance to keep up of complete traffic signal system in working order at a crossing including controller, posts, head assembly, bulbs/LED reflector, material (Consumables / Software of OEM of traffic signal to be used only) T&P etc. as required.		
42.6.1	With solid-state controller & GLS Signal Heads	P. Month	1,782.00
42.6.2	With solid-state controller & LED Signal Heads	P. Month	772.00
42.6.3	With microprocessor controller & GLS Signal Heads	P. Month	2,306.00
42.6.4	With UTCS controller & LED Signal Heads	P. Month	7,132.00
42.6.5	With microprocessor controller & controller & LED Signal Heads	P. Month	1,010.00
42.6.6	Only solid state controller	P. Month	1,260.00
42.6.7	Programmable Three Digit Countdown timer Big/ Small	P. Month	535.00
42.7	All in all maintenance to keep up blinker signal in working order at a crossing including controller, posts, head assembly, bulbs / LED reflector and material , T&P as required.	P. Month	535.00
42.8	All in all maintenance to keep up Crystal control solar road warning blinker signal with solar panel in working order at a crossing including controller, posts, head assembly, bulbs/ LED reflector and material , T&P as required.	P. Month	654.00
42.9	All in all maintenance to keep up each electric traffic bollard in working order including material, T&P as required.	Month	149.00
42.10	Refixing of standard traffic post including repair and transportation (within municipal limit) as required including excavation of pit and grouting with P.C.C. of ratio 1:3:6 from the bottom of pole (0.80 meter. Below ground level) and up to 30 cm above the ground level and 40 cm dia. Including painting with rubber coat below ground level as required.	Each	1,010.00
42.11	Refixing of cantilever traffic post including repair and transportation (with municipal limit) as required. Including excavation of pit and grouting with P.C.C. of ratio. 1:3:6 from the bottom of pole (1.40 meter. Below ground level) and up to 50 cm above the ground level and 40 cm dia. Including painting with rubber coat below ground level as required.	Each	2,972.00
42.12	Removing of exiting damaged standard traffic post(incl. Signal head assemble) and dismantling original foundation and refilling the same with earth and transportation of pole and signal head to store (within municipal limit) as required.	Each	416.00
42.13	Removing of exiting damaged cantilever traffic post (incl. Signal head) and dismantling original foundation and refilling the same with earth and transportation of pole and signal head to store (within municipal limit) as required.	Each	1,485.00
42.14	Removing of exiting damaged cantilever traffic post (incl. Signal head) and dismantling original foundation and refilling the same with earth and transportation of pole and signal head to store (within municipal limit) as required.	Each	475.00

Code No	Description	Unit	Rate Rs.
42.15	Fixing of cantilever traffic post at same site including repair and transportation (with municipal limit) as required. Including excavation of pit and grouting with P.C.C of ratio 1:3:6 from the bottom of pole (1.40 meter. Below ground level) and up to 50 cm above the ground level and 40 cm dia. Including painting with rubber coat below ground level as required.	Each	1,712.00
42.16	Painting of exiting traffic post/ cantilever pole/ signal head assembly/ controller box including removing of old rusted surface and applying red oxide finishing two coats of enamel paints as required.		
42.16.1	Traffic post	Each	268.00
42.16.2	Cantilever pole	Each	803.00
42.16.3	Controller box	Each	223.00
42.16.4	Signal head assembly 300mm dia.	Each	90.00
42.16.5	Signal head assembly 200mm dia.	Each	65.00
42.17	P & F of unbreakable polycarbonate colored lens of following size and colour.		
42.17.1	300mm, colored	Each	416.00
42.17.2	300mm, white	Each	178.00
42.18	P & F of pole cap on existing pole complete in all respect		
42.18.1	M.S. pole cap	Each	238.00
42.18.2	Fiber pole cap	Each	268.00
42.19	SITC of pelican controller for safety of pedestrians crossing the road at the push of button pedestrian stop vehicles flying on road and green period is 3 to 30 seconds. Pedestrian flashing green/ red pelican.	Each	23,771.00
42.20	Supply of following spare card		
42.20.1	Power supply/ Blinker/ Monitor/ Safety trip unit	Each	8,320.00
42.20.2	Blinker card	Each	788.00
42.20.3	Microprocessor card	Each	17,829.00
42.20.4	Power supply card	Each	8,914.00
42.20.5	Keyboard card	Each	11,886.00
42.20.6	DB card	Each	5,943.00
42.21	SITC of Crystal control Road warning Blinker system with solar panel module with 300mm LED Module of minimum 190 Nos., Blinker Units, Charging circuit, suitable SMF Rechargeable Battery (12 Volt.), including wiring, connections etc. complete in all respect.	Each	14,857.00
42.22	SITC of Micro controller/ microprocessor base Pelican Traffic Controller with built in CPU and memory, solid state switching, capable of 8 signal plans and various modes of operation (actuated, automatic and flashing) with weather proof, vandal proof, dust &		

Code No	Description	Unit	Rate Rs.
	splash proof powder coated steel cabinet, push button switch, etc. complete in all respect.	Each	14,857.00
42.23	SITC of 4.5 mm thick M.S traffic post with outer dia. 114.3mm, medium class and confirming to IS:1239 (P-1) 6 Mtr. Long (0.8 Mtr. Below ground level) suitable for mounting the signal head assembly with weather proof fiber cap and M.S base plate 300 mm x 6 mm including excavation of pit and grounding with P.C.C of ratio 1:3:6 from bottom of the pole and up to 30 cm above the ground level and 40 cm dia. Including painting with rubber paint below ground level and red oxide on exposed surface and finishing with traffic yellow enamel paint two coats complete as required.	Each	5,764.00
42.24	SITC of Programmable Three digit Digital Countdown timer with 5 mm dia. Red colored LED of High intensity (visible clearly at day time) digit PCB size 302mm x215mm approx and quantity of LED be approx 256 Nos. and housing the LED assembly in sheet metal box etc.	Each	6,655.00
42.25	SITC of Road separating indicator, Yellow LED flashing light + back lit white arrow.		
42.25.1	200mm, dia product size 320x202x 1063mm	Each	12,124.00
42.25.2	300mm, dia product size 480x230x 1440mm	Each	16,640.00
42.26	Supply & Fixing of Spare cards for UTCS microprocessor controller		
42.26.1	Microprocessor C.P.U Card	Each	25,256.00
42.26.2	Microprocessor Lamp Driver Card	Each	20,205.00
42.26.3	Microprocessor Loop Detector Card	Each	15,154.00
42.26.4	Microprocessor Vehicle Loop Detector Card	Each	7,132.00
42.26.5	Microprocessor mother board Card-Bottom	Each	7,132.00
42.26.6	Microprocessor mother board Card-Top	Each	7,132.00
42.27	SITC of SMPS input 100-250 V 1.6A AC 50/60 Hz or DC 120-300V-1Amp output + 5V/8V +12V/0.7A-12V/0.7 Amp Maximum output power 40V connection cooling 55 Watt with 30CFM forced Air LPT 43 Model	Each	7,577.00
42.28	SITC of crystal Control Solar Road warning Blinker system with Solar panel module, without LED module Blinker units charging circuit, suitable SMF Rechargeable Battery (12Volt) complete.	Each	11,315.00
42.29	SITC of solar panel Module 12 Volt 18 Watt with M.S Angle/Flat mounting Structure suitable to mount in the pole	Each	4,160.00
42.30	SITC of solar panel Module 12 Volt 55 Walt with M.S Angle/Flat mounting Structure suitable to mount in the pole	Each	12,718.00
42.31	SITC of solar panel Module 12 Volt 75 Walt with M.S Angle/Flat mounting Structure suitable to mount in the pole	Each	17,234.00
42.32	SITC of Cutting back up surface up to 2 Mtr. Depth by digging by Bogie including all layers of crust for laying pipe line etc. and making good to original condition (excluding cost bitumen)	Mtr.	428.00

Code No	Description	Unit	Rate Rs.
42.33	P/Laying P.V.C/XLPE insulated & P.V.C sheathed cable of 1.1 KV grade with Copper conductor of IS: 1554 P-I/IS: 7098 P-I in ground as per IS: 1255 including excavation of 30cm x 75cm size trench, 25cm thick under layer of sand, IInd class bricks covering, refilling earth, compaction of earth, making necessary connection, testing etc. as required of size.		
42.33.1	2.5sq mm. Armored 4 core	Mtr.	240.00
42.33.2	1.5 Sq.mm Armoured 6 Core	Mtr.	369.00
42.33.3	1.5 Sq.mm Armoured 12 Core	Mtr.	493.00
42.34	Supplying and making one end termination with heavy duty single compression brass gland SIBG type, heavy duty Copper lugs duly crimped with crimping tool, PVC tape etc. for following size of armored PVC insulated & PVC sheathed/ XLPE aluminum conductor cable of 1100 Volt grade as required of size.		
42.34.1	4 X 2.5 sq.mm.	Each	67.00
42.35	P & F in position frame made out of M.S. angle (riveted or welded) finished with two coat of red oxide and enamel paint including cutting, welding, holes etc. of following sizes as required.		
42.35.1	40mm X 40mm X 5mm	Mtr.	225.00
42.36	Pipe Ear thing as per IS: 3043 with perforated 3.0 Mtr. Long, 40 mm dia. 'B' class G.I. Pipe including all accessories like nut, bolts, reducer, nipple, wire meshed funnel, and C.C. finished chamber covered with hinged type with locking arrangement C.I. Cover, C.I. Frame of size 300mm x 300 mm and embodying the pipe complete with alternate layers salt and coke/charcoal, testing of earth resistance as required.	Set	1,961.00
42.37	Plate Earthling as per IS:3043 with copper Earth plate of size 600mm x 600 mm x 3.0mm by embodying 3 to 4 mtr. Below the ground level with 25 mm dia. G.I. 'B' class watering Pipe including all accessories like nut, bolts, reducer, nipple, wire meshed funnel, and C.C. finished chamber covered with hinged type with locking arrangement C.I. Cover, C.I. Frame of size 300mm x 300mm complete with alternate layers of salt and coke/charcoal, testing of earth resistance as required.	Set	8,534.00
42.38	S & Laying following size 'B' Class G.I. Pipe confirming to IS: 1239 P-1 (1990) with accessories for laying earth conductor/ strip/ cable in ground/ surface/ recess as required.		
42.38.1	50 mm dia.	Mtr	426.00
42.38.2	80 mm dia.	Mtr	658.00
42.38.3	100mm dia.	Mtr	793.00
42.38.4	125 mm dia.	Mtr	1,100.00

Code No	Description	Unit	Rate Rs.
42.39	S.I.T.C of Programmable Two digit Digital Countdown timer with 5 mm dia. Red & Green colored LED of High intensity (visible clearly at day time) digit PCB size 300 mm Round Dia.	Each	10,459.00
42.40	S.I.T.C of following colour retrofit LED matrices traffic light of modular size 300 mm dia, Covered with front clear acrylic sheet and back with aluminum body, InP/InGaN based 5mm dia. Coloured LEDs of ultra bright. Super intensity (visible clearly at day time up to distance 300-600 meter, viewing angle of 30 degree). The unit is suitable for working on A.C. supply (160-240 V) and life cycle approx. 10 yrs with power consumption below 12 watts, suitable for fast switching.		
42.40.1	Static Red man & walking Green man (two in one)	Each	9,152.00
42.40.2	Two in one (Red & Green for Cycles)	Each	7,845.00
42.41	Supply, Installation, Testing & Commissioning of 7.5M height galvanized polygonal signal pole with dia 350mm A/F, 4mm thickness with 6M cross arm with dia 90mm A/F, thickness 4mm fabricated from HT steel confirming to BS EN 10025, S-355 JO with 520x16mm base plate.	Each	1,72,340.00
42.42	SITC of microprocessor based logic type automatic electronic controller conforming to IS:7537 for traffic signals complete with electronic timer , control board, blinker unit for night operation and slip lane, day time peak hour operation, The controller shall have 12 Signal phases, 25 Signal plan, 24 cycle plan, 24 Signal split/ cycle, 4 Day plan, 32 Cycle switching/ day, 20 Selective Day plan/ annum, 16 Conflicting condition, 28 Signal Line, Solid-state relay switching, RS 422 Communication interphase, Manual override facility, up gradable vehicle actuated system, also have method of traffic control with fixed time isolated intersection and cable less/ cabled interlinking for synchronised operation. The controller unit shall be totally enclosed in 1.6 mm thick metal box including making connection.	Each	1,18,617.00
42.42.1	Add extra for upgrading the existing microprocessor based controller to vehicle actuated microprocessor controller.	Each	43,738.00
42.43	P & F one aspect signal head assembly of MS consisting of signal head optical system with unbreakable polycarbonate colored lens, aluminium reflector, 100 watt GLS brass holder with bulb ,300 mm dia. Signal vision with required supports for overhead mounting on pole etc. complete in all respect including wiring with 1.5 sq.mm (IS:694) copper conductor and connection complete in all respect confirming to IS:7537 (with left/ right/ straight/ or any other marking stencils if required.)	Each	1,937.00
42.44	P , Laying & Jointing R.C.C. class NP-2 (Non pressure) pipes (IS:458) with collars. Jointed with cement mortar of ratio 1:2 including excavation etc. as required.		
42.44.1	100 mm dia internal.	Mtr.	147.00
42.44.2	150 mm dia internal.	Mtr.	167.00

Code No	Description	Unit	Rate Rs.
42.45	P & F of bollard having Traffic Caution for road divider made of unbreakable polycarbonate sheet placed on suitable CC platform complete with 4 number FTL fitting (Philips make), Fitting protected with frame and wire mesh complete in all respect.	Each	7,488.00
42.46	Shifting of standard traffic post at same site including repair and transportation (within municipal limit) as required. Including excavation of pit and grouting with P.C.C. of ratio 1:3:6 from the bottom of pole (0.80 meter. Below ground level) and up to 30 cm above the ground level and 40 cm dia. including painting with rubber coat below ground level as required.	Each	772.00
42.47	P & F of unbreakable polycarbonate colored lens of following size and colour.		
42.47.1	200 mm, colored	Each	313.00
42.47.2	200 mm, white	Each	124.00
42.48	Supply of spare card		
42.48.1	Controller card	Each	3,939.00
42.48.2	Master card/ LLD card	Each	1,248.00
42.48.3	Phase cards up to 3 phase	Each	1,248.00
42.48.4	Relay card	Each	788.00
42.49	Supplying and drawing PVC insulated & sheathed solid/ stranded copper conductor multi core control cable ISI marked (IS:1554) of 1.1 kV grade of approved make as per chapter E11,in existing surface or recessed conduit/ casing capping including making connections etc. as required.		
42.49.1	1.5 sq. mm. unarmoured		
42.49.1.1	2 core	Each	40.00
42.49.1.2	4 core	Each	57.00
42.49.1.3	6 core	Each	82.00
42.49.1.4	8 core	Each	101.00
42.49.1.5	10 core	Each	121.00
42.49.1.6	12 core	Each	141.00
42.49.2	1.5 sq. mm. armoured		
42.49.2.1	2 core	Each	66.00
42.49.2.2	4 core	Each	87.00
42.49.2.3	6 core	Each	115.00
42.49.2.4	8 core	Each	136.00
42.49.2.5	10 core	Each	163.00
42.49.2.6	12 core	Each	167.00
42.49.3	2.5 sq. mm. unarmoured		

Code No	Description	Unit	Rate Rs.
42.49.3.1	2 core	Each	53.00
42.49.3.2	4 core	Each	84.00
42.49.3.3	6 core	Each	121.00
42.49.3.4	8 core	Each	151.00
42.49.3.5	10 core	Each	181.00
42.49.3.6	12 core	Each	215.00
42.49.4	2.5 sq. mm. armoured		
42.49.4.1	2 core	Each	83.00
42.49.4.2	4 core	Each	117.00
42.49.4.3	6 core	Each	156.00
42.49.4.4	8 core	Each	193.00
42.49.4.5	10 core	Each	214.00
42.49.4.6	12 core	Each	243.00
42.50	SITC of following colour retrofit LED matrices traffic light of modular size 300mm Dia. Covered with front clear acrylic sheet and back with aluminum body, InP / InGaN based 5 mm Dia coloured LEDs of ultra bright, super intensity (visible clearly at day time up to distance 300 to 600 Meter, viewing angle of 23 degree). The unit shall be suitable for working on AC supply (160-240 Volt) and life cycle minimum 10 years with power consumption maximum 12 watts, suitable for fast switching		
42.50.1	RED / Amber Round Unit of 190 Nos. LEDs	Each	3,993.00
42.50.2	Green Round Unit of 66 Nos. LEDs	Each	4,992.00
42.51	SITC Traffic am X-Stream Integrated I.P. Based Camera for vehicle presence detection & video use for traffic monitoring, use can configuration view and control and system both side and remotely having following key Functionalities: (1) All in one Sensor (Camera Detector, (2) MPEG-4 Image Compression (3) Real Time Verification & Monitoring (4) Up to 24 "Virtual" Detection Zones.		
42.51.1	Camera Only.	Each	1,35,440.00
42.51.2	Module only	Each	73,520.00
42.52	SITC of Surveyor VFT (IP Dome) A PTZ Camera with 360 degree rotation and digital zoom facility, which is also a transmitter. It can be connected straight to the net work, video transmission via IP Coaxial, Fiber Optic or twisted Pair (UTP) in ceiling or pendant configurations for indoor or outdoor installation with Ex view 23 x or 35 x high resolution color on day/night camera with Vandal proof and pressurized housings and privacy masking. (Make Vicom or equivalent)	Each	2,50,784.00

Code No	Description	Unit	Rate Rs.
42.53	S.I.T.C of WiTraC 32Bit Microcontroller based Solar Power / PWM Automatic electronic controller, conforming to IEC- 60068(ERTL) for Traffic Signals complete with electronic timer, G.P.S. based control board, blinker unit for night operation and slip lane, day time peak hours operation, The controller shall have 32 signal phase, Signal Switching and feedback on wireless medium, 24 Cycle Plan, 32 Signal Split Plan, 24 Cycle switching/days, 20 selective days/annum, 4 – Week Plan, 16 optically isolated solid state lamp driving outputs, 16 optically isolated vehicle detector, 20 X 4 LED backlit LCD and 5 X 4 keypad 8 Auxiliary I/O interface, USB, CAN, R.S.232 communication and 4 hurry call inter phase, manual override facility up gradable vehicle actuated system, also have method of traffic control with fixed time isolated intersection and cable less/ cabled interlinking for synchronized operation, including additional features such as (a) facility to enter traffic volume,(b) Provision for 3 to 5 second Red/ Green flash before starting of stage, (c) Red Light violation data from all the approaches and (d) Using External Ethernet adapter to USB for using 3G dongle router for networking and making connections. (Technology developed by CDAC and Manufactured by Shakti or equivalent)		
42.53.1	Master Controller (Size L -607 X W- 298 X D-176 mm.) o 12 V DC $\pm$ 10% 3.6 W	Each	1,29,056.00
42.53.2	Slave Controller (L - 400 X W - 298 X D - 176 mm) o 12 V DC $\pm$ 10% 3.0 W	Each	75,159.00

43.0 INSTRUMENTATION

Code No	Description	Unit	Rate Rs.
43.1	Providing, installation, testing and commissioning of followings instruments as per CBCP/SPCB guidelines.		
43.1.1	TSS Analyser with Transmitter and Sensor Measuring Range: 0-10 mg/L, Accuracy: $\leq 3\%$, Resolution: ≤ 0.15 mg/L, Operating Temperature: 0- 40°C, Cleaning: Automatic Self-Cleaning using compressed Air.	No.	3,09,833.00
43.1.2	pH Analyser: Transmitter : Range: 0-14 pH, Power Supply 230 VAC, Input: One Digital Sensor, Output: 4-20mA HART, IP66 Protection / Tx protection cover required / Sensor Range 0-14 pH , able to transmit digital signal to transmitter, calibration data can be transferred to Transmitter , process temp: 65 deg cen/ flow through tee MOC SS.	Set	1,08,441.00
43.1.3	Chlorine Analyser : Transmitter : Range: 0.05 to 20 ppm, Power Supply 230 VAC, Input: 2 Digital Sensors - one for chlorine and second for pH, Output: 4-20mA HART, IP66/67 Protection / Tx protection cover required / Sensor Range 0-14 pH , able to transmit digital signal to transmitter, calibration data can be transferred to Transmitter , process temp: 65 deg cen/ Sensor range:0.05 to 20 mg/l.	Set	3,09,833.00
43.1.4	NH3 Analyser with Transmitter and Sensor Range: 0 - 100 ppm, Repeatability: $\pm 5\%$ of measured vaue, Protection class: IP 68, Accuracy: $\pm 5\%$ of measured value, Output: 4 - 20 mA DC (Isolated)	No.	8,21,374.00
43.1.5	NO3 Analyser with Transmitter and Sensor Range: 0 - 1000 mg/L, Repeatability: $\pm 5\%$ of measured vaue, Protection class: IP 68, Accuracy: $\pm 5\%$ of measured value, Output: 4 - 20 mA DC (Isolated)	No.	8,21,374.00
43.2	Providing, installation, testing and commissioning of Mixed Liquid Suspended Solid (MLSS) Analyser Range: 0.001 - 4000 NTU, Repeatability: $\pm 5\%$ of measured vaue, Protection class: IP 68, Accuracy: $\pm 1\%$ of measured value, Output: 4 - 20 mA DC (Isolated)	No.	3,29,016.00
43.3	Providing, installation, testing and commissioning of Turbidity Analyser : Range - Selective 0 to 4000 NTU, Accuracy: $\pm 2\%$ of reading or ± 0.02 NTU; Compliance to US EPA180.1, With inbuilt transmitter with 4-20 mA output , Relay contacts & Modbus communication.	No.	2,05,652.00
43.4	Providing, installation, testing and commissioning of Sludge level meter with Transmitter and Sensor Range: 0 - 10 m, Accuracy: $\pm 5\%$, Output: 4 - 20 mA	No.	7,84,781.00
43.5	Providing, installation, testing and commissioning of Total Organic Carbon (TOC) Meter, Measuring Range: 0-25 mg/L, Accuracy: 3%, Resolution: ≤ 0.15 mg/L, Cleaning: Automatic Self-Cleaning using compressed Air	No.	3,92,390.00

Code No	Description	Unit	Rate Rs.
43.6	Providing, installation, testing and commissioning of ORP Meter with Transmitter and Sensor, Measuring Range: -2000mV to 2000mV, Accuracy: ≤ 0.01 units of V, Resolution: ≤ 0.01 units of V, Response Time: ≤ 60 seconds, Operating Temperature: 0- 40°C, Repeatability: ± 0.05	No.	1,08,441.00
43.7	Providing, Installation, Testing and Commissioning of Pressure Transmitter : Range: 0-10 Bar / Power Supply: 24 V DC / Output: 4-20 mA with HART / Diaphragm: SS316L / Process Connection: 1/2 "NPT (M) / Accuracy: 0.15% Protection: IP67	No.	23,238.00
43.8	Providing, Installation, Testing and Commissioning of Differential Pressure transmitter sensor material and wetted parts MOC SS316, 4-20mA DC (Isolated) output, IP 65 of IS 13947 Part I, Overall Accuracy $\pm 0.5\%$ of measured value, Range: Adjustable over full span	No.	81,438.00
43.9	Providing, installation, testing and commissioning of Diaphragm Type Pressure Gauges Dial size 150 mm glycerin filled shatterproof glass, Over range protection: 125% of maximum pressure, Material of sensor and other wetted parts: SS type 316, Housing material: Die cast aluminum	No.	3,098.00
43.10	Providing, installation, testing and commissioning of Diaphragm type Pressure Switches Sensing Element: Bellows / Diaphragm, Material of sensor and other wetted parts: SS type 316, Housing: Die cast aluminum, Switch type: Microswitch, Repeatability: $\pm 1\%$ of span, Switch Contacts: 2 NO + 2 NC	No.	7,848.00
43.11	Providing, installation, testing and commissioning of Ultrasonic Differential Level Transmitter : Principle : Time of Flight / Sensor MOC PP / Process Connection 1 1/2 inch BSP or 2 inch BSP Threaded type / Power Supply: 24 V DC / Output: 4- 20mA / Display: Integral display for programming and Display Reading / IP 66 and as per direction of Engineer	No.	2,24,846.00
43.12	Providing, Installation, Testing and Commissioning of Ultrasonic Level Transmitter : Principle : Time of Flight / Sensor MOC PP / Power Supply: 24 V DC / Output: 4- 20mA / Display: Integral display for programming and Display Reading / IP 66/ Accuracy $\pm 1\%$		
43.12.1	0 - 5 Mtr.	No.	74,741.00
43.12.2	0 - 8 Mtr.	No.	1,08,441.00
43.13	Providing, installation, testing and commissioning of Level Switch (Conductivity) Conductivity Probes, Probe insulation: Teflon, Probe head protection class: IP 65 of IS 13947 Part I, Probe head housing material: Aluminum		
43.13.1	Rigid for lengths of up to 3 Mtr.	No.	37,370.00
43.13.2	Rigid for lengths from 3 - 10 Mtr.	No.	61,139.00

Code No	Description	Unit	Rate Rs.
43.14	Providing, installation, testing and commissioning of Capacitance Level Transmitter for tank /sump level Accuracy: ± 1.5 % of span, Probe type: Rod, Probe material: SS type 316, Weather Protection Class: IP 65 of IS 13947 Part I, Output: 4-20 mA DC (Isolated), Material of wetted parts: SS 316, Probe insulation material: Teflon, Stilling pipe: SS type 316 with perforations	No.	84,083.00
43.15	Providing, installation, testing and commissioning of Air Flow Transmitter (Annubar) Accuracy of measuring loop: $\pm 1\%$ of full scale, Temperature compensation: required, Weather protection: IP 65 of IS 13947 Part I, Output: 4-20 mA DC (Isolated), Annubar tube: SS 316, Air temperature range: -40°C to 85°C	No.	4,67,131.00
43.16	Providing, Installation, Testing and Commissioning of Electromagnetic Flow Meter : Liner: Polyurethane or Hard Rubber / Electrode MOC: SS316L or CS /Housing : Die Cast Aluminium or CS / Power Supply: 90-230 V AC / Output: 4-20mA with HART / Sensor Cable : 10 mt / Flow Tube or Sensor housing protection IP68 / Process Flange : SS316 / Display : 3 1/2 LCD Display / Cable Connection : 1/2"NPT /Accuracy : 0.5%		
43.16.1	50 mm	No.	1,08,187.00
43.16.2	65 mm	No.	1,11,551.00
43.16.3	80 mm	No.	1,15,849.00
43.16.4	100 mm	No.	1,25,789.00
43.16.5	150 mm	No.	1,47,426.00
43.16.6	200 mm	No.	1,72,278.00
43.16.7	250 mm	No.	2,53,746.00
43.16.8	300 mm	No.	2,92,237.00
43.16.9	350 mm	No.	3,66,335.00
43.16.10	400 mm	No.	3,94,851.00
43.16.11	450 mm	No.	4,10,618.00
43.16.12	500 mm	No.	4,26,385.00
43.16.13	600 mm	No.	4,69,298.00
43.16.14	700 mm	No.	5,91,866.00
43.16.15	800 mm	No.	6,95,241.00
43.16.16	900 mm	No.	7,80,244.00
43.16.17	1000 mm	No.	8,94,586.00
43.16.18	1200 mm	No.	15,72,003.00
43.17	Providing, Installation, Testing and Commissioning of Ultrasonic Open Channel Flow Meter (Upto 5 metre Head rise): Principle : Time of Flight / Sensor MOC PP / Power Supply: 24 V DC / Output: 4-20mA / Display: Integral display for programming and Display Reading / IP 66/ Accuracy $\pm 1\%$	No.	1,64,521.00

Code No	Description	Unit	Rate Rs.
43.18	Providing, Installation, Testing and Commissioning of Ultrasonic Flow Meter Clamp ON Type: Principle: Time of Flight / Type: Clamp on / Protection : IP68 / Power Supply: 230 V AC / Output : 4-20 mA with HART / Accuracy: 2 - 3%		
43.18.1	100-2000 mm	No.	4,59,657.00
43.18.2	100-4000 mm	No.	7,43,674.00
43.19	Providing, Installation, Testing and Commissioning of Ultrasonic Flow Meter Insertion Type: Principle: Time of Flight / Type: Insertion / Protection : IP68 / Power Supply: 230 V AC / Output : 4-20 mA with HART / Accuracy: 2 - 3%		
43.19.1	200 - 1000 mm	No.	7,70,300.00
43.19.2	1000 -4000 mm	No.	7,87,921.00
43.20	Dissolved Oxygen Analyser : Measuring range: 0 to 20mg/l, Optical fluorescence technology , Membrane free operation ;Accuracy:0.01mg/l or +/-1% of measured value ; With digital transmitter having output: 4-20mA HART, IP66/67 Protection	Set	2,78,850.00
43.21	Providing, Installation, Testing and Commissioning of Loss of Head Indicator (DPT type) in Filter Beds: Measuring Range: 0 - 3 metre / Field mounted Transmitter with LCD Display / Power Supply: 230 VAC / Output : 4-20mA with HART / IP66 / Sensor 0-3 metre / Principle Time of Flight / Housing PVDF / IP68 Protection	Set	78,478.00
43.22	Providing, Installation, Testing and Commissioning of Rate of Flow Indicator in Inlet and Outlet Filter House: Measuring Range: 0 - 1 metre / Field mounted Transmitter with LCD Display / Power Supply: 230 VAC / Output : 4-20mA with HART / IP66 / Sensor 0-6 metre / Principle Time of Flight / Housing PVDF / IP68 Protection	Set	74,741.00
43.23	Providing, installation, testing and commissioning of ONLINE UPS SYSTEM, Single Phase 230 V, 50 Hz with 2 hour backup SMF battery bank as per specification		
43.23.1	1 KVA	No.	52,592.00
43.23.2	2 KVA	No.	83,353.00
43.23.3	3 KVA	No.	1,07,169.00
43.23.4	5 KVA	No.	1,30,322.00
43.23.5	6 KVA	No.	1,36,938.00
43.23.6	7.5 KVA	No.	1,79,276.00
43.23.7	10 KVA	No.	1,97,468.00
43.24	Providing, installation, testing and commissioning of ONLINE UPS SYSTEM, 3 Phase 415 V, 50 Hz with 2 hour backup SMF battery bank as per specification		
43.24.1	7.5 KVA	No.	2,58,826.00
43.24.2	10 KVA	No.	2,80,326.00

Code No	Description	Unit	Rate Rs.
43.24.3	15 KVA	No.	4,03,536.00
43.24.4	20 KVA	No.	5,32,536.00
43.25	Supply, Installation, testing and commissioning of Battery operated Inline Ultrasonic flow meter with built in GSM/GPRS based communication module with an accuracy of $\pm 1\%$ of measured value, ingress protection IP 66, MOC SS/MS/CS, battery life of min. 5 years, LCD display 7 digit for instantaneous flow and 8 digit for Totalized flow of following sizes:		
43.25.1	Single Path		
43.25.1.1	15 mm	No.	35,702.00
43.25.1.2	20 mm	No.	47,602.00
43.25.1.3	25 mm	No.	59,502.00
43.25.1.4	32 mm	No.	76,163.00
43.25.1.5	40 mm	No.	95,204.00
43.25.1.6	50 mm	No.	1,19,006.00
43.25.1.7	65 mm	No.	1,22,706.00
43.25.1.8	80 mm	No.	1,27,434.00
43.25.1.9	100 mm	No.	1,38,367.00
43.25.1.10	125 mm	No.	1,39,561.00
43.25.1.11	150 mm	No.	1,62,169.00
43.25.1.12	200 mm	No.	1,89,507.00
43.25.1.13	250 mm	No.	2,79,120.00
43.25.1.14	300 mm	No.	3,21,461.00
43.25.2	Double Path		
43.25.2.1	350 mm	No.	4,02,968.00
43.25.2.2	400 mm	No.	4,34,337.00
43.25.2.3	450 mm	No.	4,51,680.00
43.25.2.4	500 mm	No.	4,69,023.00
43.25.2.5	600 mm	No.	5,16,228.00
43.26	Supply, Installation, testing and commissioning of Battery operated Inline Ultrasonic flow meter + pressure transmitter with built in GSM/GPRS based communication module with an accuracy of $\pm 1\%$ of measured value, ingress protection IP 66, MOC SS/MS/CS, battery life of min. 5 years, LCD display 4 digit for instantaneous flow and pressure in scrolling mode and 8 digit for Totalized flow of following sizes:		
43.26.1	Single Path		
43.26.1.1	15 mm	No.	37,001.00

Code No	Description	Unit	Rate Rs.
43.26.1.2	20 mm	No.	49,334.00
43.26.1.3	25 mm	No.	61,667.00
43.26.1.4	32 mm	No.	78,933.00
43.26.1.5	40 mm	No.	98,667.00
43.26.1.6	50 mm	No.	1,23,333.00
43.26.1.7	65 mm	No.	1,27,168.00
43.26.1.8	80 mm	No.	1,32,068.00
43.26.1.9	100 mm	No.	1,43,399.00
43.26.1.10	125 mm	No.	1,44,636.00
43.26.1.11	150 mm	No.	1,68,066.00
43.26.1.12	200 mm	No.	1,96,397.00
43.26.1.13	250 mm	No.	2,89,271.00
43.26.1.14	300 mm	No.	3,33,150.00
43.26.2	Double Path		
43.26.2.1	350 mm	No.	4,17,621.00
43.26.2.2	400 mm	No.	4,50,130.00
43.26.2.3	450 mm	No.	4,68,105.00
43.26.2.4	500 mm	No.	4,86,079.00
43.26.2.5	600 mm	No.	5,35,000.00
43.27	Supply, Installation, testing and commissioning of Battery Operated Ultrasonic Level Transmitters with an accuracy of $\pm 0.25\%$ of full scale, ingress protection IP 65, MOC electronic enclosure Aluminium die cast/SS316, battery life of min. 5 years, LCD display 8 X 1 character as per technical specifications		
43.27.1	0 to 6 Mtr.	No.	82,215.00
43.28	Supply, Installation, testing and commissioning of Battery powered Electromagnetic flow meters with GSM/GPRS based with an accuracy of $\pm 1\%$ of measured value, ingress protection Electronics IP 66 and flow tube IP 68, MOC: lining Neoprene rubber/Hard rubber/PTFE, Flange - SS316/SS304/MS/CS, Electrode - SS 316/Hastalloy, Coil Housing - SS, battery life of min. 5 years, LCD display 5 digit for instantaneous flow and 9 digit for Totalized flow as per technical specifications of following sizes:		
43.28.1	15 mm	No.	35,540.00
43.28.2	20 mm	No.	47,386.00
43.28.3	25 mm	No.	59,233.00
43.28.4	32 mm	No.	75,817.00
43.28.5	40 mm	No.	94,772.00

Code No	Description	Unit	Rate Rs.
43.28.6	50 mm	No.	1,18,465.00
43.28.7	65 mm	No.	1,22,148.00
43.28.8	80 mm	No.	1,26,855.00
43.28.9	100 mm	No.	1,37,738.00
43.28.10	125 mm	No.	1,38,927.00
43.28.11	150 mm	No.	1,61,432.00
43.28.12	200 mm	No.	1,88,645.00
43.28.13	250 mm	No.	2,77,852.00
43.28.14	300 mm	No.	3,20,000.00
43.28.15	350 mm	No.	4,01,137.00
43.28.16	400 mm	No.	4,32,362.00
43.28.17	450 mm	No.	4,49,627.00
43.28.18	500 mm	No.	4,66,891.00
43.28.19	600 mm	No.	5,13,881.00
43.29	Supply, Installation, Testing and Commissioning of Online Multi-parameter of Ammonia & pH Sensor with data transmission facility as per CPCB/SPCB guidelines. measuring principle: ISE (ion selective electrodes), automatic cleaning with compressed air unique, non-porous / non-leaking reference electrode for technically unrivalled and consistent performance Power supply-10 ... 30 VDC, power consumption- 0.72 W protection class- IP 68	Nos.	5,42,208.00
43.30	Supply, Installation, Testing and Commissioning of Online Multichannel and Multiparameter Transmitter/Converter for Liquid Analysis Sensors as per CPCB/SPCB guidelines.		
43.30.1	Dual Channel (2 Sensor Input)	Nos.	2,17,168.00
43.30.2	Four Channel (4 Sensor Input)	Nos.	4,36,668.00
43.30.3	Six Channel (6 Sensor Input)	Nos.	5,12,348.00
43.30.4	Eight Channel (8 Sensor Input)	Nos.	5,42,372.00
43.30.5	COD/BOD/TSS Sensor Range :- COD - 0-600 mg/l ; BOD - 0-90 mg/l ; TSS 0-1000 mg/l	Nos.	20,37,324.00
43.30.6	TSS Sensor Range :- 0-4 g/l	Nos.	4,15,691.00
43.30.7	NH3 Sensor Range :- 0.1-1000 mg/l	Nos.	6,59,457.00
43.30.8	NO3 Sensor Range :- 0.1-1000 mg/l	Nos.	6,59,457.00
43.30.9	MLSS Sensor Range :- 0-300 g/l	Nos.	4,15,691.00

Code No	Description	Unit	Rate Rs.
43.30.10	TOC Sensor Range :- 0-240 mg/l	Nos.	20,37,324.00
43.30.11	ORP Sensor Range :- -1500 to +1500 mV	Nos.	46,614.00
43.30.12	pH Sensor Range :- 0-14	Nos.	50,043.00
43.30.13	FRC Sensor Range :- 0.05 to 20 mg/l	Nos.	2,05,926.00
43.30.14	Turbidity Sensor Range :- 0-4000 FNU	Nos.	3,16,293.00
43.30.15	DO Sensor Range :- 0-20 mg/l	Nos.	2,29,781.00
43.31	Supply, Installation, Testing, and Commissioning of Online Continuous Effluent Monitoring System (OCEMS) for Sewage Treatment Plant Self-Surveillance in Compliance with CPCB Standards Excluding Flow Meter and including device with all accessories complete in all respect for real time data transmission to CPCB & SPCB.	Nos.	9,95,000.00

44.0 MOTOR STARTERS

Code No	Description	Unit	Rate Rs.
44.1	Upto 3.7 KW DOL Starter Feeder with MCB,Main and Aux Contactor,O/L Relay,L/R Selector Switch,3 Indicating lamps,Start-Stop Push Button ,Control MCB Size : 600 (W) x 400 (H) x 600 (D)	Each	24,083.00
44.2	From 3.3 KW to 7.5 KW DOL Starter Feeder with MCB,Main and Aux Contactor,O/L Relay,L/R Selector Switch,3 Indicating lamps,Start-Stop Push Button ,Control MCB (Size : 600 (W) x 400 (H) x 600 (D)	Each	24,083.00
44.3	S & F of Star delta Starter with MCB,Main and Aux Contactor,O/L Relay, L/R Selector Switch,3 Indicating lamps,Start-Stop Push Button ,Control MCB with panel with all accessories with following rating		
44.3.1	7.5 KW to 9.3KW	Each	12,136.00
44.3.2	11 KW	Each	12,136.00
44.3.3	15 KW	Each	13,570.00
44.3.4	18.5 KW	Each	13,570.00
44.3.5	22 KW	Each	22,326.00
44.3.6	30 KW	Each	35,850.00
44.3.7	37KW	Each	35,850.00
44.3.8	45 KW	Each	59,417.00
44.3.9	55 KW	Each	59,417.00
44.4	S & F of STAR DELTA STARTER IN THE EXISTING PANEL WITH FOLLOWING RATING		
44.4.1	7.5 KW to 9.3KW	Each	12,332.00
44.4.2	11 KW	Each	13,278.00
44.4.3	15 KW	Each	16,138.00
44.4.4	18.5 KW	Each	17,979.00
44.4.5	22 KW	Each	26,577.00
44.4.6	30 KW	Each	26,577.00
44.4.7	37KW	Each	37,113.00
44.4.8	45 KW	Each	52,732.00
44.4.9	55 KW	Each	64,436.00
44.5	55 KW to 90 KW Soft Starter Feeder without Soft Starter with 3 phase Size: 600 (W) x 900 (H) x 600 (D)	Each	74,100.00

Code No	Description	Unit	Rate Rs.
44.6	SITC of Soft Starters with panel supplied by manufacturer conforming to applicable standards with logic inputs & outputs, relay outputs and analogue outputs, plug in I/O connections, display of electrical parameters, state of load & operating time, RS 485 serial link for connections to Modbus.		
44.6.1	22 KW	Each	98,135.00
44.6.2	30 KW	Each	1,09,242.00
44.6.3	37 KW	Each	1,19,619.00
44.6.4	45 KW	Each	1,33,380.00
44.6.5	55 KW	Each	1,57,854.00
44.6.6	75 KW	Each	1,83,890.00
44.6.7	90 KW	Each	2,07,482.00
44.6.8	110 KW	Each	2,29,712.00
44.6.9	125 KW	Each	2,81,582.00
44.6.10	160 KW	Each	3,29,747.00
44.6.11	200KW	Each	3,61,240.00
44.6.12	225 KW	Each	4,13,111.00
44.7	PROVIDING AND FIXING OF SOFT STARTER IN EXISTING PANEL		
44.7.1	22 KW	Each	61,335.00
44.7.2	30 KW	Each	68,276.00
44.7.3	37 KW	Each	74,762.00
44.7.4	45 KW	Each	90,125.00
44.7.5	55 KW	Each	98,659.00
44.7.6	75 KW	Each	1,14,931.00
44.7.7	90 KW	Each	1,44,517.00
44.7.8	110 KW	Each	1,60,449.00
44.7.9	125 KW	Each	2,25,038.00
44.7.10	160 KW	Each	2,51,292.00
44.7.11	200KW	Each	3,00,050.00
44.7.12	225 KW	Each	3,42,291.00
44.8	SITC of Variable Frequency Drives with panel supplied by manufacturer conforming to applicable standards with logic inputs & outputs, relay outputs and analogue outputs, plug in I/O connections, display of electrical parameters, state of load & operating time, RS 485 serial link for connections to Modbus.		
44.8.1	0.75 KW	Each	23,499.00

Code No	Description	Unit	Rate Rs.
44.8.2	1.1 KW	Each	23,954.00
44.8.3	1.5 KW	Each	24,408.00
44.8.4	2.2 KW	Each	27,936.00
44.8.5	3 KW	Each	28,477.00
44.8.6	4/3.7 KW	Each	29,017.00
44.8.7	5.5 KW	Each	30,042.00
44.8.8	7.5 KW	Each	44,607.00
44.8.9	11 KW	Each	50,355.00
44.8.10	15 KW	Each	58,149.00
44.8.11	18.5 KW	Each	68,902.00
44.8.12	22 KW	Each	89,840.00
44.8.13	30 KW	Each	1,15,203.00
44.8.14	37 KW	Each	1,34,789.00
44.8.15	45 KW	Each	1,61,670.00
44.8.16	55 KW	Each	1,78,212.00
44.8.17	75 KW	Each	2,01,301.00
44.8.18	90 KW	Each	2,37,615.00
44.8.19	110 KW	Each	2,72,937.00
44.8.20	132 KW	Each	3,61,240.00
44.8.21	160 KW	Each	4,25,460.00
44.8.22	200 KW	Each	4,80,265.00
44.8.23	250 KW	Each	5,82,614.00
44.8.24	250 KW	Each	6,29,854.00
44.8.25	315 KW	Each	7,55,826.00

45.0 DISMANTLING OF EXISTING STRUCTURE/ MISC. ITEMS

Code No	Description	Unit	Rate Rs.
45.1	Dismantling of existing LT/HTelectric lines including poles/towers, ACSR conductors, guard wires, stay wire, insulators and other electrical items of the pole coming along the alignment of the road or in the plant premises and removal and transportation as well as disposal of all the items as per the direction of engineer incharge.(Serviceable material or can-dum material.)		
45.1.1	Dismantling of 33KV Lattice Tower (580 kg/450 kg) with all accessories brackets, tophamper, chakri, V-Cross arms guard bracket, stay, insulators (pin /disc) etc.	Each	3,991.00
45.1.2	Dismantling of 33KV Rail /any type of pole with all accessories brackets, tophamper, chakri, V-Cross arms guard bracket, stay, insulators (pin /disc) etc.	Each	2,224.00
45.1.3	Dismantling of 11KV Lattice Tower with all accessoriesbrackets, tophamper, chakri, V-Cross arms guard bracket, stay, insulators (pin /disc) etc.	Each	2,506.00
45.1.4	Dismantling of 11KVRail/cement Pole /joist/(RSJ - 9 or 10 mtr height with earth wire and brackets, tophamper, chakri, V-Cross arms guard bracket, stay, insulators (pin /disc) etc.	Each	2,133.00
45.1.5	Dismantling of Composite line pole with 11KV and LT (RSJ 10/9 mtr height pole) ACSR conductors ,V-Cross arms, top hamper, brackets, insulators, stay etc.	Each	1,831.00
45.1.6	Dismantling of LT line /joist/rail pole (PCC 8/9 mtr height) with existing street light fixtures, brackets, top hamper, earth guarding bracket, insulators, stay etc with ACSR conductor, 3 phase/ single phase, one neutral one earthwire and one street light phase)	Each	1,563.00
45.1.7	Dismantling of LT line pole (PCC - 8/9 mtr height) single phase/3 phase & 5 wires bracket, top hamper, insulators(pin or disc) earthwire and conductors.	Each	1,033.00
45.1.8	Dismantling and rerolling of 33KV conductor any type	Rmt	12.00
45.1.9	Dismantling and rerolling of 11KV conductor any type	Rmt	8.00
45.1.10	Dismantling and rerolling of LT conductor any type	Rmt	5.00
45.1.11	Dismantling and rerolling of earth conductor any type	Rmt	2.00
45.1.12	Dismantling of Telephone pole (Tubular Type).	Nos	609.00
45.1.13	Dismantling and reinstallation of 11KV Feeder pillar box any type	Each	4,399.00
45.1.14	Dismantling and re installation of LT Feeder pillar box any type	Each	3,836.00
45.1.15	Dismantling of the Double Pole structure with mounted transformers, distribution boards G.O, D.O, street light panel, stays, earthing wire pipe, cabling,etc & installing the same transformer on the structure newly erected along with distribution board along with erection, testing and commissioning.	Each	6,273.00

Code No	Description	Unit	Rate Rs.
45.1.16	Dismantling of the four pole structure with mounted transformers along with distribution boards G.O, D.O, street light panel, stays, earthing wire pipe, cabling etc & installing the same transformer on the structure newly erected along with distribution board along with erection, testing and commissioning.	Each	25,405.00

46.0 SHIFTING of OVER-HEAD LINES (Dismantling & Re-erecting the Same)

Code No	Description	Unit	Rate Rs.
46.1	Dismantling and re - erection of P.C.C./R.C.C. pole as per REC manual no 15/1979 conforming to IS: 2905/1966 as per requirement of sec3 in alignment, including excavation of pit and back filling with stone aggregate/boulders and soil in 0.45m consolidating each deposited layer of 0.45m by ramming and watering etc complete in all respect		
46.1.1	8.0 Mtr (200 Kg) long as per Discom specification	Each	932.00
46.1.2	9.0 Mtr (200 Kg) long as per Discom specification	Each	1,141.00
46.1.3	9.0 Mtr (400 Kg) long as per Discom specification	Each	1,342.00
46.1.4	11.0 Mtr (400 Kg) long as per Discom specification	Each	1,512.00
46.2	Dismantling and re - erection of GI stay set as per Discom specification complete with long stay rod with anchor plate including stay clamps turn buckle and G.I stay wire tightened through strain insulator, in cement concrete 1:3:6 including excavation of pit-re-filling etc as reqd.		
46.2.1	Stay set of dia 20mm,2.4m long stay rod and anchor plate 380x380x6.4mm	Each	689.00
46.2.2	Stay set of dia 16mm,1.8m long stay rod and anchor plate 300x300x6.4mm	Each	598.00
46.3	Dismantling and re- fixing of cross arms as per Discom specification, made out from angle iron 50mmx 50mmx6mm having 'D' support for each insulator including all necessary nuts,bolts, holding clamp of 50x6mm flat etc as reqd. on existing pole or on wall and special accessories for XLPE insulated ABC overhead cable like I- hook, Dead End clamp assembly, Suspension clamp assembly as required		
46.3.1	LT Bracket with clamp 1200 mm long	Each	39.00
46.3.2	LT Bracket with clamp 600 mm long	Each	35.00
46.3.3	Suspension clamp with eye hook (REC Standard) & pole clamp	Each	102.00
46.3.4	Dead clamp with eye hook (REC Standard) & pole clamp	Each	102.00
46.3.5	Type A/B LT connectors (REC Standard) suitable for ABC Cable	Each	51.00
46.4	Dismantling and re - fixing of LT porcelain pin insulator as per IS 1445-1997 suitable for working voltage 1100 volts including all accessories like hot dip GI forged spindle of 260mm long and nuts etc as reqd as per Discom specification.		
46.4.1	105mm x 65mm	Each	8.00
46.4.2	105mm x 80mm	Each	13.00
46.4.3	120mm x 85mm	Each	16.00

Code No	Description	Unit	Rate Rs.
46.5	Dismantling and re - fixing of porcelain shackle insulator as per IS:1443 1979 suitable for working on 1100 volts including hot dipped GI accessories and heavy duty hardwares etc as required as per Discom specification.		
46.5.1	75mm x 90mm	Each	20.00
46.5.2	100mm x 110mm	Each	26.00
46.6	Labour cost for re-painting over the existing poles above ground level including overhang making surface well clean and apply two coats of aluminium/ enamel paint as approved with required T & P etc as required.		
46.6.1	Pole of 7 to 9 mtr long		
46.6.1.1	with one overhang	Each	21.00
46.6.1.2	with two overhang	Each	24.00
46.6.2	Pole of 10 to 12 mtr long		
46.6.2.1	with one overhang	Each	32.00
46.6.2.2	with two overhang	Each	36.00
46.7	Dismantling and re - drawing overhead steel core Aluminium conductor (ACSR) ISI marked (IS 398 part II-1996) on existing cross arms through insulator with all necessary T&P required including binding and twisting etc. complete in all respect as required as per Discom specification.		
46.7.1	30 Sqmm of (6+1) 2.59mm (Weasel)	Mtr	3.00
46.7.2	50 Sqmm of (6+1) 3.35 mm (Rabbit)	Mtr	4.00
46.7.3	50 Sqmm of (6+1) 3.35 mm (Insulated Rabbit)	Mtr	5.00
46.7.4	80 Sqmm of (6+1) 4.09 mm (Raccon)	Mtr	4.00
46.7.5	100 sqmm of (6/4.72 mm+1/1.57 mm) (Dog)	Mtr	5.00
46.8	Dismantling and re fixing of fuse box size 250(H) x 200(W) x 150(D) mm with base shape accomodating the pole partly, fabricated of 1.6mm MS sheet with hinged cover, dust and vermin proof, rubber gasket, locking arrangement, duly holded with 2 nos pole clamps of 25mm x 3mm flat with nut and bolts, complete with anticorrosive treatment, finished with two coat of approved enamel paint. The box shall be provided with 2/ 4 nos copper bus bar 150 x 20 x 3mm with brass screws suitable supports,earth terminal, inter connection, brass cable gland upto 10 Sqmm size cable, 2nos 16 Amp kitkat fuse complete in all respect.	Each	95.00
46.9	Dismantling and re - fixing of 'V' type cross arms made of MS channel on the existing poles complete including all necessary nut and bolt etc with clamps as per Discom specification.		
46.9.1	11kV cross arms (75 x 40 x 6.8 kg/mtr)	Each	63.00
46.9.2	11kV cross arms (75 x 40 x 5.7 kg/mtr)	Each	54.00

Code No	Description	Unit	Rate Rs.
46.10	Dismantling and re - fixing of top hamper on the existing pole complete including nut bolts etc as required.		
46.10.1	Vertical type		
46.10.1.1	11 kV (.7m long) (65 x 65 x6mm angle)	Each	24.00
46.10.1.2	11 kV(50 x 6 mm flat)	Each	7.00
46.11	Dismantling and re - fixing of Cross arms made out from 100 x 50 x 6mm MS channel complete in all respect as required including nuts and bolts and clamp as per Discom specification etc as required.		
46.11.1	1.3 m long	Each	63.00
46.11.2	2 x 1.3 m long	Each	126.00
46.12	Dismantling and re - fixing of 50 x 6mm MS strip having two holes of 5/8" dia with cut for providing 6/8 SWG GI wire.		
46.12.1	100 mm long	Each	2.00
46.12.2	80 mm long	Each	1.00
46.13	Dismantling and re - fixing of a set of 4 nos V cross arm made out of MS angle with bracing of MS flat 50 x 6 mm with nuts and bolts (as per specification of Discom) for 11 kV made up of 65 x 65 x6mm MS angle.	Each	349.00
46.14	Dismantling and re - fixing of pilot patti made from MS flat (as per specification of Discom) and suitable for PCC pole (50 x 6mm)/ R.S. joist (50 x 6mm).	Each	4.00
46.15	Dismantling and re - fixing11kV pin insulator(IS 731/ 1971) with minimum creepage distance of 300mm on existing bracket including all accessories like hot dipped GI spindle and nuts etc (as per specificationof Discom).	Each	20.00
46.16	Dismantling and re-fixing11kV Disc insulator (IS 731/ 1971) with minimum creepage distance of 300mm on existing bracket including all accessories like hot dipped GI spindle and nuts etc (as per specificationof Discom).		
46.16.1	B & S type insulator with hardware	Each	66.00
46.16.2	T & C type insulator with hardware	Each	66.00
46.17	Dismantling and re- fixing of PG clamps on overhead lines/jumpers, made of aluminium alloy 4600 of IS 617-1994 (with latest amendment if any) with steel nut and bolts conforming to IS 1363-1992 & IS 1367/1979-80 (with latest amendments if any) all ferrous metal parts intended for outdoor use except those made of stainless steel shall be protected by hotdip galvanising in accordance with IS 2633-1986 complete in all respect as required for ACSR conductor.		
46.17.1	Dog	Each	9.00
46.17.2	Racoon	Each	9.00
46.17.3	Weasel/Rabbit	Each	9.00

Code No	Description	Unit	Rate Rs.
46.18	Dismantling and re-laying earth conductor from electrode to source in ground/ floor/ wall on iron saddles etc as required including making connection duly soldered or crimped 7/3.15 mm hot dipped stay wire.	Mtr	3.00
46.19	Dismantling and re-fixing of straight type 1.5 mtr long cross arms made out from MS angle of size 50 x 50 x 6mm for guarding on existing poles complete including 2 nos 150mm long MS flat of size 50 x 6mm bend into shape at both the ends duly welded clamps, nut and bolt etc as required.	Each	179.00
46.20	Dismantling and re - fixing of piller box made of 2mm CRCA MS sheet of 415 volts 3 phase 4 wire triple pole and neutral type, complete in all respect as required. Including knife switch, HRC fuses with copper one piece U contacts base, brass studs and nuts, copper busbar for main and interconnection, MS angle frame of 50 x 50 x 6 mm grouted with C.C. of M-10 grade to achieve the height of 1.5 feet above the road level suitable for four outgoing.(400Amp capacity)	Each	4,339.00
46.21	Dismantling and re - fixing 100 Amp, 11kV Horn gap fuse set IS 9385 on existing DP structure with 6 nos 24kV/22kV post insulator (IS:5350 part III), hot dipped hard ware, fuse wire of required size etc. complete in all respect as per specification given by Discom. (Type tested by ERDA/CPRI)	Each	872.00
46.22	Dismantling and re - fixing of 11kV, 400 Amp 3pole, central pot rotating double break type isolator (IS:9921 part I to V) without earth blade operating mechanism with GI spring loaded reverse loop type fixed contact, solid hard drawn electrolytic copper tubular moving contact with silver/ nickel plated at end points, 9 nos post insulator of 12 kV (IS:2554 & IS 5350 part III), hot dipped galvanising hard ware, nut, bolts etc complete in all respect as per specification of Discom. (Type tested by ERDA/CPRI.)	Each	1,890.00
46.23	Dismantling and re - fixing of distribution type Lightning arrestor 9 kV, 5 kA (IS:3070) with mounting breaking to be installed on existing DP structure. (Type tested by ERDA/CPRI.)	Each	872.00
46.24	Dismantling and re - fixing double pole structure for 11/0.4 Kv substation as per Discom specification complete in all respect as required including nuts and bolts etc (excluding the cost of poles) made of MS channel of 4 nos 100 x 50 x 6mm and 4 nos 75 x 40 x 6mm and MS flat 50 x 6mm as per Discom specifications.	Each	1,218.00
46.25	Dismantling and re - fixing of 11 kV Danger plates as per specification of Discom on the existing poles complete in all respect as per Discom specification.	Each	15.00
46.26	Dismantling and re- fixing of single pole mounted structure set for isolator as per Discom specification complete in all respect with nuts and bolts as required MS flat 50 x 6mm, MS angle 65 x 65 x 6mm, MS channel 100 x 50 x 6mm. (Excluding cost of pole).	Each	396.00

Code No	Description	Unit	Rate Rs.
46.27	Dismantling and re - erection of RS joist of 116 x 100 mm, 11Meter long with the welded/ bolted top hamper 65 x 65 x 6mm (0.7 Mtr long) making necessary arrangement for fixing 11 kV 'V' cross arm, LT bracket and guard wire bracket, grouted in ground 1/6 th of its length and fixed with cement, coarse and grit in 1:3:6 ratio in 1/5th of its length (40cm dia) from the bottom including two coats of aluminium paint over the complete length of joist.	Each	1,512.00
46.28	Dismantling and re - drawing of XLPE insulated LT bunched Aluminium conductor cable confirming to IS 14255/1995 and IS 398 (Pt-4)/ 1994 on existing cross arms through I hook with all necessary T&P required including binding and twisting etc. complete in all respect as required as per Discom specification.		
46.28.1	1X16 sq. mm. (insulated)	Mtr	4.00
46.28.2	1 X 25 sq. mm. + 1X25 sq. mm. (Bared)	Mtr	4.00
46.28.3	1 X 25 sq. mm. + 1X25 sq. mm. (insulated)	Mtr	4.00
46.28.4	3 X 16 sq. mm. + 1X16 sq. mm. (Bared)	Mtr	4.00
46.28.5	3 X 16 sq. mm. + 1X16 sq. mm. (insulated)	Mtr	4.00
46.28.6	3 X 25 sq. mm. + 1X25 sq. mm. (Bared)	Mtr	6.00
46.28.7	3 X 25 sq. mm. + 1X25 sq. mm. (insulated)	Mtr	6.00
46.28.8	3 X 50 sq. mm. + 1X35 sq. mm. (Bared)	Mtr	14.00

47.0 PLC & SCADA

Code No	Description		Unit	Rate Rs.
47.1	Design, Manufacture, Supply, Installation, Testing and Commissioning of Indoor type PLC Panel of size approx. 800 mm X 500 mm X 2000mm (LBH) , Fabricated out of min. 2 mm thick CRCA sheet complete with latest configuration, necessary programming software for PLC & SCADA and comprising of all accessories not limited to the following:			
	DI	30	No.	
	DO	26	No.	
	AI	6	No.	
	AO	2	No.	
	MCB 16A DP	2	No.	
	MCB 6A DP	6	No.	
	SMPS 100-240VAC/ 4.5A / 24 VDC	1	No.	
	Selector Switch (Auto/Manual) & Local / Remote	2	No.	
	Control Relays	1	Lot	
	Annunciator with 24 Windows NO to NC Type Microprocessor Based, Window Size 75*42mm, 110VAC, with	1	No.	
	Electronic Hooter	1	No.	
	Control Transformer 200VA	1	No.	
	Emergency STOP Push Button	1	No.	
	Panel Cooling Fan & Filter	2	No.	
	Panel Light with Door Switch, 7W	1	No.	
	Control Indication Lamp for 24VDC, 220VAC	3	No.	
	Push Button	3	No.	
	Power Wiring+Control Wiring + Control TB/ Fuse 2A,TB etc	1	Lot	
	Panel Hardware, lugs, terminations, ferruls, name plate Ect.	1	Lot	
	UTILITY SOCKET 16A, 3 PIN	2	No.	
	HMI Display 10 Inch, Colour	1	No.	
	Isolators Dual Output, 24VDC	1	Lot	Lot 6,47,272.00

Code No	Description		Unit	Rate Rs.
47.2	Design, Manufacture, Supply, Installation, Testing and Commissioning of Indoor type PLC Panel of size approx. 800 mm X 500 mm X 2000mm (LBH) , Fabricated out of min. 2 mm thick CRCA sheet complete with latest configuration, necessary programming software for PLC & SCADA and comprising of all accessories not limited to the following:		Lot	
	DI	46	No.	
	DO	42	No.	
	AI	10	No.	
	AO	4	No.	
	MCB 16A DP	2	No.	
	MCB 6A DP	6	No.	
	SMPS 100-240VAC/ 4.5A / 24 VDC	1	No.	
	Selector Switch (Auto/Manual) & Local / Remote	2	No.	
	Control Relays	1	Lot	
	Annunciator with 24 Windows NO to NC Type Microprocessor Based, Window Size 75*42mm, 110VAC, with	1	No.	
	Electronic Hooter	1	No.	
	Control Transformer 200VA	1	No.	
	Emergency STOP Push Button	1	No.	
	Panel Cooling Fan & Filter	2	No.	
	Panel Light with Door Switch, 7W	1	No.	
	Control Indication Lamp for 24VDC, 220VAC	3	No.	
	Push Button	3	No.	
	Power Wiring+Control Wiring + Control TB/ Fuse 2A,TB etc	1	Lot	
	Panel Hardware, lugs, terminations, ferruls, name plate Ect.	1	Lot	
	UTILITY SOCKET 16A, 3 PIN	2	No.	
	HMI Display 10 Inch, Colour	1	No.	
	Isolators Dual Output, 24VDC	1	Lot	Lot 8,67,933.00
47.3	Design, Manufacture, Supply, Installation, Testing and Commissioning of Indoor type PLC Panel of size approx. 800 mm X 500 mm X 2000mm (LBH) , Fabricated out of min. 2 mm thick CRCA sheet complete with latest configuration, necessary programming software			

Code No	Description			Unit	Rate Rs.
	for PLC & SCADA and comprising of all accessories not limited to the following:				
	DI	62	No.		
	DO	58	No.		
	AI	14	No.		
	AO	6	No.		
	MCB 16A DP	2	No.		
	MCB 6A DP	6	No.		
	SMPS 100-240VAC/ 4.5A / 24 VDC	1	No.		
	Selector Switch (Auto/Manual) & Local / Remote	2	No.		
	Control Relays	1	Lot		
	Annunciator with 24 Windows NO to NC Type Microprocessor Based, Window Size 75*42mm, 110VAC, with	1	No.		
	Electronic Hooter	1	No.		
	Control Transformer 200VA	1	No.		
	Emergency STOP Push Button	1	No.		
	Panel Cooling Fan & Filter	2	No.		
	Panel Light with Door Switch, 7W	1	No.		
	Control Indication Lamp for 24VDC, 220VAC	3	No.		
	Push Button	3	No.		
	Power Wiring+Control Wiring + Control TB/ Fuse 2A,TB etc	1	Lot		
	Panel Hardware, lugs, terminations, ferruls, name plate Ect.	1	Lot		
	UTILITY SOCKET 16A, 3 PIN	2	No.		
	HMI Display 10 Inch, Colour	1	No.		
	Isolators Dual Output, 24VDC	1	Lot	Lot	11,40,082.00
47.4	Design, Manufacture, Supply, Installation, Testing and Commissioning of Indoor type PLC Panel of size approx. 800 mm X 500 mm X 2000mm (LBH) , Fabricated out of min. 2 mm thick CRCA sheet complete with latest configuration, necessary programming software for PLC & SCADA and comprising of all accessories not limited to the following:				
	DI	86	No.		
	DO	82	No.		
	AI	18	No.		

Code No	Description			Unit	Rate Rs.
	AO	10	No.		
	MCB 16A DP	2	No.		
	MCB 6A DP	6	No.		
	SMPS 100-240VAC/ 4.5A / 24 VDC	1	No.		
	Selector Switch (Auto/Manual) & Local / Remote	2	No.		
	Control Relays	1	Lot		
	Annunciator with 24 Windows NO to NC Type Microprocessor Based, Window Size 75*42mm, 110VAC, with	1	No.		
	Electronic Hooter	1	No.		
	Control Transformer 200VA	1	No.		
	Emergency STOP Push Button	1	No.		
	Panel Cooling Fan & Filter	2	No.		
	Panel Light with Door Switch, 7W	1	No.		
	Control Indication Lamp for 24VDC, 220VAC	3	No.		
	Push Button	3	No.		
	Power Wiring+Control Wiring + Control TB/ Fuse 2A,TB etc	1	Lot		
	Panel Hardware, lugs, terminations, ferruls, name plate Ect.	1	Lot		
	UTILITY SOCKET 16A, 3 PIN	2	No.		
	HMI Display 12 Inch, Colour	1	No.		
	Isolators Dual Output, 24VDC	1	Lot	Lot	12,79,834.00
47.5	Design, Manufacture, Supply, Installation, Testing and Commissioning of Indoor type PLC Panel of size approx. 800 mm X 500 mm X 2000mm (LBH) , Fabricated out of min. 2 mm thick CRCA sheet complete with latest configuration, necessary programming software for PLC & SCADA and comprising of all accessories not limited to the following:				
	DI	102	No.		
	DO	98	No.		
	AI	22	No.		
	AO	16	No.		
	MCB 16A DP	2	No.		
	MCB 6A DP	6	No.		
	SMPS 100-240VAC/ 4.5A / 24 VDC	1	No.		

Code No	Description			Unit	Rate Rs.
	Selector Switch (Auto/Manual) & Local / Remote	2	No.		
	Control Relays	1	Lot		
	Annunciator with 24 Windows NO to NC Type Microprocessor Based, Window Size 75*42mm, 110VAC, with	1	No.		
	Electronic Hooter	1	No.		
	Control Transformer 200VA	1	No.		
	Emergency STOP Push Button	1	No.		
	Panel Cooling Fan & Filter	2	No.		
	Panel Light with Door Switch, 7W	1	No.		
	Control Indication Lamp for 24VDC, 220VAC	3	No.		
	Push Button	3	No.		
	Power Wiring+Control Wiring + Control TB/ Fuse 2A,TB etc	1	Lot		
	Panel Hardware, lugs, terminations, ferruls, name plate Ect.	1	Lot		
	UTILITY SOCKET 16A, 3 PIN	2	No.		
	HMI Display 12 Inch, Colour	1	No.		
	Isolators Dual Output, 24VDC	1	Lot	Lot	14,56,362.00
47.6	Design, Manufacture, Supply, Installation, Testing and Commissioning of Indoor type PLC Panel of size approx. 1000 mm X 600 mm X 2000mm (LBH) , Fabricated out of min. 2 mm thick CRCA sheet complete with latest configuration, necessary programming software for PLC & SCADA and comprising of all accessories not limited to the following:- Programmable Logic Controller (PLC) with Dual Hot Redundant CPU, Power supply, Communication Module, IO & Processor rack (Standard DC), Back up Interface/Expansion Module, Rack (Backplane) 10 slots for IO and Processor. SCADA software shall have facility VPN, OPC, Smart Client, Web Enabled, Automation Report Generation, Archiving, Trends, Data Logging, ect.				
	DI	118	No.		
	DO	114	No.		
	AI	24	No.		
	AO	12	No.		
	MCB 16A DP	2	No.		

Code No	Description	Unit	Rate Rs.
	MCB 6A DP	6 No.	
	SMPS 100-240VAC/ 4.5A / 24 VDC	1 No.	
	Selector Switch (Auto/Manual) & Local / Remote	2 No.	
	Control Relays	1 Lot	
	Annunciator with 24 Windows NO to NC Type Microprocessor Based, Window Size 75*42mm, 110VAC, with	1 No.	
	Electronic Hooter	1 No.	
	Control Transformer 200VA	1 No.	
	Emergency STOP Push Button	1 No.	
	Panel Cooling Fan & Filter	2 No.	
	Panel Light with Door Switch, 7W	1 No.	
	Control Indication Lamp for 24VDC, 220VAC	3 No.	
	Push Button	3 No.	
	Power Wiring+Control Wiring + Control TB/ Fuse 2A,TB etc	1 Lot	
	Panel Hardware, lugs, terminations, ferruls, name plate Ect.	1 Lot	
	UTILITY SOCKET 16A, 3 PIN	2 No.	
	HMI Display 15 Inch, Colour	1 No.	
	Isolators Dual Output, 24VDC	1 Lot	
	Ethernet Switch (Managed)	2 No.	
	Operator Station including, Core i5 processor, 8 GB RAM, 1TB SSD, DVD RW Drive, RS-232/485/RJ45 Port, 1 Parallel Port, 4 nos. USB Port, 2x Ethernet Cards, Keyboard, Optical mouse, 32" LED monitor, Latest windows professional, Anti Virous, etc.	2 No.	
	Engineering Station including, Core i7 processor, 8 GB RAM, 1TB SSD, DVD RW Drive, RS-232/485/RJ45 Port, 1 Parallel Port, 4 nos. USB Port, 2x Ethernet Cards, Keyboard, Optical mouse, 32" LED monitor, Latest windows professional, Anti Virous, etc.	2 No.	
	Run Time & Development Programming and Troubleshooting software for PLC, HMI, SCADA, VPN, Web Client - OWS	1 No.	
	Black and white, A4 Size Lazer Printer , copier, Scan.		
	Hi-Speed USB 2.0 port; built-in Fast Ethernet	2 No.	

Code No	Description			Unit	Rate Rs.
	10/100Base-TX network port; built-in WiFi 802.11b/g/n				
	Online UPS 3 KVA with 60 min Backup time.	1	No.	Lot	32,36,361.00
47.7	Design, Manufacture, Supply, Installation, Testing and Commissioning of Indoor type PLC Panel of size approx. 1000 mm X 600 mm X 2000mm (LBH) , Fabricated out of min. 2 mm thick CRCA sheet complete with latest configuration, necessary programming software for PLC & SCADA and comprising of all accessories not limited to the following:- Programmable Logic Controller (PLC) with Dual Hot Redundant CPU, Power supply, Communication Module, IO & Processor rack (Standard DC), Back up Interface/Expansion Module, Rack (Backplane) 10 slots for IO and Processor. SCADA software shall have facility VPN, OPC, Smart Client, Web Enabled, Automation Report Generation, Archiving, Trends, Data Logging, ect.				
	DI	166	No.		
	DO	162	No.		
	AI	24	No.		
	AO	16	No.		
	MCB 16A DP	2	No.		
	MCB 6A DP	6	No.		
	SMPS 100-240VAC/ 4.5A / 24 VDC	1	No.		
	Selector Switch (Auto/Manual) & Local / Remote	2	No.		
	Control Relays	1	Lot		
	Annunciator with 24 Windows NO to NC Type Microprocessor Based, Window Size 75*42mm, 110VAC, with	1	No.		
	Electronic Hooter	1	No.		
	Control Transformer 200VA	1	No.		
	Emergency STOP Push Button	1	No.		
	Panel Cooling Fan & Filter	2	No.		
	Panel Light with Door Switch, 7W	1	No.		
	Control Indication Lamp for 24VDC, 220VAC	3	No.		
	Push Button	3	No.		
	Power Wiring+Control Wiring + Control TB/ Fuse 2A,TB etc	1	Lot		

Code No	Description			Unit	Rate Rs.
	Panel Hardware, lugs, terminations, ferruls, name plate Ect.	1	Lot		
	UTILITY SOCKET 16A, 3 PIN	2	No.		
	HMI Display 15 Inch, Colour	1	No.		
	Isolators Dual Output, 24VDC	1	Lot		
	Ethernet Switch (Managed)	2	No.		
	Operator Station including, Core i5 processor, 8 GB RAM, 1TB SSD, DVD RW Drive, RS-232/485/RJ45 Port, 1 Parallel Port, 4 nos. USB Port, 2x Ethernet Cards, Keyboard, Optical mouse, 32" LED monitor, Latest windows professional, Anti Virous, etc.	2	No.		
	Engineering Station including, Core i7 processor, 8 GB RAM, 1TB SSD, DVD RW Drive, RS-232/485/RJ45 Port, 1 Parallel Port, 4 nos. USB Port, 2x Ethernet Cards, Keyboard, Optical mouse, 32" LED monitor, Latest windows professional, Anti Virous, etc.	2	No.		
	Run Time & Development Programming and Troubleshooting software for PLC, HMI, SCADA, VPN, Web Client - OWS	1	No.		
	Black and white, A4 Size Lazer Printer , copier, Scan.				
	Hi-Speed USB 2.0 port; built-in Fast Ethernet 10/100Base-TX network port; built-in WiFi 802.11b/g/n	2	No.		
	Online UPS 3 KVA with 60 min Backup time.	1	No.	Lot	39,71,897.00
47.8	Design, Manufacture, Supply, Installation, Testing and Commissioning of Indoor type PLC Panel of size approx. 1200 mm X 800 mm X 2000mm (LBH) , Fabricated out of min. 2 mm thick CRCA sheet complete with latest configuration, necessary programming software for PLC & SCADA and comprising of all accessories not limited to the following:- Programmable Logic Controller (PLC) with Dual Hot Redundant CPU, Power supply, Communication Module, IO & Processor rack (Standard DC), Back up Interface/Expansion Module, Rack (Backplane) 10 slots for IO and Processor. SCADA software shall have facility VPN, OPC, Smart Client, Web Enabled, Automation Report Generation, Archiving, Treands, Data Logging, ect.				
	DI	230	No.		

Code No	Description	Unit	Rate Rs.
	DO	226	No.
	AI	32	No.
	AO	24	No.
	MCB 16A DP	2	No.
	MCB 6A DP	6	No.
	SMPS 100-240VAC/ 4.5A / 24 VDC	1	No.
	Selector Switch (Auto/Manual) & Local / Remote	2	No.
	Control Relays	1	Lot
	Annunciator with 24 Windows NO to NC Type Microprocessor Based, Window Size 75*42mm, 110VAC, with	1	No.
	Electronic Hooter	1	No.
	Control Transformer 200VA	1	No.
	Emergency STOP Push Button	1	No.
	Panel Cooling Fan & Filter	2	No.
	Panel Light with Door Switch, 7W	1	No.
	Control Indication Lamp for 24VDC, 220VAC	3	No.
	Push Button	3	No.
	Power Wiring+Control Wiring + Control TB/ Fuse 2A,TB etc	1	Lot
	Panel Hardware, lugs, terminations, ferruls, name plate Ect.	1	Lot
	UTILITY SOCKET 16A, 3 PIN	2	No.
	HMI Display 15 Inch, Colour	1	No.
	Isolators Dual Output, 24VDC	1	Lot
	Ethernet Switch (Managed)	2	No.
	Operator Station including, Core i5 processor, 8 GB RAM, 1TB SSD, DVD RW Drive, RS-232/485/RJ45 Port, 1 Parallel Port, 4 nos. USB Port, 2x Ethernet Cards, Keyboard, Optical mouse, 32" LED monitor, Latest windows professional, Anti Virous, etc.	2	No.
	Engineering Station including, Core i7 processor, 8 GB RAM, 1TB SSD, DVD RW Drive, RS-232/485/RJ45 Port, 1 Parallel Port, 4 nos. USB Port, 2x Ethernet Cards, Keyboard, Optical mouse, 32" LED monitor, Latest windows professional, Anti Virous, etc.	2	No.
	Run Time & Development Programming and	1	No.

Code No	Description			Unit	Rate Rs.
	Troubleshooting software for PLC, HMI, SCADA, VPN, Web Client - OWS				
	Black and white, A4 Size Lazer Printer , copier, Scan.				
	Hi-Speed USB 2.0 port; built-in Fast Ethernet 10/100Base-TX network port; built-in WiFi 802.11b/g/n	2	No.		
	Online UPS 3 KVA with 60 min Backup time.	1	No.	Lot	50,01,649.00
47.9	Design, Manufacture, Supply, Installation, Testing and Commissioning of Indoor type PLC Panel of size approx. 1200 mm X 800 mm X 2000mm (LBH) , Fabricated out of min. 2 mm thick CRCA sheet complete with latest configuration, necessary programming software for PLC & SCADA and comprising of all accessories not limited to the following:- Programmable Logic Controller (PLC) with Dual Hot Redundant CPU, Power supply, Communication Module, IO & Processor rack (Standard DC), Back up Interface/Expansion Module, Rack (Backplane) 10 slots for IO and Processor. SCADA software shall have facility VPN, OPC, Smart Client, Web Enabled, Automation Report Generation, Archiving, Trends, Data Logging, ect.				
	DI	310	No.		
	DO	306	No.		
	AI	40	No.		
	AO	24	No.		
	MCB 16A DP	2	No.		
	MCB 6A DP	6	No.		
	SMPS 100-240VAC/ 4.5A / 24 VDC	1	No.		
	Selector Switch (Auto/Manual) & Local / Remote	2	No.		
	Control Relays	1	Lot		
	Annunciator with 24 Windows NO to NC Type Microprocessor Based, Window Size 75*42mm, 110VAC, with	1	No.		
	Electronic Hooter	1	No.		
	Control Transformer 200VA	1	No.		
	Emergency STOP Push Button	1	No.		
	Panel Cooling Fan & Filter	2	No.		
	Panel Light with Door Switch, 7W	1	No.		

Code No	Description		Unit	Rate Rs.
	Control Indication Lamp for 24VDC, 220VAC	3	No.	
	Push Button	3	No.	
	Power Wiring+Control Wiring + Control TB/ Fuse 2A,TB etc	1	Lot	
	Panel Hardware, lugs, terminations, ferruls, name plate Ect.	1	Lot	
	UTILITY SOCKET 16A, 3 PIN	2	No.	
	HMI Display 15 Inch, Colour	1	No.	
	Isolators Dual Output, 24VDC	1	Lot	
	Ethernet Switch (Managed)	2	No.	
	Operator Station including, Core i5 processor, 8 GB RAM, 1TB SSD, DVD RW Drive, RS-232/485/RJ45 Port, 1 Parallel Port, 4 nos. USB Port, 2x Ethernet Cards, Keyboard, Optical mouse, 32" LED monitor, Latest windows professional, Anti Virous, etc.	2	No.	
	Engineering Station including, Core i7 processor, 8 GB RAM, 1TB SSD, DVD RW Drive, RS-232/485/RJ45 Port, 1 Parallel Port, 4 nos. USB Port, 2x Ethernet Cards, Keyboard, Optical mouse, 32" LED monitor, Latest windows professional, Anti Virous, etc.	2	No.	
	Run Time & Development Programming and Troubleshooting software for PLC, HMI, SCADA, VPN, Web Client - OWS	1	No.	
	Black and white, A4 Size Lazer Printer , copier, Scan.			
	Hi-Speed USB 2.0 port; built-in Fast Ethernet 10/100Base-TX network port; built-in WiFi 802.11b/g/n	2	No.	
	Online UPS 3 KVA with 60 min Backup time.	1	No.	Lot 57,37,185.00
47.10	Design, Manufacture, Supply, Installation, Testing and Commissioning of Indoor type PLC Panel of size approx. 1200 mm X 800 mm X 2000mm (LBH) , Fabricated out of min. 2 mm thick CRCA sheet complete with latest configuration, necessary programming software for PLC & SCADA and comprising of all accessories not limited to the following:- Programmable Logic Controller (PLC) with Dual Hot Redundant CPU, Power supply, Communication Module, IO & Processor rack (Standard DC), Back up Interface/Expansion Module, Rack (Backplane) 10 slots for IO and			

Code No	Description	Unit	Rate Rs.
	Processor. SCADA software shall have facility VPN, OPC, Smart Client, Web Enabled, Automation Report Generation, Archiving, Trends, Data Logging, ect.		
	DI	438	No.
	DO	434	No.
	AI	48	No.
	AO	24	No.
	MCB 16A DP	2	No.
	MCB 6A DP	6	No.
	SMPS 100-240VAC/ 4.5A / 24 VDC	1	No.
	Selector Switch (Auto/Manual) & Local / Remote	2	No.
	Control Relays	1	Lot
	Annunciator with 24 Windows NO to NC Type Microprocessor Based, Window Size 75*42mm, 110VAC, with	1	No.
	Electronic Hooter	1	No.
	Control Transformer 200VA	1	No.
	Emergency STOP Push Button	1	No.
	Panel Cooling Fan & Filter	2	No.
	Panel Light with Door Switch, 7W	1	No.
	Control Indication Lamp for 24VDC, 220VAC	3	No.
	Push Button	3	No.
	Power Wiring+Control Wiring + Control TB/ Fuse 2A,TB etc	1	Lot
	Panel Hardware, lugs, terminations, ferruls, name plate Ect.	1	Lot
	UTILITY SOCKET 16A, 3 PIN	2	No.
	HMI Display 15 Inch, Colour	1	No.
	Isolators Dual Output, 24VDC	1	Lot
	Ethernet Switch (Managed)	2	No.
	Operator Station including, Core i7 processor, 8 GB RAM, 1TB SSD, DVD RW Drive, RS-232/485/RJ45 Port, 1 Parallel Port, 4 nos. USB Port, 2x Ethernet Cards, Keyboard, Optical mouse, 32" LED monitor, Latest windows professional, Anti Virous, etc.	2	No.
	Engineering Station including, Core i7 processor, 8 GB RAM, 1TB SSD, DVD RW	2	No.

Code No	Description			Unit	Rate Rs.
	Drive, RS-232/485/RJ45 Port, 1 Parallel Port, 4 nos. USB Port, 2x Ethernet Cards, Keyboard, Optical mouse, 32" LED monitor, Latest windows professional, Anti Virous, etc.				
	Run Time & Development Programming and Troubleshooting software for PLC, HMI, SCADA, VPN, Web Client - OWS	1	No.		
	Black and white, A4 Size Lazer Printer , copier, Scan.				
	Hi-Speed USB 2.0 port; built-in Fast Ethernet 10/100Base-TX network port; built-in WiFi 802.11b/g/n	2	No.		
	Online UPS 5 KVA with 60 min Backup time.	1	No.	Lot	69,14,044.00
47.11	Design, Manufacture, Supply, Installation, Testing and Commissioning of Indoor type PLC Panel of size approx. 1200 mm X 800 mm X 2000mm (LBH) , Fabricated out of min. 2 mm thick CRCA sheet complete with latest configuration, necessary programming software for PLC & SCADA and comprising of all accessories not limited to the following:- Programmable Logic Controller (PLC) with Dual Hot Redundant CPU, Power supply, Communication Module, IO & Processor rack (Standard DC), Back up Interface/Expansion Module, Rack (Backplane) 10 slots for IO and Processor. SCADA software shall have facility VPN, OPC, Smart Client, Web Enabled, Automation Report Generation, Archiving, Treands, Data Logging, etc.				
	DI	662	No.		
	DO	658	No.		
	AI	56	No.		
	AO	32	No.		
	MCB 16A DP	2	No.		
	MCB 6A DP	6	No.		
	SMPS 100-240VAC/ 4.5A / 24 VDC	1	No.		
	Selector Switch (Auto/Manual) & Local / Remote	2	No.		
	Control Relays	1	Lot		
	Annunciator with 24 Windows NO to NC Type Microprocessor Based, Window Size 75*42mm, 110VAC, with	1	No.		
	Electronic Hooter	1	No.		

Code No	Description		Unit	Rate Rs.
	Control Transformer 200VA	1	No.	
	Emergency STOP Push Button	1	No.	
	Panel Cooling Fan & Filter	2	No.	
	Panel Light with Door Switch, 7W	1	No.	
	Control Indication Lamp for 24VDC, 220VAC	3	No.	
	Push Button	3	No.	
	Power Wiring+Control Wiring + Control TB/ Fuse 2A,TB etc	1	Lot	
	Panel Hardware, lugs, terminations, ferruls, name plate Ect.	1	Lot	
	UTILITY SOCKET 16A, 3 PIN	2	No.	
	HMI Display 15 Inch, Colour	1	No.	
	Isolators Dual Output, 24VDC	1	Lot	
	Ethernet Switch (Managed)	2	No.	
	Operator Station including, Core i7 processor, 8 GB RAM, 1TB SSD, DVD RW Drive, RS-232/485/RJ45 Port, 1 Parallel Port, 4 nos. USB Port, 2x Ethernet Cards, Keyboard, Optical mouse, 32" LED monitor, Latest windows professional, Anti Virous, etc.	2	No.	
	Engineering Station including, Core i7 processor, 8 GB RAM, 1TB SSD, DVD RW Drive, RS-232/485/RJ45 Port, 1 Parallel Port, 4 nos. USB Port, 2x Ethernet Cards, Keyboard, Optical mouse, 32" LED monitor, Latest windows professional, Anti Virous, etc.	2	No.	
	Run Time & Development Programming and Troubleshooting software for PLC, HMI, SCADA, VPN, Web Client - OWS	1	No.	
	Black and white, A4 Size Lazer Printer , copier, Scan.			
	Hi-Speed USB 2.0 port; built-in Fast Ethernet 10/100Base-TX network port; built-in WiFi 802.11b/g/n	2	No.	
	Online UPS 5 KVA with 60 min Backup time.	2	No.	Lot 98,56,190.00
47.12	Compact RTU complete with DI, DO, AI and modbus communication ports and power supply. // Compact RTU for variable power supply using batteries, rechargeable batteries, solar or 10.8 V DC to 28.8 V DC with integrated modem; connection to control center via Tele Control Basic, DNP3, IEC60870-5-104 and Communcation protocols, on-board I/O (8 DI, 4 DQ, 4 AI), configuration and diagnostics per web interface, RJ45 port, mobile communications			

Code No	Description	Unit	Rate Rs.
	antenna (GSM/UMTS), Mini SIM card, with adapter Micro SIM card also, GPRS (Multi-slot Class 10), 35 mm DIN rail mounting, TCP/IP, DNP 3, Open VPN-Client. Panel Enclosure for Compact RTU Location, wall/floor mounted along with wiring and related accessories and arrangement of mounting of RTU, Modem and having IP-5X Protection. Panels shall be self-fabricate type only with Canopy.	Lot	1,23,570.00
47.13	Modular RTU complete with DI, DO, AI and modbus communication ports and power supply 24 VDC or for variable power supply using batteries, rechargeable batteries, solar or 10.8 V DC to 28.8 V DC with integrated modem; connection to control center via Tele Control Basic, DNP3, IEC60870-5-104 and Communication protocols, on-board I/Os min. (8 DI, 4 DQ, 2 AI), configuration and diagnostics per web interface, RJ45 port, mobile communications antenna (GSM/UMTS), Mini SIM card, with adapter Micro SIM card also, GPRS (Multi-slot Class 10), 35 mm DIN rail mounting, TCP/IP, DNP 3, Open VPN-Client. Panel Enclosure for Compact RTU Location, wall/floor mounted along with wiring and related accessories and arrangement of mounting of RTU, Modem having IP-5X Protection. Panels shall be self-fabricate type only with Canopy.	Lot	1,05,917.00
47.14	Supply, Installation, testing and commissioning of SCADA System at Master Control Centre complete with PC server, monitor, communication modules, printers, 2 Nos. of 60" LED Display of latest resolution and configuration, 4 Nos of 32" Operator console (1 No. of Engineering, 1 No. of operator console, 1 No. of Historical and 1 No. of Web Server) including control desk, chairs, storage racks etc., required hardware, software complete with all accessories and in line with Technical Specification.	Lot	43,39,666.00

48.0 SMART SOLUTIONS

Code No	Description	Unit	Rate Rs.
48.1	Smart lighting system		
48.1.1	SITC of street light controller (SLC) along with necessary software and hardware, 140-270 Vac, Inbuilt Surge protection of 10KVA, Capacity up to 300W, ON/OFF/Dimming of Individual streetlight/floodlight, Ingress protection IP65		
48.1.1.1	1 Channel	each	12,231.00
48.1.1.2	2 Channel	each	12,926.00
48.1.2	SITC of street light controller (SLC) based on PLC, including software and hardware, 140-270 Vac, Inbuilt Surge protection of 10KVA, Capacity up to 300W, ON/OFF/Dimming of Individual streetlight/floodlight, Ingress protection IP65		
48.1.2.1	1 Channel	each	14,182.00
48.1.2.2	2 Channel	each	16,868.00
48.1.3	SITC of GPRS/ISDN/OFC gateway along with necessary software and hardware, Controls 50 nos. SLC, 140-270Vac, CE/FCC certified communication module, On-board 2 nos. current (4-20mA), and 2 nos. analog voltage channel(1-10V), On-board RS485 Modbus interface	each	50,540.00
48.1.4	SITC of GPRS gateway PLC based along with necessary software and hardware, Controls 50 nos. SLC, 140-270Vac, CE/FCC certified communication module, Battery backup up to 24 hours, On-board 2 nos. current (4-20mA), and 2 nos. analog voltage channel(1-10V), On-board RS485 Modbus interface		
48.1.4.1	Single phase	each	50,540.00
48.1.4.2	Three phase	each	74,125.00
48.1.5	SITC of Smart LED luminaire with integrated SLC and 0-10V dimmable driver, 140-270V AC, 10 KV built-in surge protector, Ingress protection IP66 of following ratings:		
48.1.5.1	Smart LED luminaire 72 W	each	16,404.00
48.1.5.2	Smart LED luminaire 90 W	each	17,584.00
48.1.5.3	Smart LED luminaire 100W	each	18,306.00
48.1.5.4	Smart LED luminaire 120W	each	20,340.00
48.1.5.5	Smart LED luminaire 150W	each	21,193.00
48.1.5.6	Smart LED luminaire 170W	each	22,703.00

Code No	Description	Unit	Rate Rs.
48.1.6	P & L of IP66 protected high power high power LED linear flood light system. Fixture made of powder coated extruded aluminium housing with UV stabilized PC/toughened glass cover and appropriate lens to be used to achieve various beam angle pattern. fixture suitable for input 12vDC, power consumption should be 6W/0.5A per feet with system CRI- 70, color red/ green / blue/ /RGB W/WW. the fixture must have IP66 protected 5mm Round female connector for input, the fixture must have provision to extend further . system life of 50000burning hours with 70% of initial lumens maintained . light output in red, green, blue, cool, white or warm white colour as per requirement. fixtures shall be CE complete series of linear flood light.		
48.1.6.1	linear LED strip 1 feet (with driver)	each	9,880.00
48.1.6.2	Linear LED Strip 2 Feet (with Driver)	each	14,819.00
48.1.7	Server setup and software maintenance for 1 year	per light point	654.00
48.1.8	Supply & laying of 0.9 mm Teflon copper wire (Fire And Water Resistant) with sleeves ,taping including Grove cutting ,Zirri cutting in plaster stone wall ,column, roof with Scaffolding , filling chemical epoxy Araldite ,pvc clips, finished with lime mortar etc.	Rmtr	193.00
48.1.9	P & F of IP68, IK10 protected LED Buried marker light /Step Light Fixture. Fixture made of powder coated die cast aluminium with Toughened Glass cover and appropriate beam angle lens to be used as per requirement. The System level Luminous efficacy must be >90 Lumen/W. High Power LEDs at 1W/2W per LED. The driving current should be Minimum 350 mA per LED. CRI>70, CCT: 3000/6500 K. The integral SMPS based electronic driver must be constant current and surge protection of min. 4KV(L-N) and efficiency >85%, PF>0.9 and input Voltage range of 90-270V AC at 50Hz. System life of 50000 Burning hours with 70% of Initial Lumens maintained. Light should include quick connecting cable coupled with various mounting accessories. Light output in Cool white or Warm White Colour as per engineers choice. Fixture must be in compliance with IS/CE Standards.		
48.1.9.1	Burial Light - 5W L-7	Each	4,754.00
48.1.9.2	Rectangular LED Marker Light	Each	3,269.00
48.1.10	P & F of IP65 IK10 rated LED bulk head type light fixture made from CRCA sheet steel housing suitable for mounting LED tube system (integral driver), Power consumption of 10-15W , 500-600 lumens system lumen efficiency 70 lm/ watt output suitable for1x100 W GLS/9W CFL bulk head fixtures, life time of 50000 burning hours with 70% initial lumen maintained. CCT 3000° K,4000° K and 6000° K. Fixture shall be in compliance with CE & KEMA standards.		
48.1.10.1	LED Bulk head luminaire 6/7W	Each	1,322.00
48.1.10.2	LED Bulk head luminaire 9/10W	Each	1,511.00

Code No	Description	Unit	Rate Rs.
48.2	Environmental and Continuous Ambient Air Quality Monitoring System		
48.2.1	Sulphur Dioxide (SO ₂) Analyzer based on UV -Fluorescence Principle Model AF22 e suitable for 230V, 50 Hz. power supply, built-in solenoid valve for manual/ auto calibration, built-in zero air scrubber for zero calibration & RS 232 port for Serial communication with Data Acquisition System (US -EPA Approval No. EQSA-0802-149)	each	13,65,444.00
48.2.2	Oxide of Nitrogen (NO _x) Analyzer based on Chemiluminescence principle Model AC32 e suitable for 230 V, 50 Hz. power supply, built-in solenoid valve for 230 V, 50 Hz. power supply, built-in solenoid valve for 230 V, 50 Hz. power supply, built-in solenoid valve communication with Data Acquisition System (US - EPA Approval No. RFNA-0202-146)	each	15,49,195.00
48.2.3	CO Analyser based on Non Dispersive IR Principle with Gas Filter Co-relation Model CO 12 e suitable for 230 V, 50 Hz. power supply, built-in solenoid valve for manual/ auto calibration, built-in zero air scrubber for zero calibration & RS 232 port for Serial communication with Data Acquisition System (US EPA Approval No. RFCA-0915-228)	each	12,14,505.00
48.2.4	PM _{2.5} Analyser based on Beta Ray Attenuation principle Model MP101M LCD suitable for 230V AC, 50 Hz. Power supply with C-14 Radioactive source, Pump, PM _{2.5} Inlet, Standard foil for calibration. RS 232 & Ethernet port for Serial communication with Data Acquisition System	each	21,96,957.00
48.2.5	PM ₁₀ Analyser based on Beta Gauge detection principle Model MP101M LCD suitable for 230V AC, 50 Hz. Power supply with C-14 Radioactive source, Pump, PM ₁₀ Inlet & Standard foil for calibration.	each	20,31,611.00
48.2.6	Ozone Analyser based on UV Photometry Principle Model O3 42 e suitable for 230 V, 50 Hz. Power supply, & RS 232 port for Serial communication with Data Acquisition System	each	12,22,194.00
48.2.7	VOC Analyser based on PID with Gas Chromatographic Column Separation Model VOC72M suitable for measurement of Benzene, Toluene, o-m-p Xylene, 230 V, 50 Hz. power supply, built-in solenoid valve for manual/ auto calibration, built-in zero air scrubber for zero calibration & RS 232 port for Serial communication with Data Acquisition System	each	35,95,419.00
48.2.8	Nitrogen Cylinder 47 Litres Capacity, Carbon Steel with Regulator for Carrier Gas for PID	each	99,387.00
48.2.9	Multipoint, Multi-Gas Calibrator, Model MGC 101 suitable for 230V AC, 50 Hz. with the following: • Mass Flow Controller based for Dilution air & Span Gas • Inlet ports for external span gases • RS 232 interface • In built Zero air generator	each	10,01,493.00

Code No	Description	Unit	Rate Rs.
48.2.10	Calibration Gas Cylinder made of Aluminium with SS regulator & valve (1 Cylinder for each Gas) for following Gases:		
48.2.10.1	SO ₂	each	50,768.00
48.2.10.2	NO	each	50,768.00
48.2.10.3	CO	each	50,768.00
48.2.10.4	Benzene	each	94,006.00
48.2.11	Gas Sampling System & Hood Gas Sampling system consisting of SS gas sample inlet, peltier based moisture removal facility, manifold & tubings to the analyzers.	each	72,518.00
48.2.12	Standard 19" Rack Cabinet (Double Bay Rack) with Telescopic slides, Overload protection, Power Distribution box, Cooling fans, Dust filters & pneumatic plumbing to accommodate Analyzer, Calibrator & Accessories	each	1,45,044.00
48.2.13	Weather Monitoring Station consisting of the following Parameters: Combined Wind speed and direction, Combined Temperature & Relative Humidity, Liquid Precipitation (Rainfall) Sensor, Solar radiation, Meteorological Mast - 10 Meters, Interface unit	each	5,17,002.00
48.2.14	Analyzer Shelter as below: Size - 3mtr(W) x 3 mtr (L) x 2.7 mtr(H), MOC - 1.2mm thick GI sheet (external walls), & 1.2mm thick GI sheet (internal walls), Door - One main door, Insulation Thickness - 0mm with PUF insulation, Roof thickness - 100mm with PUF, Flooring - anti slip sheet, Lighting inside shelter at minimum of 300lux, External dome lighting shall be under the overhangs.	each	29,00,887.00
48.2.15	4' X 8' (RGB/ Full Colour) 7 Line Display Board (Power Supply: 230V AC from UPS)	each	2,57,670.00
48.2.16	Local Data Logger - PC based Data Acquisition System with SAM WI License Software suitable for Storing, Logging, Reporting, Printing data from above offered Analysers. PC with specifications as under: Intel Core i5 5th Generation Processor, 8 GB RAM, 1 TB HDD+250 GB SSD, CD/DVD Combo Drive, 32" Monitor, Minimum 6 USB ports (USB 3.0/2.0), WINDOWS-7 or higher Compatible Operating System, standard keyboard, mouse with pad and with A3 & A4 Color Laser printer.	each	4,48,447.00
48.2.17	Central Data Logger - PC based Data Acquisition System with XR Premium License Software suitable for Storing, Logging, Reporting, Printing data, Validation and communicating with above offered Local DAS. PC with specifications as under: Intel Core i5 5th Generation Processor, 8 GB RAM, 2 TB HDD+250 GB SSD, CD/DVD Combo Drive, 32" Monitor, Minimum 6 USB ports (USB 3.0/2.0), WINDOWS-7 or higher Compatible Operating System, standard keyboard, mouse with pad and with A3 & A4 Color Laser printer.	each	7,01,183.00

Code No	Description	Unit	Rate Rs.
48.3	Smart City Surveillance with vehicle Identification & Counting		
48.3.1	Supply, installation, testing and commissioning of Monitoring software video surveillance all channels real-time live monitoring simultaneously The VMS shall support client applications including System client, Web client, Video wall management client and mobile client, The VMS shall support login by user name and password. It shall also manage all user information, permissions, license, operation information and system information, The VMS shall support unified time synchronization among all devices in the system and daily user and maintenance information management, The video recording management shall support several types of storage device such as DAS, NAS, IPSAN, direct storage etc. It shall enable centrally management of NVR, storage devices offering video searching, playback, managing and downloading, The video recording management shall support several types of storage device such as DAS, NAS, IPSAN, direct storage etc. It shall enable centrally management of NVR, storage devices offering video searching, playback, managing and downloading, Shall have Network management server which regularly acquires the status of video devices such as NVR, Network camera, storage boxes and running status of servers of system, Shall have Network management server which regularly acquires the status of video devices such as NVR, Network camera, storage boxes and running status of servers of system, Shall have an Alarm management server which provides alarm events and maintains the logs of alarm management. It shall also receive I/O alarms triggered by alarm host such as recorder, camera and so on. IT shall also be responsible to trigger linked actions like push alarm notification to clients, sending e mail, calling presents in PTZ, video wall linkages etc., Shall have an Alarm management server which provides alarm events and maintains the logs of alarm management. It shall also receive I/O alarms triggered by alarm host such as recorder, camera and so on. IT shall also be responsible to trigger linked actions like push alarm notification to clients, sending e mail, calling presents in PTZ, video wall linkages etc.	per channel	10,065.00
48.3.2	8ch Network Video Recorder- Connect Up to 8 IP Cameras, Dual OS, Up to 8 Megapixels Resolution, HDMI and VGA independent outputs provided, HDMI Video output at up to 4K (3840 × 2160) resolution , VGA upto 1920 × 1080, Support H.265, MJPEG, Incoming Bandwidth 80 Mbps, 4 SATA Hard Disks, ANR Technology, 4 SATA interfaces for 4 HDDs and capacity of each HDD upto 6TB, 3× USB at least 1 × USB with 3.0, Alarm I/O 16/4, RS-485, RS-232, 2 RJ-45 10 /100/1000 Mbps self-adaptive Ethernet interface, Multiple network monitoring: Web viewer, CE, FCC, BIS certified.	Nos.	15,485.00
48.3.3	16ch Network Video Recorder- Connect Up to 16 IP Cameras, Dual OS, Up to 8 Megapixels Resolution, HDMI and VGA independent outputs provided, HDMI Video output at up to 4K (3840 × 2160) resolution , VGA upto 1920 × 1080, Support H.265, MJPEG,		

Code No	Description	Unit	Rate Rs.
	Incoming Bandwidth 160 Mbps, 4 SATA Hard Disks, ANR Technology, 4 SATA interfaces for 4 HDDs and capacity of each HDD upto 6TB, 3× USB at least 1 × USB with 3.0, Alarm I/O 16/4, RS-485, RS-232, 2 RJ-45 10 /100/1000 Mbps self-adaptive Ethernet interface, Multiple network monitoring: Web viewer, CE, FCC, BIS certified.	Nos.	31,633.00
48.3.4	32ch Network Video Recorder- Connect Up to 32 IP Cameras, Dual OS, Up to 8 Megapixels Resolution, HDMI and VGA independent outputs provided, HDMI Video output at up to 4K (3840 × 2160) resolution , VGA upto 1920 × 1080, Support H.265, MJPEG, Incoming Bandwidth 256 Mbps, 4 SATA Hard Disks, ANR Technology, 4 SATA interfaces for 4 HDDs and capacity of each HDD upto 6TB, 3× USB at least 1 × USB with 3.0, Alarm I/O 16/4, RS-485, RS-232, 2 RJ-45 10 /100/1000 Mbps self-adaptive Ethernet interface, Multiple network monitoring: Web viewer, CE, FCC, BIS certified.	Nos.	38,712.00
48.3.5	128ch Network Video Recorder-Connect Up to 128 IP Cameras, Dual OS, Up to 12 Megapixels Resolution, Two independent HDMI outputs of 4K resolution, 1 VGA output with output upto 1920 × 1080, Support H.265, MJPEG, Supports N+1 hot spare system, Supports RAID0, RAID1, RAID5, RAID6 and RAID10, Supports HDD hot swap, Supports Dual Power-Redundant, Incoming Bandwidth 512 Mbps, 16 SATA Hard Disks, ANR Technology, 16 SATA interfaces for 16 HDDs and capacity of each HDD upto 8TB, 4× USB at least 2 × USB with 3.0, Alarm I/O 16/8, RS-485, RS-232, 4 RJ-45 10 /100/1000 Mbps self-adaptive Ethernet interface, Multiple network monitoring: Web viewer, CE, FCC, UL certified.	Nos.	4,49,064.00
48.3.6	Supply Installation, Testing & Commissioning of Intel i7 4th Generation processor 3Ghz or latest, 4GB RAM with 2TB hard disk, DVD-RW/keyboard/optical mouse/LAN card/24" LED monitor. Minimum 6 USB ports. With pre-loaded licensed Windows 10 or latest software PC	each	73,546.00
48.3.7	SITC of 55" 4k Resolution or Better LED TV with remote control and wall mount unit / floor stand complete with making connections etc. as required.	each	77,425.00
48.3.8	Supply, Installation, Testing & Commissioning of Traffic Management Software	each	17,82,669.00
48.3.9	Supply, Installation, Testing & Commissioning of Traffic Control & Monitoring Software	each	17,82,669.00
48.3.10	Installation of OFC Network Connectivity (One Time Coast) Per NODE	each node	15,450.00
48.3.11	OFC Network Connectivity Maintenance and Rent Charges Per year Each NODE	each node	92,699.00
48.3.12	Supply, installation, testing and commissioning of color high resolution or better LED Video wall of comprising of 4 nos. 40 inch display, full HD complete with all accessories.	each	2,47,760.00

Code No	Description	Unit	Rate Rs.
48.3.13	SITC of Intelligent Manageable Ethernet Switches providing 24 x 10/100/1000 Fast Ethernet ports- and 2 dual purpose uplink (provision for Copper / Fibre Giga connectivity) with LAN based Software. The LAN based S/W supports enhanced integrated security, including Network Admission Control (NAC), advanced quality of service (QoS), availability and scalable management to enable new converged applications	each	24,776.00
48.3.14	16 port Unmanaged Network PoE Switch: 16 port PoE Switch with PoE standard of IEEE 802.3af , IEEE 802.3at, PoE port, Uplink ports	Nos.	18,582.00
48.3.15	SITC of Intelligent Ethernet POE Switches providing 24 x 10/100/1000 Fast Ethernet POE ports- 370W or better and 4 dual purpose uplink (provision for Copper / Fibre Giga connectivity) with LAN based Software. The LAN based S/W supports enhanced integrated security, including Network Admission Control (NAC), advanced quality of service (QoS), availability and scalable management to enable new converged applications	each	24,776.00
48.3.16	Supply Installation Testing & Commissioning of 1000 Base-SX, SFP, MMF, LC connector, Multimode Fibre Giga module	each	18,386.00
48.3.17	Supply, Installation, Testing & Commissioning of 5 MP IR Fixed Dome Network Camera -1/2.7 inch Progressive Scan CMOS, 2592 × 1944 at 25fps, 2.8 mm Fixed lens, 0.003 Lux at F1.4, 0 Lux with IR on, ICR, ONVIF (PROFILE S, PROFILE G, PROFILE T), support H.265, H.264, MJPEG, 120db WDR, 3D Digital Noise Reduction, BLC, HLC, Three individually configurable stream, 12 VDC & PoE, IR range: 40m, Support on-board storage up to 256 GB (SD card not included), IP67, IK10, Edge Analytics- Line crossing detection, Intrusion detection, Motion detection, Region entrance detection, Region exiting detection, Scene change detection, Face capture, Video tampering, audio exception detection, False alarm reduction through human and vehicle target classification based on deep learning CE, FCC, BIS certified	each	13,162.00
48.3.18	Supply, Installation, Testing & Commissioning of 5 MP IR Fixed Bullet Network Camera -1/2.7 inch Progressive Scan CMOS, 2592 × 1944 at 25fps, 2.8 mm Fixed lens, 0.003 Lux at F1.4, 0 Lux with IR on, ICR, ONVIF (PROFILE S, PROFILE G, PROFILE T), support H.265, H.264, MJPEG, 120db WDR, 3D Digital Noise Reduction, BLC, HLC, Three individually configurable stream, 12 VDC & PoE, IR range: 40m, Support on-board storage including SD Card up to 256 GB , IP67, Alarm 1 inputs, 1 outputs, Audio 1 inputs, 1 outputs, Edge Analytics- Line crossing detection, Intrusion detection, Motion detection, Region entrance detection, Region exiting detection, Scene change detection, Face capture, Video tampering, audio exception detection, False alarm reduction through human and vehicle target classification based on deep learning CE, FCC, BIS certified	each	13,472.00

Code No	Description	Unit	Rate Rs.
48.3.19	Supply, Installation, Testing & Commissioning of 5 MP Varifocal Bullet Network Camera complete with all required specification and supporting accessories.	each	35,089.00
48.3.20	Supply, Installation, Testing & Commissioning of 8 MP Varifocal Bullet Network Camera complete with all required specification and supporting accessories.	each	46,455.00
48.3.21	Supply, Installation, Testing & Commissioning of 4MP IR Outdoor PTZ Camera-1/1.8" Progressive Scan CMOS, 2560 × 1440 at 25fps, 5.9 mm to 188 mm, 32× Optical, 16x digital zoom, Color: 0.005 Lux at F1.5, B/W: 0.001Lux at F1.5, ICR, ONVIF, support H.265,MJPEG, 120 dB WDR, 3D Digital Noise Reduction, HLC, BLC, Defog, EIS, Triple individually configurable stream, 24 VAC & PoE, IR range: 200m, Pan: 360° endless, Tilt: From -15° to 90° (auto-flip), Pan Speed - from 0.1°/s to 160°/s, Preset Speed: 240°/s, Tilt Speed- from 0.1°/s to 120°/s, Preset Speed: 200°/s, Presets- 300, Alarm Input-2-ch alarm input, Alarm Output-1-ch alarm output, Audio-1 channel input & output, Support on-board storage up to 256 GB (SD card not included), IP66, Line crossing detection, intrusion detection, CE, FCC, BIS certified.		1,23,880.00
48.3.22	Supply, Installation, Testing & Commissioning of 2MP IR Outdoor PTZ Camera with 32X Zoom complete with all required specification and supporting accessories.	each	1,00,652.00
48.3.23	Supply, Installation, Testing & Commissioning of ONVIF, IP based 4d PTZ control Joystick complete with all required specification and supporting accessories.	each	38,712.00
48.3.24	RAID box for recording video image 20 TB	each	3,09,700.00
48.3.25	RLVD Workstation	each	1,01,018.00
48.3.26	Supply Installation Testing & Commissioning of Intel® Xeon™ E3-2124, Microsoft® Windows Server 2012 R2, 16G x 1 DDR4, 2400MT/s UDIMMS, 1T SATA × 2, 3.5" Enterprise SATA 7.2k HDDs, H330 RAID Controller with RAID 1, up to 4 x 3.5" SAS/SATA HDD, up to 4 x 3.5" SAS/SATA HDD, 1GbE × 2, 1U, Rack Mount, CR-2032 Coin Cell/Lithium/0.0032kg, 250W Cabled PSU, iDRAC8, Express, 2 VGA Ports: one each on the front and back panels. 5 total USB ports: • Rear: 2 x USB 3.0 ports • Front: 2 x USB 2.0 ports • Internal: 1 x USB 3.0 port Support upto 3000 cameras and 300 preloaded channel license including	each	11,61,374.00
48.3.27	S & F of PVC Trunking for cable management.		
48.3.27.1	32 mm x 16 mm	each	104.00

Code No	Description	Unit	Rate Rs.
48.3.28	Supply, Installation, Testing & Commissioning of ANPR (Automatic number Plate Recognition Camera + 1 illuminator Hardware accelerated, built-in motion detection Auto day & night switch; adaptive settings to environmental settings Automatic time synchronization (NTP) Adjustable image compression for max LPR performance Still images (JPEG) and compressed live video streams (MJPEG) Powerful IR illumination while low power consumption Extreme operation environments: IP67 rating. including power supply & suitable mounting clamp, etc. complete,	each	2,36,382.00
48.3.29	Supply, Installation, Testing & Commissioning of 9MP Automatic number Plate Recognition (ANPR) Camera covering 3 lanes complete with all required specification and supporting accessories. Features only for 4 wheelers & Trucks. Without client Server.	each	5,98,752.00
48.3.30	Supply, Installation, Testing & Commissioning of Red Light Violation Detection (RLVD) Controller with 32 optically isolated RED light inputs and 48 Vehicle Detection inputs I/O module suitable for automatic detection of RED LIGHT including industrial based PC of following specs-Intel core i5, Windows 7 or higher- 64 bit OS, 16GB RAM, 1TB HDD, 4 USB ports, /1 Gbps Ethernet, VGA port, Separate Cooling fan attached to enclosure, Din rail mountable connectors, MCB and required power supplies for the system all housed in a pole mountable enclosure including necessary mounting clamps and hardware etc. complete. without client software	each	4,09,161.00
48.3.31	Supply, Installation, Testing & Commissioning of Red Light Violation Detection System (RLVD) & Automatic Number Plate Detection System (ANPR)- monitoring 2 Lanes with same direction having 9MP complete with all required specification and supporting accessories. Without client Server.	each	8,83,263.00
48.3.32	Supply, Installation, Testing & Commissioning of Signal Light Detector system complete with all required specification and supporting accessories. Without client Server.	each	1,39,365.00
48.3.33	Supply, Installation, Testing & Commissioning of Speed Violation Detection Solution (SVDS) Single Location having 9MP Capture Unit Camera (supporting to 3 Lane) with all required specification and supporting accessories. Features only for 4 wheelers & Trucks. Without client Server.	each	5,98,752.00
48.3.34	Supply, Installation, Testing & Commissioning of Speed Violation Detection Solution (SVDS) for Single Location Radar type (Multilane supported) with all required specification and supporting accessories. Features only for 4 wheelers & Trucks. Without client Server.	each	8,05,219.00
48.3.35	Supply, Installation, Testing & Commissioning of Strobe Light for single Lane type, supporting to ANPR/RLVD/SVDS complete with all required specification and supporting accessories. Without client Server.	each	1,54,850.00

Code No	Description	Unit	Rate Rs.
48.3.36	Supply, Installation, Testing & Commissioning of Terminal/Client Server supporting for ANPR/RLVD/SVDS complete with all required specification and supporting accessories.	each	4,56,807.00
48.3.37	SITC of Safespace series SPEED RADAR SIGN of AC or solar operated SP-100 or equivalent Model	each	2,86,472.00
48.3.38	Supply, Installation, Testing & Commissioning of Automatic Over Speed Violation Detection The SpeedCAM SmartCam should be a pre-built ANPR/LPR system, including- ANPR camera- PC- Radar- ANPR software. Also should be combination of FXCAMd camera, an embedded industrial computer with installed FreeFlow software and radar. The camera module provides ideal images for the embedded PC which processes the images with license plate recognition technology. The image capturing should be triggered by the radar and the motion detection together. Full processing should be performed inside the unit (like time stamp application). Images, license plate texts, location, speed and time should stored in the camera database with easy access through a built-in web-server. with Vehicle Registration Number Plate Recognition and Prosecution System with other related equipment including installation & outstation communication, UPS etc.	each	30,64,414.00
48.3.39	SITC of battery bank comprising SMF/VRLA batteries, inter-connection wiring etc. as required complete in all respect.		
48.3.39.1	12 V 26 Ah	each	3,780.00
48.3.39.2	12 V 42 Ah	each	5,544.00
48.3.39.3	12 V 65 Ah	each	7,727.00
48.3.39.4	12 V 100 Ah	each	11,422.00
48.3.40	SITC of Solar Charge Controller MPPT/ PWM charger to charge 12 V (nominal) battery with not less than 94% Solar charge controller efficiency with indications for charger, full charge and charge disconnected of cap. Upto 50 Amp.	each	4,290.00
48.3.41	Installation ,Testing & Commissioning of OS, database Application Software Configuration and Fine tuning including one year warranty support	each	21,26,453.00
48.3.42	RLVD Application (CDAC) up to 50 Nodes	each	17,82,669.00
48.3.43	ANPR Software	each	8,91,334.00
48.3.44	All in all maintenance to keep up of complete ATCS in working order. The system is based on CDAC Technology working on composite signal control strategy (CoSiCoSt) software installed at Control Room without network connectivity. (Excluding Traffic Signals, U.P.S. & A.Cs)	each per point per year	13,086.00
48.3.45	All in All Maintenance of U.P.S. (5KV) to Keep up in Working Order.	each per year	1,003.00
48.3.46	All in All Maintenance of Air Conditioners to Keep up in Working Order	each per year	535.00

Code No	Description	Unit	Rate Rs.
48.3.47	Rent for 100Mbps for connectivity for operation of ATCS	each per year	5,137.00
48.3.48	All in All Maintenance to keep up Traffic-cam Cameras with Software & Hardware Complete in all respect.		
48.3.48.1	Cameras with Power Supply	each per month	1,188.00
48.3.48.2	Modules	each per month	624.00
48.3.49	SITC of microprocessor based UTCS type automatic electronic controller conforming to IS: 7537 for traffic signals complete with electronic timer, G.P.S. based control board, blinker unit for night operation and slip lane, day time peak hour's operation. The controller shall have 32 signal phases, 25 Signal Plan, 24 Cycle Plan, 32 Signal Split Plan, 32 Cycle conditions, 32 signal line, solid state relay switching R.S 485 communication and 4 hurry call inter phase, manual override facility up gradable vehicle actuated system, also have method of traffic control with fixed time isolated intersection and cable less/cabled interlinking for synchronized operation. The unit shall be totally enclosed in 2.00mm thick metal sheet box size 99 cm x 61.5 cm x 35.5 cm including making connection	each	1,78,267.00
48.3.50	Add extra for upgrading the exiting microprocessor based controller to ATCS (area Traffic Control System) controller.	each	59,422.00
48.3.51	SITC Traffic Cam X-Stream Integrated I.P. Based Camera for vehicle presence detection & video use for traffic monitoring, use can configuration view and control and system both side and remotely having following key Functionalities: (1) All in one Sensor (Camera Detector), (2) MPEG-4 Image Compression (3) Real Time Verification & Monitoring (4) Up to 24 "Virtual" Detection Zones.		
48.3.51.1	Camera Only.	each	1,35,428.00
48.3.51.2	Module only	each	73,514.00
48.3.52	SITC of Surveyor VFT (IP Dome) APTZ Camera with 360 degree rotation and digital zoom facility, which is also a transmitter. It can be connected straight to the net work, video transmission via IP Coaxial, Fibre Optic or twisted Pair (UTP) in ceiling or pendant configurations for indoor or outdoor installation with Ex view 23 x or 35 x high resolution color on day/night camera with Vandal proof and pressurized housings and privacy masking.	each	2,50,762.00
48.3.53	S.I.T.C of WiTraC 32Bit Microcontroller based Solar Power / PWM Automatic electronic controller, conforming to IEC- 60068(ERTL) for Traffic Signals complete with electronic timer, G.P.S. based control board, blinker unit for night operation and slip lane, day time peak hours operation, The controller shall have 32 signal phase, Signal Switching and feedback on wireless medium, 24 Cycle Plan, 32 Signal Split Plan, 24 Cycle switching/days, 20 selective days/annum, 4 – Week Plan, 16 optically isolated solid state lamp driving outputs, 16 optically isolated vehicle detector, 20 X 4 LED backlit LCD and 5		

Code No	Description	Unit	Rate Rs.
	X 4 keypad 8 Auxiliary I/O interface, USB, CAN, R.S.232 communication and 4 hurry call inter phase, manual override facility up gradable vehicle actuated system, also have method of traffic control with fixed time isolated intersection and cable less/ cabled interlinking for synchronized operation, including additional features such as (a) facility to enter traffic volume,(b) Provision for 3 to 5 second Red/ Green flash before starting of stage, (c) Red Light violation data from all the approaches and (d) Using External Ethernet adapter to USB for using 4G or higher dongle/ router for networking and making connections.		
48.3.53.1	Master Controller (Size L -607 X W- 298 X D-176 mm.) o 12 V DC $\pm$ 10% 3.6 W	each	1,29,045.00
48.3.53.2	Slave Controller (L - 400 X W - 298 X D - 176 mm) o 12 V DC $\pm$ 10% 3.0 W	each	75,153.00
48.4	Stablisers		
48.4.1	Supply, Fixing and testing of following capacity wall mounted stablisers having output voltage variation from 200V to 250V(+/-5%) with input voltage variation from 170V to 260V, time delay facility from 2 to 4 minute and high cutoff at 270V complete in all respect		
48.4.1.1	3 kVA	Each	3,073.00
48.4.1.2	4 kVA	Each	3,438.00
48.4.1.3	5 kVA	Each	4,023.00
48.5	City Beautification items		
48.5.1	Providing & Fixing of IK07 IP-66 protected high power LED flood light system with Pressure diecast aluminium housing LM6/ ADC12 material , toughened glass diffuser with suitable lenses on LED to achieve various beam angles, 240 volt, 50Hz, of high power LED lamps . Integrated driver must be potted & has a unique BIS number shall be high efficiency having efficiency more than 85 % and in compliance to BIS certified and T.C. certificate. The System level Luminaire efficacy $\geq$ 120 lm/ wt with High Power LEDs is to be used . LED driver Input Voltage AC 120 to 270 V AC with High voltage Cutoff @ $\geq$ 300 V AC and Auto resetting Safety . Input Frequency 50Hz $\pm$ 3%, Power Factor $>$ 0.95 ,driver Efficiency $>$ 85% , THD(I) $<$ 10% , driver current $<$ 1000mA shown in LM79 report. driver should be Phase to phase protection of 440 V for 4 Hrs. Electrical Connector Must be provided, Surge Protection Min $\geq$ 4KV internal and 10KV external, System life of 30000 Burning hours with 70% of Initial Lumens maintained, color Rendering Index $>$ 70 and CCT 5700K $\pm$ 355K. Driver current $<$ 1000mA shown in LM79 report. Fixture shall be IS 10322 Compliant. All as per pre approved by Engineer in-charge.		
48.5.1.1	High Power LED Flood Light 30W	Each	2,532.00
48.5.2	P & F of IP68, IK10 protected LED Buried marker light /Step Light Fixture. Fixture made of powder coated die cast aluminium with Toughened Glass cover and appropriate beam angle lens to be		

Code No	Description	Unit	Rate Rs.
	used as per requirement. The System level Luminous efficacy must be >90 Lumen/W. High Power LEDs at 1W/2W per LED. The driving current should be Minimum 350 mA per LED. CRI>70, CCT: 3000/6500 K. The integral SMPS based electronic driver must be constant current and surge protection of min. 4KV(L-N) and efficiency >85%, PF>0.9 and input Voltage range of 90-270V AC at 50Hz. System life of 50000 Burning hours with 70% of Initial Lumens maintained. Light should include quick connecting cable coupled with various mounting accessories. Light output in Cool white or Warm White Colour as per engineers choice. Fixture must be in compliance with IS/CE Standards.		
48.5.2.1	Burial Light - 5W	Each	4,513.00
48.5.3	P & F of IP68, IK10 protected LED Buried marker light / Step Light Fixture. Fixture made of powder coated die cast alluminium with Toughened Glass cover and appropriate beam angle lens to be used as per requirement. The System level Luminous efficacy must be >90 Lumen/W. High Power LEDs at 1W/2W per LED. The driving current should be Minimum 350 mA per LED. CRI>70, CCT: 3000/6500 K. The integral SMPS based electronic driver must be constant current and surge protection of min. 4KV(L-N) and efficiency > 85%, PF>0.9 and input Voltage range of 90-270V AC at 50Hz. System life of 50000 Burning hours with 70% of Initial Lumens maintained. Light should include quick connecting cable coupled with various mounting accessories. Light output in Cool white or Warm White Colour as per engineers choice. Fixture must be in compliance with IS/CE Standards.	Each	3,103.00
48.6	AIR COOLED DX SYSTEM :		
48.6.1	Supply , Installation, Testing and Comissioning of ISO certified company made Air Cooled Hi Wall split type Air conditioners with latest star rating system as per BEE amended upto date complete with Indoor unit(IDU), Out door unit (ODU), surface / concealed copper Refrigerant piping with insulation (closed cell elastomeric nitrile rubber tubular pipe section) upto 3 Mtr (IDU to ODU), copper power cable upto 3.5 Mtr (IDU to ODU), R-32/R-410/ R-407 Green Refrigerant, wireless Remote control, suitable for working between 180-260V with low & high voltage cutoff and 50 hz ,1 phase AC supply capable of performing cooling, dehumidification, air circulation of following capacity with Scroll / rotary compressor. Min 5 year OEM warranty both compressor and PCB. NABL accredited as per IS/ISO/IEC 17025 standards / CPRI/ ERDA lab testing reports as per IS 1391(Part-2) 2018 with OEM certificate must submitted to engineer in-charge. All as per pre approved by Engineer in-charge. All as per pre approved by Engineer in-charge. For additional technical parameters of products/work , refer Annexure "A" attached with this BSR .		
48.6.1.1	Non Invertor Type 1.8/2.0 TR with 3 star rating of BEE (ISEER not less then 3.5)	No.	50,874.00

Code No	Description	Unit	Rate Rs.
48.6.2	SITC of ISO certified company made air cooled ducted split type air conditioning machine with each having a capacity and details as mentioned below suitable for operation on R-32/R-410A R-407 Green refrigerant comprising of single/twin Scroll / Rotary / Reciprocating type compressor hermetically sealed complete with automatic capacity, safety switches, lubrication system, with min 5 year OEM warranty both compressor and PCB , Suitable capacity squirrel cage induction motor with class 'B' insulation suitable for operation on 415 + 10% volts, 50 Hz, A.C. supply for Blower motor, Necessary drive arrangement for blower motor, Matching Air cooled condenser with necessary fittings for refrigerant piping connections, necessary structural support for mounting condensers, Microprocessor based control panel complete with accessories, machine isolation / disconnect switch, valves and accessories to inter connect compressor and condenser including pressure testing, vacuum. Necessary starters suitable for Indoor & outdoor unit complete with O/L , U/V, phase reversal protection, single phase preventors etc complete as required. NABL accredited as per IS/ISO/IEC 17025 standards / CPRI/ ERDA lab testing reports as per IS 1391 with OEM certificate must submitted to engineer in-charge. All as per pre approved by Engineer in-charge. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
	Ductable Split type		
48.6.2.1	11 TR	Nos.	2,18,692.00
48.6.2.2	5.5 TR	No.	1,29,111.00
48.7	DX SYSTEM INSTALLATION		
48.7.1	Supply and installation of copper refrigerant piping of required sizes duly insulated with closed cell elastomeric insulation thickness as specified by manufacturer, as per pipe size and cabling between indoor and outdoor complete with proper supports etc for following capacity unit. All related civil work such as making hole, chasing in wall, shall be inclusive in the quoted price.		
48.7.1.1	1.8 TR WALL MOUNTED UNIT (3-Star Rated), R-32 Gas Inverter/ Non Inverter	Rmt	1,544.00
48.7.1.2	11.0 TR DUCTABLE UNIT, R-22 gas, Non Inverter type	Rmt	3,456.00
48.7.1.3	5.5 TR DUCTABLE UNIT, R -22 gas, Non Inverter type	Rmt	2,720.00
48.7.2	Communication cable between IDU & ODU		
48.7.2.1	For Split AC (2.5 Sq mm X 4 C)	Rmt	367.00
48.7.2.2	For Ducted AC (1.5 sq mm X 8 C)	Rmt	662.00
48.7.3	To supply, install, test and commission PVC drain pipes duly insulated with 6 mm thick nitrile rubber and 'U ' traps from indoor units to nearest drain point.		
48.7.3.1	32 mm dia	Rmt	367.00

Code No	Description	Unit	Rate Rs.
48.7.3.2	25mm dia.	Rmt	309.00
48.7.4	Out door stand for Split Ac (pre fabricated)	nos	3,677.00
48.7.5	Out door stand MS frame for ducted AC	nos	9,559.00
48.8	Air Distribution Part		
48.8.1	Supply , Installation, Testing and Comissioning of ducting made from GSS of class VIII & fabricated as per IS:655 and as per approved drawings & designs including the cost of hangers, supports, angle, expansion fasteners , closed cell neoprene gasket T&P etc. as required of following gauge:- All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR . SITE FABRICATED GI SHEET DUCT		
48.8.1.1	0.63mm (24 G)	Sqmt	645.00
48.8.1.2	0.80mm (22 G)	Sqmt	819.00
	FLEXIBLE CONNECTION		
48.8.2	P & F of Fire retardent , non porous double layer Canvas of required size with GI frame ,Gasket Nut Bolts for air cooling Plants/AHU/FCU etc complete with making connections etc as required All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR . GRILLE / DIFFUSER	nos	1,874.00
48.8.3	Supply, installation, testing and commissioning of terminal air distribution equipment as per approved shop drawings, colour and specifications.		
48.8.3.1	Powder Coated aluminium linear grille with aluminium damper.	Sqmt	12,500.00
48.8.3.2	Powder Coated aluminium linear/square grille without damper.	Sqmt	11,031.00
48.9	Volume Control Damper of standard duty flanged style frame dampers with opposed blade linkage drive, made out of 1.0 mm galvanised steel.	Sqmt	8,089.00
48.10	Fire smoke damper made of heavy gauge galvanised steel having multi blade construction,90 min fire rating, with UL stamped thermal cut-off with spring return electric actuator motor.	Sqmt	66,914.00
48.11	P & L of IP66 protected high power high power LED linear flood light system. Fixture made of powder coated extruded aluminium housing with UV stabilized PC/toughened glass cover and appropriate lens to be used to achieve various beam angle pattern. fixture suitable for input 12vDC, power consumption should be 6W/0.5A per feet with system CRI- 70, color red/ green / blue/ /RGB W/WW. the fixture must have IP66 protected 5mm Round female connector for input, the fixture must have provision to extend further . system life of 50000burning hours with 70% of initial lumens maintained . light output in red, green, blue, cool, white or warm white colour as per requirement. fixtures shall be CE complete series of linear flood		

Code No	Description	Unit	Rate Rs.
	light.		
48.11.1	Linear LED Strip 1 Feet (with Driver)	Each	9,379.00
48.11.2	Linear LED Strip 2 Feet (with Driver)	Each	14,068.00
48.11.3	Linear LED Strip 4 Feet (with Driver)	Each	25,793.00
48.12	Providing & Fixing of ISO certified company made IK10 IP65 protected Top/Bottom mounted LED Post top Light system. Fixture made of powder coated die cast aluminium housing with UV stabilized PC diffuser. The System level Luminous efficacy ≥ 90 Lumen/W. SMD LEDs is to be used, System CRI>70, CCT: 3000/4000/6500 K. The integral electronic driver must be potted & has a unique BIS R number must be potted & has a unique BIS R number constant current and Internal/external surge protection device of min. 4KV(L-N) and efficiency > 85%, PF>0.9, THD<20% and input Voltage range of 90-270V AC at 50Hz. System life of 30000 Burning hours with 70% of Initial Lumens maintained Light output in Cool white or Warm White Colour as per engineers choice. driver current <1000mA shown in LM79 report. Fixture must be in compliance with BIS Standards and T.C . Certificate complete in all respect.OEM Must have its own in house NABL lab setup for all testing facilities for LED fixtures. (LM79/LM80) Certificate/ report with liable warranty of product/accessories from OEM. All as per pre approved by Engineer in-charge.		
48.12.1	30 W LED Post Top Fixture	Each	6,151.00
48.13	Supply, Installation, Testing and Commissioning of Spike Light with 10 Degree Beam Deflection and 3000 K CCT.		
48.13.1	6 Watt	Each	2,220.00
48.13.2	12 Watt	Each	4,285.00
48.14	Supply, installation, testin and commissioning of 18W LED recess mounted LED ceiling light with die cast aluminium housing for thermal management. High efficiency diffuser for glare free uniform light distribution. • Integrated with COB light LED. • High PF >0.9 constant current LED driver with 2.5KV built in surge and thermal protection. • Cable entries for through-wiring of mains supply cable. • Suitable for operation on 240V, 50Hz single phase ac supply.	Each	1,830.00
48.15	Supply, installation, testing and commissioning of 18 watt LED 3000K, 4000K 240Vac CRI >80 MacAdam step 3 Input power : 18W Dimension Ø100 x 150mm Beam angle : 15° / 25° / 40° Electronic driver ON/OFF CE and BIS LUMINAIRE TYPE Ceiling Mounted Down Light. IP rating IP65 MATERIAL CHARACTERISTICS Extruded aluminium pipe (grade 6063 with test certificate) Ø100 x 2.5mm thickness & cast aluminium plate for surface mounting on ceiling (grade ADC12 with test certificate). SS fasteners. Silicone gasket. Mechanical resistance IK07. Pure polyester powder coated process : Acid treatment & pure polyester powder coating. LIGHTING PERFORMANCE Hybrid optics with lens & reflector combination for higher efficiency, lower optical losses with optimum glare suppression. Clear toughened glass diffuser of 4mm thickness	Each	9,326.00

Code No	Description	Unit	Rate Rs.
	with controlled downward light emission. Lifespan of the luminaire > 60,000 hours at 40°C. Operating ambient temperature range is from -15°C to +50°C. Driver efficiency >85%, power factor >0.95, THD <10%, Surge protection 3KV.		
48.16	Providing and Fixing Panel Light for Ceiling 595x595 (48 Watt) complete as per standard specification, as per Direction of Engineer in-charge.	Each	3,686.00
48.17	Decorative heritage pole in 4 Meter height. Pole upper section of length 3mtr is of dia 76mm and 1 meter bottom section of dia 114mm with decorative casting with base plate as per drawing. Provision for inside termination box with 4way connector & 1nos 6 AMPS MCB for local isolation with cover.Complete in all aspects with foundation bolts.	Each	20,060.00
48.18	Providing & Fixing of IP40 LED Surface/ Recessed / suspended mounting Mid power SMD type LED Light fixture made from CRCA sheet steel housing, high purity / transmissivity UV stabilized Non - yellowish diffuser for uniform light distribution. High efficiency with 2.5 KV internal/external surge protection BIS certified isolated driver having efficiency > 85% , with Short & Open circuit protection and in compliance to IEC standards (Integral with light fixture). System lumen efficacy of ≥ 120 lm/Watt ,THD < 10 % , p.f. ≥ 0.95 ,CRI >80 , life time of minimum 50000 Burning Hours with , 70% of initial Lumen maintained till life ends , CCT 3000°K / 4000°K / 5700°K /6000°K/6500°K (As per ANSI Bin) , maximum power consumption should not more than the specified rating and Fixture shall be of BIS standard and trade mark certificate (T.C.). Manufactures Word Mark/ Name Engraved/ Embossing/ Screen printing on housing.		
48.18.1	36W LED light fixture 2'x2' with acrylic / prismatic front cover.	Each	2,608.00
48.19	Providing & Fixing of IK07 IP 66 protected LED Street Light Luminaire on existing bracket/pole. Fixture made of powder coated single piece pressure die cast aluminum LM6/ ADC12 material with heat dissipation fins on housing with UV stabilized PC/Toughened Glass cover (UV stabilization report submitted for UV cover) and secondary lens on each LED & should be SMD type . The System level Luminaire efficacy ≥ 120 lm/ wt with High Power LEDs is to be used and potted driver must be potted & has a unique BIS number with Input Voltage AC 120 to 270 V AC with High voltage Cutoff @ ≥ 300 V AC and Auto resetting Safety ,Input Frequency 50Hz $\pm 3\%$ Power Factor >0.95 driver Efficiency >85% ,THD(I) <10% Humidity 10% to 90% RH Working Temp -5C to 45C . driver current <1000mA shown in LM79 report. The luminaire shall be BIS certified and T.C. certified. Life Expectancy Equal or more than 50000 burning hrs with Minimum 70% lumen maintained, color Rendering Index >70 and CCT 5700K +355K. Surge protection shall be min ≥ 4 KV internal and min 10 KV external. driver should be Phase to phase protection of 440 V for 4 Hrs. Manufactures Word Mark/Name Engraved/Embossing on die cast housing to allow traceability/authenticity. Fixture shall be AS PER IS 10322 Compliant. All as per pre approved by Engineer in-charge.		
48.19.1	LED Street Light fixture 30 Watt	nos	2,465.00

49.0 LIFTS

Code No	Description	Unit	Rate Rs.
49.1	Supplying, installation, Testing and commissioning of the passenger/goods/Stretcher or Bed elevator having following main features: (a) MOTOR : Gearless lift drive comprising of high starting torque lift duty, 3 phase 440 Volts A.C. permanent magnetic synchronous motor of proper rating with high efficiency shall be used. (b) Operation/Drive : Microprocessor based /PLC, AC Variable Voltage variable frequency variable speed (V3F) vector control drive with encoder feedback closed loop system shall be used for lift car and door operation which shall be full collective selective operation hall call demand response, UP/Down hall stops, main, Up/Down contactor with overload and phase reversal relay and safety controls. (c) Traction Media: main hoist flat coated steel belt / rope. Thimbles of spring permit adjustment of uniform tension for smooth operation of the elevator Pulse belt monitoring system to avoid the cut in the belt. (d) Car : car should be with M S platform with bracings of adequate size and to sustain the impact load cabin plus passengers with safety factor of fire for steel with Anti-skid PVC flooring and side panels should be of Stainless steel with hair line finish of sheet of grade 304 duty with S.S. handrails . Car ceiling shall be steel finish with aesthetic appearances with LED ceiling lights .The size of the car shall be taken as per available lift well size and relevant BIS code of lifts. Car panel will also be of S S 304 grade finished with emergency stop device, emergency alarm, mechanical door safety device, full length infra-red curtain in car door, facility of auto/attended mode. All car panel buttons and all floor switches must be with brail language as per lift act. Agency shall also provide & install one No. 2 MP , IR , IP based ceiling mounted Dome Camera in the car complete with connecting cables & accessories (To be connected with existing CCTV system in the Building) .The inspection unit shall be provided at the top of the car. (e) Landing Doors: All landing door shall be fully automatic centre opening / telescopic made of hair line finish stainless steel grade 304 with key holes and infrared curtains with unlocking facility from outside. (f) Emergency light: Appropriate rechargeable battery operated LED emergency light in the car and along with alarm switch shall be provided. (g) ARD: Automatic rescue Device (ARD) shall be provided according to passenger capacity with SMF batteries of approved brands as per BSR. (h) Audio-Visual Indication: Audio visual indication in the lift		

Code No	Description	Unit	Rate Rs.
	car, showing over loading such that doors kept open till excess load is removed. (i) Scrolling Indicators: Digital scrolling indicator system for up-down arrow with floor position indicator shall be provided inside the car and at all stops/floors. (j) Buffers: Spring buffers/PU Buffers shall be provided. (k) Car Fan: ENERGY EFFICIENT Car fan/blower with automatic sleep timer shall be provided. (l) Voice Annunciator: Voice annunciator with suitable music shall be provided in lift car. (m) Self diagnostics system for operational and safety parameters shall be provided in control panel. (n) Mechanical/Electronic over speed governor, door key holes in the floor doors, fireman switch shall be provided. (o) Lift machine hoisting arrangement in the lift machine room, counter balance to promote smooth and economic operation complete with steel guide rails for the car & counter weight, Trap Door, Lifting hooks as required and monkey ladders for lift pit should be provided by the agency along with all other steel structure works, foundations for the machine etc as required. (p) Permanent wiring in lift machine room and in lift well with providing and fixing of electrical distribution board complete with SP & TP MCB's, proper numbers of light points, with LED fixtures, exhaust fan, 2 nos copper plate /chemical earthing with 8 SWG copper earth wire and plug points shall be provided by the agency. (Power supply of 3 phase 440 V shall be made available by department in lift machine room.) (q) All civil work related to installation of lift like finishing, cleaning and levelling of lift pit, white wash of lift well and in machine room shall be done by the lift erecting agency without any extra cost. (r) Granite or marble cladding around all landing door openings shall be in the scope of lift installation agency and additional payment shall be made according to the actual measurement/schedule by the department to the lift agency. (s) Agency has to provide all working drawings and documents to comply latest BIS specifications and make proper liaison services for obtaining all necessary permissions.		
49.1.1	6 passengers/408 Kg, 3 stops, rated speed adjustable up to 1.0 mtr /sec with 2 years comprehensive maintenance / DLP.	Job	13,38,883.00
49.1.2	8 passengers/544 Kg, 3 stops, rated speed adjustable up to 1.0 mtr /sec with 2 years comprehensive maintenance / DLP.	Job	14,39,974.00
49.1.3	10 passengers/680 Kg, 3 stops, rated speed adjustable up to 1.0 mtr /sec with 2 years comprehensive maintenance / DLP.	Job	15,41,064.00
49.1.4	13 passengers/884 Kg, 3 stops, rated speed adjustable up to 1.0 mtr /sec with 2 years comprehensive maintenance / DLP.		
	Note: Add Rs 65,000/- per stop in the above rate for elevator up to 13 passenger and 10 stops.	Job	17,58,798.00

Code No	Description	Unit	Rate Rs.
49.1.5	15/16 passengers/1020/1088 Kg, 3 stops, rated speed Adjustable up to 1.0 mtr /sec with 2 years comprehensive maintenance / DLP . Note 1 : Add Rs 90,000/- per stop in the above rate for elevator up to 10 stops. Note 2 : Add Rs 50000/- extra for equivalent bed elevator in place of normal passenger elevator .	Job	20,66,645.00
49.1.6	20 passengers/1360 Kg, 3 stops, rated speed Adjustable up to 1.0 mtr /sec with 2 years comprehensive maintenance / DLP. Note 1 : Add Rs 90,000/- per stop in the above rate for elevator up to 10 stops. Note 2 : Add Rs 75000/- extra for equivalent bed elevator in place of normal passenger elevator.	Job	24,63,233.00
49.1.7	26 passengers/1768 Kg, 3 stops, rated speed Adjustable up to 1.0 mtr /sec with 2 years comprehensive maintenance / DLP. Note 1 : Add Rs 90,000/- per stop in the above rate for elevator up to 10 stops Note 2 : Add Rs 100000/- extra for equivalent bed elevator in place of normal passenger elevator.	Job	33,96,378.00
49.1.8	Goods Elevator/1000 Kg, 2 stops, rated speed adjustable up to 1.0 mtr /sec with 2 years comprehensive maintenance / DLP. Note : Add Rs 90,000/- per stop in the above rate for elevator up to 10 stops	Job	20,51,093.00
49.1.9	Goods Elevator /1500 Kg, 2 stops, rated speed adjustable up to 1.0 mtr /sec with 2 years comprehensive maintenance / DLP. Note : Add Rs 90,000/- per stop in the above rate for elevator up to 10 stops Note1: The above rates are for the all elevators having gearless drive with machine room Note2: Rates for Geared drive of all Elevator with machine room shall be deducted @ Rs. 50000/- each up to 13 Passenger and Rs 75000/- each for Above 13 Passenger capacity. Note 3: Rates for Machine room less (MRL) Elevator shall be added @ Rs 50,000/- for each up to 13 passenger and Rs 75000/- each for above 13 passenger capacity. Note 4: Add Extra for all elevators with Honeycomb / moonrock finish S. S. car @ Rs 40000/- for Car & Rs 10000/- per stop for landing doors.	Job	24,39,904.00
49.2	All in all comprehensive maintenance after defect liability period of the passenger/bed cum stretcher /goods elevator having various speed as per OEM guidelines and maintenance manual including car with all car accessories, hoist way accessories and complete with machine room accessories but excluding replacement of diffused battery bank of ARD system as per following details.		
49.2.1	6 Passenger, 408 Kg Elevator up to 5 Stops with Machine Room	Job P. Month	7,505.00

Code No	Description	Unit	Rate Rs.
49.2.2	8 Passenger, 544 Kg Elevator up to 5 Stops with Machine Room	Job P. Month	8,083.00
49.2.3	10 Passenger, 680 Kg Elevator up to 5 Stops with Machine Room	Job P. Month	8,660.00
49.2.4	13 Passenger, 884 Kg Elevator up to 5 Stops with Machine Room	Job P. Month	9,815.00
49.2.5	15/16 Passenger, 1020/1088 Kg Elevator up to 5 Stops with Machine Room	Job P. Month	11,547.00
49.2.6	20 Passenger, 1360 Kg Elevator up to 5 Stops with Machine Room	Job P. Month	14,722.00
49.2.7	26 Passenger, 1768 Kg Elevator up to 5 Stops with Machine Room	Job P. Month	19,053.00
49.2.8	1000 Kg Goods Elevator up to 5 Stops with Machine Room	Job P. Month	11,259.00
49.2.9	1500 Kg Goods Elevator up to 5 Stops with Machine Room	Job P. Month	13,279.00
NOTE :- Add @ Rs 350/- per stop per month for more than 5 stops and up to 10 stops for AMC of Elevators .			

ELECTRICAL SECTOR

Office of the Chief Engineer (Electrical), PWD, Rajasthan has issued Basic Schedule of Rates for electrical works vide no. CE (Elect.)/BSR/2022-23/D-148 dated 30.05.2022 which is effective from 01.06.2022. RUIDP has adopted the same with the modification in its SoR 2023 for electrical sector. As PWD BSR is effective from 01.06.2022, rates of each item for PWD BSR have been increased considering price index issued by office of the Economic Advisor, Ministry of Commerce and Industry, GoI to make the rates of electrical items at par with rates of other items of RUIDP SoR– 2023.

RUIDP has adopted the rates of items of Solar-based water supply schemes (chapter-76) from PHED, Rajasthan's SOR, which is effective from July 2023.

NOTE: Amendments/corrigendum to be issued from time to time with regards to PWD Rajasthan's Electrical BSR-2022 and PHED, Rajasthan's SOR-2023 for chapter-76 (items of Solar-based water supply schemes) shall form the part of RUIDP SOR-2023 for which no separate order will be issued.

50.0 ELECTRICAL WIRING IN PVC CONDUIT

Code No	Description	Unit	Rate Rs.
50.1	Wiring of light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq. mm nominal size FR PVC insulated unsheathed flexible copper conductor 1.1 kV grade and 1.5 sq. mm nominal size FR PVC insulated unsheathed flexible copper earth conductor 1.1 kV grade (IS:694) in recessed ISI marked MMS (IS:9537 P - III) virgin material PVC conduit & it's ISI marked (IS:3419-1988) accessories, round tiles, 1.2 mm thick Hot Dipped Galvanized Modular Box with earth terminal, 10A Modular switch, Modular face plate with grid plate, 3 pin ceiling rose / Holder /3 way connector, screws, making connections, testing etc. as required. For specification of copper Conductor, Phenolic Laminated sheet's & Electrical/ Wiring accessories refer Chapter-53, 54 & 56 for additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
50.1.1	Short point (up to 3 mtr.)	P. point	368.00
50.1.2	Medium point (up to 6 mtr.)	P. point	592.00
50.1.3	Long point (up to 10 mtr.)	P. point	791.00
50.2	Wiring of twin control light point with 1.5 sq. mm nominal size FR PVC insulated unsheathed flexible copper conductor 1.1 kV grade and 1.5 sq. mm nominal size FR PVC insulated unsheathed flexible copper earth conductor 1.1 kV grade (IS:694) in recessed ISI marked MMS (IS:9537 P - III) PVC conduit & it's ISI marked (IS:3419-1988) accessories, round tiles, 2 Nos Hot Dipped Galvanized M.S Modular box of 1.2 mm thick with earth terminal, 2 Nos 10 A two way Modular switch, 3 pin ceiling rose / holder / 3 way connector ,Modular face plate with grid plate, screws, making connections, testing etc. as required. For specification of copper Conductor, Phenolic Laminated sheet's & Electrical/ Wiring accessories refer Chapter-53, 54 & 56 for additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
50.2.1	Short point (up to 3 mtr.)	P. point	791.00
50.2.2	Medium point (up to 6 mtr.)	P. point	1,165.00
50.2.3	Long point (up to 10 mtr.)	P. point	1,257.00
50.3	Wiring of 3/5 pin 6 amp. Light plug point with 1.5 sq. mm nominal size FR PVC insulated unsheathed flexible copper conductor 1.1 kV grade and 1.5 sq. mm nominal size FR PVC insulated unsheathed flexible copper earth conductor 1.1 kV grade (IS:694) in recessed ISI marked MMS (IS:9537 P - III) PVC conduit & it's ISI marked (IS:3419-1988) accessories, Hot Dipped Galvanized Modular box of 1.2 mm thick with earth terminal, 10 A modular switch, 3/5 pin 6 A modular socket, Modular face plate with grid plate, screws, making		

Code No	Description	Unit	Rate Rs.
	connections, testing etc. as required. For specification of copper Conductor, Phenolic Laminated sheet's & Electrical/ Wiring accessories refer Chapter-53, 54 & 56. For additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
50.3.1	On board	P. point	366.00
50.3.2	Short point (up to 3 mtr.)	P. point	520.00
50.3.3	Medium point (up to 6 mtr.)	P. point	744.00
50.3.4	Long point (up to 10 mtr..)	P. point	943.00
50.4	S&F following sizes (dia.) of ISI marked virgin material MMS (IS:9537 P - III) PVC conduit along with ISI marked (IS:3419-1988) accessories as required in recess including cutting the wall, covering conduit and making good the same as required. For additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
50.4.1	20 mm	R. mtr.	41.00
50.4.2	25 mm	R. mtr.	57.00
50.4.3	32 mm	R. mtr.	86.00
50.4.4	40 mm	R. mtr.	118.00
50.4.5	50 mm	R. mtr.	174.00
50.5	Rewiring of light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq. mm nominal size FR PVC insulated unsheathed flexible copper conductor 1.1 kV grade and 1.5 sq. mm nominal size FR PVC insulated unsheathed flexible copper earth conductor 1.1 kV grade (IS:694) in recessed ISI marked MMS (IS:9537 P - III) virgin material PVC conduit & it's ISI marked (IS:3419-1988) accessories, round tiles, 1.2 mm thick MS box with earth terminal, 6 A switch, 3 pin ceiling rose/holder / 3 way connector , 3.0 mm thick ISI marked (IS:2036-1995) phenolic laminated sheet, Al.alloy / Cadmium plated iron/ brass screws, cup washers, making connections, testing etc. as required. For specification of copper Conductor, Phenolic Laminated sheet's & Electrical/ Wiring accessories refer Chapter-53, 54 & 56 for additional technical parameters of product / work refer Annexure 'A' attached with this BSR.		
50.5.1	Short point (up to 3 mtr.)	P. point	262.00
50.5.2	Medium point (up to 6 mtr.)	P. point	484.00
50.5.3	Long point (up to 10 mtr.)	P. point	679.00
50.6	Rewiring of twin control light / fan / call bell point with 1.5 sq. mm nominal size FR PVC insulated unsheathed flexible copper conductor 1.1 kV grade and 1.5 sq. mm nominal size FR PVC insulated unsheathed flexible copper earth conductor 1.1 kV grade (IS:694) in recessed ISI marked MMS (IS:9537 P - III) virgin material PVC conduit & it's ISI marked (IS:3419-1988) accessories, round tiles, 2 Nos 1.2 mm thick MS box with earth		

Code No	Description	Unit	Rate Rs.
	terminal, 2 Nos 6 A two way switch, 3 pin ceiling rose / holder/ 3 way connector, 3.0 mm thick ISI marked (IS:2036-1995) phenolic laminated sheet, Al.alloy / Cadmium plated iron/ brass screws, cup washers, making connections, testing etc. as required. For specification of copper Conductor, Phenolic Laminated sheet's & Electrical/ Wiring accessories refer Chapter-53, 54 & 56 for additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
50.6.1	Short point (up to 3 mtr.)	P. point	483.00
50.6.2	Medium point (up to 6 mtr.)	P. point	899.00
50.6.3	Long point (up to 10 mtr..)	P. point	1,262.00
50.7	Rewiring of 3/5 pin 6 amp. Light plug point with 1.5 sq. mm nominal size FR PVC insulated unsheathed flexible copper conductor 1.1 kV grade and 1.5 sq. mm nominal size FR PVC insulated unsheathed flexible copper earth conductor 1.1 kV grade (IS:694) in recessed ISI marked MMS (IS:9537 P - III) virgin material PVC conduit & it's ISI marked (IS:3419-1988) accessories, 1.2 mm thick MS box with earth terminal of required size, 6 A switch, 3/5 pin 6 A socket, 3.0 mm thick ISI marked (IS:2036-1995) phenolic laminated sheet, Al.alloy / Cadmium plated iron/ brass screws, cup washers, making connections, testing etc. as required. For specification of copper Conductor, Phenolic Laminated sheet's & Electrical/ Wiring accessories refer Chapter-53, 54 & 56 for additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
50.7.1	On board	P. point	139.00
50.7.2	Short point (up to 3 mtr.)	P. point	290.00
50.7.3	Medium point (up to 6 mtr.)	P. point	511.00
50.7.4	Long point (up to 10 mtr..)	P. point	706.00

51.0 ELECTRICAL WIRING IN STEEL CONDUIT

Code No	Description	Unit	Rate Rs.
51.1	Wiring of light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq. mm nominal size FR PVC insulated unsheathed flexible copper conductor 1.1 kV grade and 1.5 sq. mm nominal size FR PVC insulated unsheathed flexible copper earth conductor 1.1 kV grade (IS:694) in recessed ISI marked (IS:9537 P - II) rigid steel conduit & it's ISI marked (IS:14768 P-II 2003) accessories, round tiles, Hot Dipped Galvanized Modular Box of 1.2 mm thick with earth terminal, 10A Modular switch, 3 pin ceiling rose / holder / 3 way connector ,Modular face plate with grid plate, pvc bushes, check nuts, screws, making connections, testing etc. as required. For specification of copper Conductor, Phenolic Laminated sheet's & Electrical/ Wiring accessories refer Chapter-53, 54 & 56 for additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
51.1.1	Short point (up to 3 mtr.)	P. point	488.00
51.1.2	Medium point (up to 6 mtr.)	P. point	874.00
51.1.3	Long point (up to 10 mtr..)	P. point	1,215.00
51.2	Wiring of twin control light / Fan / Call bell point with 1.5 sq. mm nominal size FR PVC insulated unsheathed flexible copper conductor 1.1 kV grade and 1.5 sq. mm nominal size FR PVC insulated unsheathed flexible copper earth conductor 1.1 kV grade (IS:694) in recessed/surface ISI marked (IS:9537 P - II) rigid steel conduit & it's ISI marked (IS:14768 P-II 2003) accessories, round tiles, 2 Nos Hot Dipped Galvanized Modular box of 1.2 mm thick with earth terminal, 2 Nos 10A two way Modular switch, 3 pin ceiling rose / holder / 3 way connector ,Modular face plate with grid plate, screws, pvc bushes, check nuts, making connections, testing etc. as required. For specification of copper Conductor, Phenolic Laminated sheet's & Electrical/ Wiring accessories refer Chapter-53, 54 & 56 for additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
51.2.1	Short point (up to 3 mtr.)	P. point	941.00
51.2.2	Medium point (up to 6 mtr.)	P. point	1,625.00
51.2.3	Long point (up to 10 mtr..)	P. point	2,368.00
51.3	Wiring of 3/5 pin 6 amp. Light plug point with 1.5 sq. mm nominal size FR PVC insulated unsheathed flexible copper conductor 1.1 kV grade and 1.5 sq. mm nominal size FR PVC insulated unsheathed flexible copper earth conductor 1.1 kV grade (IS:694) in recessed ISI marked (IS:9537 P - II) rigid steel conduit & it's ISI marked (IS:14768 P-II 2003) accessories, Hot Dipped Galvanized Modular box of 1.2 mm thick with earth terminal, 10A modular switch, 3/5 pin 6 A modular socket, Modular face plate with grid plate, pvc		

Code No	Description	Unit	Rate Rs.
	bushes, check nuts, screws, making connections, testing etc. as required. For specification of copper Conductor, Phenolic Laminated sheet's & Electrical/ Wiring accessories refer Chapter-53, 54 & 56 for additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
51.3.1	On board	P. point	366.00
51.3.2	Short point (up to 3 mtr.)	P. point	639.00
51.3.3	Medium point (up to 6 mtr.)	P. point	1,026.00
51.3.4	Long point (up to 10 mtr.)	P. point	1,366.00
51.4	S&F following sizes (dia.) of ISI marked (IS:9537 P - II) rigid steel conduit with wall thickness according to IS Specified along with ISI marked (IS:14768 P-II 2003) accessories in recessed using saddles, clamps, fasteners, pvc bushes, check nuts, as required including cutting jhiris in the wall and making good the same as required. For additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
51.4.1	20 mm	R. mtr.	125.00
51.4.2	25 mm	R. mtr.	160.00
51.4.3	32 mm	R. mtr.	219.00
51.4.4	40 mm	R. mtr.	345.00
51.4.5	50 mm	R. mtr.	495.00
51.5	Rewiring of light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq. mm nominal size FR PVC insulated unsheathed flexible copper conductor 1.1 kV grade and 1.5 sq. mm nominal size FR PVC insulated unsheathed flexible copper earth conductor 1.1 kV grade (IS:694) in recessed ISI marked (IS:9537 P - II) rigid steel conduit & it's ISI marked (IS:14768 P-II 2003) marked accessories, round tiles, 1.2 mm thick MS box with earth terminal, 6 A switch, 3 pin ceiling rose/holder / 3 pin connector, 3.0 mm thick ISI marked (IS:2036-1995) phenolic laminated sheet, pvc bushes, check nuts, Al.alloy / Cadmium plated iron/ brass screws, cup washers, making connections, testing etc. as required. For specification of copper Conductor, Phenolic Laminated sheet's & Electrical/ Wiring accessories refer Chapter-53, 54 & 56 for additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
51.5.1	Short point (up to 3 mtr.)	P. point	379.00
51.5.2	Medium point (up to 6 mtr.)	P. point	756.00
51.5.3	Long point (up to 10 mtr.)	P. point	1,084.00
51.6	Rewiring of twin control light / Fan / Call bell point with 1.5 sq. mm nominal size FR PVC insulated unsheathed flexible copper conductor 1.1 kV grade and 1.5 sq. mm nominal size FR PVC insulated unsheathed flexible copper earth conductor 1.1 kV grade (IS:694) in recessed ISI marked (IS:9537 P - II) rigid steel conduit		

Code No	Description	Unit	Rate Rs.
	& it's ISI marked (IS:14768 P-II 2003) accessories, round tles, 2 Nos 1.2 mm thick MS box with earth terminal, 2 Nos 6 A two way switch, 3 pin ceiling rose / holder / 3 way connector, 3.0 mm thick ISI marked (IS:2036-1995) phenolic laminated sheet, pvc bushes, check nuts, Al.alloy / Cadmium plated iron/ brass screws, cup washers, making connections, testing etc. as required. For specification of copper Conductor, Phenolic Laminated sheet's & Electrical/ Wiring accessories refer Chapter-53, 54 & 56 for additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
51.6.1	Short point (up to 3 mtr.)	P. point	682.00
51.6.2	Medium point (up to 6 mtr.)	P. point	1,422.00
51.6.3	Long point (up to 10 mtr..)	P. point	2,064.00
51.7	Rewiring of 3/5 pin 6 amp. Light plug point with 1.5 sq. mm nominal size FR PVC insulated unsheathed flexible copper conductor 1.1 kV grade and 1.5 sq. mm nominal size FR PVC insulated unsheathed flexible copper earth conductor 1.1 kV grade (IS:694) in recessed ISI marked (IS:9537 P - II) rigid steel conduit & it's ISI marked (IS:14768 P-II 2003) accessories, required size 1.2 mm thick , G.I. box with earth terminal, 6 A switch, 3/5 pin 6 A socket, 3.0 mm thick ISI marked (IS:2036-1995) phenolic laminated sheet, pvc bushes, check nuts, Al.alloy / Cadmium plated iron/ brass screws, cup washers, making connections, testing etc. as required. For specification of copper Conductor, Phenolic Laminated sheet's & Electrical/ Wiring accessories refer Chapter-53, 54 & 56 for additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
51.7.1	On board	P. point	139.00
51.7.2	Short point (up to 3 mtr.)	P. point	407.00
51.7.3	Medium point (up to 6 mtr.)	P. point	784.00
51.7.4	Long point (up to 10 mtr..)	P. point	1,112.00

52.0 ELECTRICAL WIRING IN PVC TRUNKING

Code No	Description	Unit	Rate Rs.
52.1	Wiring of light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq. mm nominal size FR PVC insulated unsheathed flexible copper conductor 1.1 kV grade and 1.5 sq. mm nominal size FR PVC insulated unsheathed flexible copper earth conductor 1.1 kV grade (IS:694) on surface ISI marked (IS:14927 P - II) virgin material UPVC trunking & it's accessories, Hot Dipped Galvanized Modular box of 1.2 mm thick with earth terminal/ Surface Moulded virgin material UPVC Modular Box , 10 A Modular switch, Modular face plate with grid plate, 3 pin ceiling rose/holder /3 way Connector, screws, making connections, testing etc. as required. For specification of copper Conductor, Phenolic Laminated sheet's & Electrical/ Wiring accessories refer Chapter-53, 54 & 56 for additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
52.1.1	Short point (up to 3 mtr.)	P. point	370.00
52.1.2	Medium point (up to 6 mtr.)	P. point	599.00
52.1.3	Long point (up to 10 mtr.)	P. point	834.00
52.2	Wiring of twin control light point with 1.5 sq. mm nominal size FR PVC insulated unsheathed flexible copper conductor 1.1 kV grade and 1.5 sq. mm nominal size FR PVC insulated unsheathed flexible copper earth conductor 1.1 kV grade (IS:694) of approved make on surface ISI marked (IS:14927 P - II) virgin material UPVC trunking & it's accessories, Hot Dipped Galvanized Modular box of 1.2 mm thick with earth terminal/ Surface 2 No. Moulded virgin material UPVC Modular Box , 2 Nos 10 A two way Modular switch, 3 pin ceiling rose / holder/3 way Connector , Modular face plate with grid plate, screws, making connections, testing etc. as required. For specification of copper Conductor, Phenolic Laminated sheet's & Electrical/ Wiring accessories refer Chapter-53, 54 & 56 for additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
52.2.1	Short point (up to 3 mtr.)	P. point	748.00
52.2.2	Medium point (up to 6 mtr.)	P. point	1,177.00
52.2.3	Long point (up to 10 mtr..)	P. point	1,554.00
52.3	Wiring of 3/5 pin 6 amp. Light plug point with 1.5 sq. mm nominal size FR PVC insulated unsheathed flexible copper conductor 1.1 kV grade and 1.5 sq. mm nominal size FR PVC insulated unsheathed flexible copper earth conductor 1.1 kV grade (IS:694) on surface ISI marked (IS:14927 P - II) virgin material UPVC Trunking & it's accessories, Hot Dipped Galvanized Modular box of 1.2 mm thick with earth terminal/ Surface Moulded virgin material UPVC Modular Box, modular 10A switch, 3/5 pin 6 A modular socket,		

Code No	Description	Unit	Rate Rs.
	Modular face plate with grid plate, screws, making connections, testing etc. as required. For specification of copper Conductor, Phenolic Laminated sheet's & Electrical/ Wiring accessories refer Chapter-53, 54 & 56 for additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
52.3.1	On board	P. point	399.00
52.3.2	Short point (up to 3 mtr.)	P. point	522.00
52.3.3	Medium point (up to 6 mtr.)	P. point	750.00
52.3.4	Long point (up to 10 mtr..)	P. point	952.00
52.4	S&F following sizes of ISI marked (IS:14927 P - II) virgin material UPVC trunking along with accessories like coupler, inner, outer, elbow, square box, tee, end cap etc. on surface with screws, expansion fasteners as required. For additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
52.4.1	20 mm x 12 mm	R. mtr.	42.00
52.4.2	25 mm x 12 mm	R. mtr.	51.00
52.4.3	32 mm x 12 mm	R. mtr.	66.00
52.4.4	25 mm x 16 mm	R. mtr.	63.00
52.4.5	38 mm x 16 mm	R. mtr.	90.00
52.4.6	38 mm x 25 mm	R. mtr.	100.00
52.4.7	38 mm x 38 mm	R. mtr.	129.00
52.4.8	50 mm x 16 mm	R. mtr.	142.00
52.4.9	50 mm x 50 mm	R. mtr.	230.00
52.4.10	75 mm x 50 mm	R. mtr.	538.00
52.4.11	75 mm x 75 mm	R. mtr.	691.00
52.4.12	100 mm x 50 mm	R. mtr.	865.00
52.4.13	150 mm x 50 mm	R. mtr.	1,306.00
52.4.11	75 mm x 75 mm	R. mtr.	691.00
52.4.12	100 mm x 50 mm	R. mtr.	865.00
52.4.13	150 mm x 50 mm	R. mtr.	1,306.00

53.0 DRAWING OF WIRES AND SUBMAINS

Code No	Description	Unit	Rate Rs.
53.1	Supplying and drawing FR PVC insulated & unsheathed flexible copper conductor as per PWD specification for electrical Works with ISI marked (IS:694) and as per IS 8130 : 2013 of 1.1 kV grade . Wire should be made from 99.90 % purity copper, class 5 stranding in acc. to IS:8130/IEC 60228 for lower watt loss , oxygen free for less chances of oxidization, insulation PVC type A/C/D , flame retardant as per IS 10810-53, better amperage rating as per IS:3961 part 5, in existing surface or recessed PVC/ MS conduit/casing capping making connections with Copper Lugs of suitable size, Ferrules,testing etc. as required. OEM Must have its own in house NABL lab setup for all testing facilities for wires. For additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
53.1.1	1 x 1.5 sq.mm	Mtr.	23.00
53.1.2	2 x 1.5 sq.mm	Mtr.	44.00
53.1.3	3x 1.5 sq.mm	Mtr.	65.00
53.1.4	4 x 1.5 sq.mm	Mtr.	85.00
53.1.5	1 x 2.5 sq.mm	Mtr.	32.00
53.1.6	2 x 2.5 sq.mm	Mtr.	63.00
53.1.7	2 x 2.5 sq. mm. + 1x1.5sqmm	Mtr.	83.00
53.1.8	3 x 2.5 sq.mm	Mtr.	92.00
53.1.9	4 x 2.5 sq.mm	Mtr.	122.00
53.1.10	1 x 4.0 sq.mm	Mtr.	49.00
53.1.11	2 x 4.0 sq.mm	Mtr.	95.00
53.1.12	3 x 4 sq. mm.	Mtr.	140.00
53.1.13	4 x 4.0 sq.mm	Mtr.	187.00
53.1.14	2 x 4.0 sq. mm. + 1 x 2.5 sq. mm.	Mtr.	125.00
53.1.15	1 x 6.0 sq.mm	Mtr.	73.00
53.1.16	2 x 6.0 sq.mm	Mtr.	144.00
53.1.17	3 x 6.0 sq. mm.	Mtr.	213.00
53.1.18	4 x 6.0 sq.mm	Mtr.	283.00
53.1.19	2 x 6.0 sq. mm. + 1 x 2.5 sq. mm.	Mtr.	174.00
53.1.20	2 x 6.0 sq. mm. + 1 x 4.0 sq. mm.	Mtr.	190.00
53.1.21	1 x 10.0 sq.mm	Mtr.	139.00
53.1.22	2 x 10.0 sq.mm	Mtr.	274.00

Code No	Description	Unit	Rate Rs.
53.1.23	4 x 10.0 sq.mm	Mtr.	544.00
53.1.24	1 x 16.0 sq.mm	Mtr.	227.00
53.1.25	2 x 16.0 sq.mm	Mtr.	443.00
53.1.26	4 x 16.0 sq.mm	Mtr.	878.00
53.2	Supplying and drawing coaxial cable 75 ohm impedence with foam PE insulated solid bare copper inner conductor, and 1st outer conductor of bonded alum. tape and second outer conductor of alum. alloy braid in existing surface or recessed conduit/casing capping including making connections as required. For additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
53.2.1	RG - 6	Mtr.	31.00
53.2.2	RG -11	Mtr.	59.00
53.3	Supplying and drawing PE Insulated & PVC Sheathed unarmoured telephone cable with 0.5 mm dia. Solid Annealed electrolytic grade bare Copper Conductor as per IS: 8130/84 & confirming to TEC specification GR / WIR/06-03 March 2002 in existing surface or recessed conduit/casing capping. including ferruling on each pair for Identification etc. as required. For additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
53.3.1	1 pair	Mtr.	12.00
53.3.2	2 pair	Mtr.	18.00
53.3.3	3 pair	Mtr.	27.00
53.3.4	4 pair	Mtr.	34.00
53.3.5	5 pair	Mtr.	42.00
53.3.6	10 pair	Mtr.	85.00
53.3.7	20 pair	Mtr.	163.00
53.3.8	50 pair	Mtr.	402.00
53.3.9	100 pair	Mtr.	843.00
53.3.10	200 pair	Mtr.	1,593.00
53.4	Supply and Laying of PE Insulated, PVC Inner Sheathed, armoured & PVC Sheathed Telephone Cable. with 0.5 mm thick Solid Annealed Bare Copper Conductor as per IS: 8130/84 telephone cable confirming to TEC specifications GR/WIR 06/03, Mar.-2002 in existing pipe / open trench / Cable tray / on surface including making necessary connection, testing etc. as required of size. For additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
53.4.1	5 pair	Mtr.	93.00
53.4.2	10 pair	Mtr.	146.00

Code No	Description	Unit	Rate Rs.
53.4.3	20 pair	Mtr.	237.00
53.4.4	50 pair	Mtr.	503.00
53.4.5	100 pair	Mtr.	929.00
53.4.6	200 pair	Mtr.	1,772.00
53.5	Supply and Laying of PE Insulated jelly filled Armoured Telephone Cable. with 0.6 mm thick Solid Annealed Bare Copper Conductor and confirming to TEC specifications confirming. to DOT GR/CUG-01/Aug.2003 in existing pipe / open trench / Cable tray / on surface including making necessary connection, testing etc. as required of size. For additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
53.5.1	5 pair	Mtr.	116.00
53.5.2	10 pair	Mtr.	173.00
53.5.3	20 pair	Mtr.	260.00
53.5.4	50 pair	Mtr.	542.00
53.5.5	100 pair	Mtr.	975.00
53.5.6	200 pair	Mtr.	1,809.00
53.6	Supply & drawing Wiring for sub mains ISI marked (IS:694) 1100 Volts grade PVC insulated flat twin core sheathed solid aluminium conductor with 10 SWG G.I. Support wire duly clipped etc. as required. For additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
53.6.1	4.0 sq.mm	Mtr.	62.00
53.6.2	6.0 sq.mm	Mtr.	75.00
53.6.3	10.0 sq.mm	Mtr.	100.00
53.7	P/Laying ISI marked P.V.C. insulated submersible cable confirming to (IS:694) and as per IS 8130 : 2013 of 1.1 kV grade . Wire should be made from 99.90 % purity copper, stranding in acc. to IS:8130/IEC 60228 for lower watt loss , oxygen free for less chances of oxidization, insulation PVC type A/C/D , flame retardant as per IS 10810-53, better amperage rating as per IS:3961 part 5, existing pipe / open trench / Cable tray / on surface including making connection etc. as required. For additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
53.7.1	1.5 Sq.mm 3 core flat / Round	Mtr.	94.00
53.7.2	2.5 Sq.mm 3 core flat / Round	Mtr.	150.00
53.7.3	4.0 Sq.mm 3 core flat / Round	Mtr.	219.00
53.7.4	6.0 Sq.mm 3 core flat / Round	Mtr.	308.00
53.7.5	10.0 Sq.mm 3 core flat / Round	Mtr.	502.00
53.7.6	16.0 Sq.mm 3 core flat / Round	Mtr.	762.00

Code No	Description	Unit	Rate Rs.
53.8	Supply and laying following size twin parallel type Speaker cables of IS/ISO 9001 CERTIFIED COMPANY made with multi wire, bright annealed flexible bare electrolytic grade copper conductor, insulated with specially formulated transparent grade PVC compound, red strip for identification in existing conduit etc. as required. For additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
53.8.1	0.75 sq.mm	Rmtr.	37.00
53.8.2	1.0 Sq. mm	Rmtr.	45.00
53.8.3	1.5 Sq.mm	Rmtr.	64.00
53.8.4	2.5 Sq.mm	Rmtr.	103.00
53.9	Supply and laying speaker cable of IS/ISO 9001 CERTIFIED COMPANY made following size 2 core twin twisted multi stranded electrolytic grade copper conductor, overall PVC insulated and armoured cable (Blue colour) on surface/ above false ceiling including cost of GI spacers, saddles etc. as required. For additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
53.9.1	0.75 sq.mm	Rmtr.	105.00
53.9.2	1.0 Sq. mm	Rmtr.	114.00
53.9.3	1.5 Sq.mm	Rmtr.	134.00
53.9.4	2.5 Sq.mm	Rmtr.	187.00
53.10	Supply and laying PVC Insulated and PVC Round Sheathed Multi Core copper conductor (IS:694) and as per IS 8130 : 2013 of 1.1 kV grade . Wire should be made from 99.90 % purity copper, stranding in acc. to IS:8130/IEC 60228 for lower watt loss , oxygen free for less chances of oxidization, insulation PVC type A/C/D , flame retardant as per IS 10810-53, better amperage rating as per IS:3961 part 5, in existing pipe / open trench / Cable tray / on surface including making connection etc. as required. For additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
53.10.1	1.5 sq.mm x 3 core	Rmtr.	97.00
53.10.2	1.5 sq.mm x 4 core	Rmtr.	121.00
53.10.3	1.5 sq.mm x 6 core	Rmtr.	190.00
53.10.4	1.5 sq.mm x 8 core	Rmtr.	247.00
53.10.5	2.5 sq.mm x 3 core	Rmtr.	152.00
53.10.6	2.5 sq.mm x 4 core	Rmtr.	200.00
53.10.7	2.5 sq.mm x 6 core	Rmtr.	301.00
53.10.8	2.5 sq.mm x 8 core	Rmtr.	391.00
53.10.9	4.0 sq.mm x 3 core	Rmtr.	228.00

Code No	Description	Unit	Rate Rs.
53.10.10	4.0 sq.mm x 4 core	Rmtr.	288.00
53.10.11	4.0 sq.mm x 6 core	Rmtr.	466.00
53.10.3	1.5 sq.mm x 6 core	Rmtr.	190.00
53.10.4	1.5 sq.mm x 8 core	Rmtr.	247.00
53.10.5	2.5 sq.mm x 3 core	Rmtr.	152.00
53.10.6	2.5 sq.mm x 4 core	Rmtr.	200.00
53.10.7	2.5 sq.mm x 6 core	Rmtr.	301.00
53.10.8	2.5 sq.mm x 8 core	Rmtr.	391.00
53.10.9	4.0 sq.mm x 3 core	Rmtr.	228.00
53.10.10	4.0 sq.mm x 4 core	Rmtr.	288.00
53.10.11	4.0 sq.mm x 6 core	Rmtr.	466.00

54.0 G.I./ M.S./ WOODEN BOXES, LAMINATES & DISMANTLING

Code No	Description	Unit	Rate Rs.
54.1	P & F 1.2 mm thick G. I. / M .S. Sheet boxes duly finished with two coats of red oxide and with earthing terminal of following sizes (nominal size) in recessed/surface as required.For additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
54.1.1	1.2 mm thick M. S. Sheet boxes		
54.1.1.1	75mm x 75mm x 60mm	Each	46.00
54.1.1.2	100mm x 100mm x 60mm	Each	59.00
54.1.1.3	150mm x 75mm x 60mm	Each	68.00
54.1.1.4	175mm x 100mm x 60mm	Each	85.00
54.1.1.5	150mm x 150mm x 60mm	Each	93.00
54.1.1.6	225mm x 100mm x 60mm	Each	101.00
54.1.1.7	200mm x 150mm x 60mm	Each	115.00
54.1.1.8	200mm x 125mm x 75mm	Each	123.00
54.1.1.9	200mm x 250mm x 75mm	Each	206.00
54.1.1.10	200mm x 250mm x 100mm	Each	229.00
54.1.1.11	250mm x 300mm x 75mm	Each	292.00
54.1.1.12	250mm x 300mm x 100mm	Each	321.00
54.1.1.13	300mm x 375mm x 75mm	Each	411.00
54.1.1.14	300mm x 375mm x 100mm	Each	440.00
54.1.1.15	250mm x 100mm x 60mm	Each	92.00
54.1.1.16	300mm x 100mm x 60mm	Each	132.00
54.1.1.17	300mm x 300mm x 75mm	Each	272.00
54.1.2	1.2 mm thick G I boxes		
54.1.2.1	75mm x 75mm x 60mm	Each	51.00
54.1.2.2	100mm x 100mm x 60mm	Each	65.00
54.1.2.3	150mm x 75mm x 60mm	Each	75.00
54.1.2.4	175mm x 100mm x 60mm	Each	96.00
54.1.2.5	150mm x 150mm x 60mm	Each	104.00
54.1.2.6	225mm x 100mm x 60mm	Each	115.00
54.1.2.7	200mm x 150mm x 60mm	Each	129.00
54.1.2.8	200mm x 125mm x 75mm	Each	138.00
54.1.2.9	200mm x 250mm x 75mm	Each	202.00

Code No	Description	Unit	Rate Rs.
54.1.2.10	200mm x 250mm x 100mm	Each	264.00
54.1.2.11	250mm x 300mm x 75mm	Each	335.00
54.1.2.12	250mm x 300mm x 100mm	Each	364.00
54.1.2.13	300mm x 375mm x 75mm	Each	468.00
54.1.2.14	300mm x 375mm x 100mm	Each	498.00
54.1.2.15	250mm x 100mm x 60mm	Each	107.00
54.1.2.16	300mm x 100mm x 60mm	Each	147.00
54.1.2.17	300mm x 300mm x 75mm	Each	411.00
54.2	P & F in position frame made out of M.S. angle (riveted or welded) finished with two coats of red oxide and two coats enamel paint including cutting, welding, holes etc.of following sizes as required.For additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
54.2.1	25mm x 25mm x 3mm	Mtr.	138.00
54.2.2	25mm x 25mm x 5mm	Mtr.	226.00
54.2.3	35mm x 35mm x 5mm	Mtr.	326.00
54.2.4	40mm x 40mm x 5mm	Mtr.	376.00
54.2.5	50mm x 50mm x 6mm	Mtr.	565.00
54.3	P & Fixing Powder coated CRCA sheet enclosures on existing angle iron frame by means of nuts and bolts and making holes , Din rail etc. as required.For additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
54.3.1	1.0 mm thick	Sqm.	1,707.00
54.3.2	1.6 mm thick	Sqm.	2,385.00
54.3.3	2.0 mm thick	Sqm.	2,910.00
54.3.4	2.5 mm thick	Sqm.	3,577.00
54.4	P & Fixing M.S. flat on existing angle iron frame and making required nos. of holes for fixing accessories including one coat of red oxide paint and two coats of enamel paint etc. as required.For additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
54.4.1	25 mm x 3 mm	Mtr.	75.00
54.4.2	25 mm x 5 mm	Mtr.	125.00
54.4.3	32 mm x 5 mm	Mtr.	163.00
54.4.4	40 mm x 6 mm	Mtr.	198.00
54.4.5	50 mm x 6 mm	Mtr.	300.00
54.4.6	50 mm x 10 mm	Mtr.	489.00

Code No	Description	Unit	Rate Rs.
54.5	P & F paper phenolic resin bonded laminates confirming to IS : 2036 - 1995 for boxes/ frames including making holes for switches etc, with brass screws, washers/ zinc plated nut and bolts as required. For additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
54.5.1	3.0 mm thick	Sq.m	1,027.00
54.5.2	4.8 mm thick	Sq.m	1,179.00
54.5.3	6.4 mm thick	Sq.m	1,323.00
54.5.4	9.0 mm thick	Sq.m	1,679.00
54.5.5	12.0 mm thick	Sq.m	2,215.00
54.5.6	19.0 mm thick	Sq.m	3,443.00
54.5.7	25.0 mm thick	Sq.m	6,260.00
54.6	P & F phenolic laminated sheet 2.0 mm thick of following size . Including screws, cup washer as required.For additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
54.6.1	75 mm dia	Each	10.00
54.6.2	100 mm dia.	Each	17.00
54.7	P & F P.V.C. sheet 2.0 mm thick of following size Including screws, cup washer as required.For additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
54.7.1	75 mm dia.	Each	6.00
54.7.2	100 mm dia.	Each	7.00
54.8	P & F Aluminium sheet 1.0 m thick of following size dia. Including screws, cup washer as required.For additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
54.8.1	75 mm dia.	Each	10.00
54.8.2	100 mm dia.	Each	13.00
54.9	P & F 1.2mm thick M.S. Recessed fan box, hexagonal/ round of size 130 mm dia, depth 75mm, 12 mm dia rod fan hook with 100 mm length extended on each side . All as per pre approved by Engineer in-charge. For additional technical parameters of product / work refer Annexure 'A' attached with this BSR	Each	131.00
54.10	P & F 1.00mm thick M.S. Recessed concealed box, round of size 150 mm dia, depth 100 mm complete as required. All as per pre approved by Engineer in-charge.For additional technical parameters of product / work refer Annexure 'A' attached with this BSR	Each	96.00
54.11	Labour charges for dismantling of surface PVC/ Steel conduit including wiring in conduit, conduit fittings and depositing the same with listing of material in store.	R. Mtr.	8.00

Code No	Description	Unit	Rate Rs.
54.12	Labour charges for dismantling of surface/ recessed switch board of any size and depositing the same with listing of material in store.	Each	6.00
54.13	Labour charges for dismantling of switch accessories like switch, socket, ceiling rose, holder and depositing the same with listing of material in store.	Each	3.00
54.14	Labour charges for dismantling of wiring in existing conduit of following size and depositing the same with listing of material in store.		
54.14.1	up to 2.5 sq. mm. wire	R. Mtr.	2.00
54.14.2	4/ 6 sq. mm. wire	R. Mtr.	3.00
54.14.3	10 sq. mm. wire	R. Mtr.	4.00
54.15	P & F 3.0 mm thick Poly propylene plastic polished concealed fan box, square of size (106x106) mm dia, depth 50 mm , 10 mm dia rod of MS with chrome plated with 55 mm length extended on each side . All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	122.00

55.0 DISTRIBUTION BOARD & IT'S ACCESSORIES

Code No	Description	Unit	Rate Rs.
55.1	Providing & Fixing of 240/415 V AC MCB with positive isolation of 10 kA breaking capacity (B/ C/D tripping characteristic as per type of load and site requirement) 4 KV impulse withstand voltage, ISI marked IS 8828(1996) / conforming to IEC 60898-1 2002, IEC 60947-2, low watt losses, trip free mechanism , energy limiting of class 3 as per IEC, minimum phase termination capacity of 35sq.mm. , conductor line load reversibility , IP 20 contact protection and fitted in existing distribution board/sheets, minimum electrical operation 20,000 upto 20 A rating and 10,000 upto 63 A, 5000 for 80 A & above rating including making connections, testing etc. as required. OEM shall have submit NABL / CPRI / ERDA accredited lab type test reports & All as per pre approved by Engineer in-charge. For additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
55.1.1	Single pole MCB (With B/C curve tripping Characteristics)		
55.1.1.1	0.5 A to 5 A rating	Each	303.00
55.1.1.2	6 A to 32 A rating	Each	192.00
55.1.1.3	40 A rating	Each	425.00
55.1.1.4	50/63 A rating	Each	425.00
55.1.1.5	80 A rating	Each	1,580.00
55.1.1.6	100 A rating	Each	1,765.00
55.1.1.7	125 A rating	Each	1,897.00
55.1.2	Double pole MCB(With B/C curve tripping Characteristics)		
55.1.2.1	0.5 A to 5 A rating	Each	804.00
55.1.2.2	6 A to 32 A rating	Each	580.00
55.1.2.3	40 A rating	Each	923.00
55.1.2.4	50/63 A rating	Each	923.00
55.1.2.5	80 A rating	Each	3,477.00
55.1.2.6	100 A rating	Each	3,707.00
55.1.2.7	125 A rating	Each	2,924.00
55.1.3	Triple pole MCB (With B/C curve trippingCharacteristics)		
55.1.3.1	0.5A to 5 A rating	Each	1,181.00
55.1.3.2	6 A to 32 A rating	Each	933.00
55.1.3.3	40 A rating	Each	1,419.00
55.1.3.4	50/63 A rating	Each	1,419.00

Code No	Description	Unit	Rate Rs.
55.1.3.5	80 A rating	Each	5,480.00
55.1.3.6	100 A rating	Each	5,839.00
55.1.3.7	125 A rating	Each	6,476.00
55.1.4	Four pole MCB (With B/C curve tripping Characteristics)		
55.1.4.1	0.5A to 5 A rating	Each	1,481.00
55.1.4.2	6 A to 32 A rating	Each	1,254.00
55.1.4.3	40 A rating	Each	1,782.00
55.1.4.4	50/63 A rating	Each	1,789.00
55.1.4.5	80 A rating	Each	7,150.00
55.1.4.6	100 A rating	Each	7,444.00
55.1.4.7	125 A rating	Each	8,418.00
55.1.5	Triple pole MCB (With D curve tripping Characteristics)		
55.1.5.1	0.5 A to 5 A rating	Each	1,216.00
55.1.5.2	6 A to 32 A rating	Each	971.00
55.1.5.3	40 A rating	Each	1,488.00
55.1.5.4	50/63 A rating	Each	1,488.00
55.2	Providing & Fixing of 240/415 V isolator ISI marked IS:13947-III/conforming to IEC 60947-3, suitable for AC22A utilization category, 4KV impulse withstand voltage, true contact indication, Red colour dolly / lever shall have single mould covering overall poles for operation , two position din rail mounting, minimum phase termination capacity of 35sq.mm. IP 20 contact protection and fitted in existing distribution board / sheet including making connections, testing etc. as required. OEM shall have submit NABL / CPRI / ERDA accredited lab type test reports & All as per pre approved by Engineer in-charge.For additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
55.2.1	Double pole isolator		
55.2.1.1	30 A / 40 A rating	Each	360.00
55.2.1.2	63 A rating	Each	464.00
55.2.1.3	80 A/ 100 A rating	Each	604.00
55.2.2	Triple pole Isolator		
55.2.2.1	40 A rating	Each	342.00
55.2.2.2	63 A rating	Each	723.00
55.2.2.3	80 A/ 100 A rating	Each	822.00
55.2.3	Four pole Isolator		
55.2.3.1	40 A rating	Each	800.00
55.2.3.2	63 A rating	Each	838.00

Code No	Description	Unit	Rate Rs.
55.2.3.3	80 A/ 100 A rating	Each	981.00
55.3	Providing & Fixing of 240/415 V factory fitted RCBO with overload, short-circuit and earth leakage protection with ISI marked (IS12640-2)/ conforming to IEC 61009-1, breaking capacity 10 KA, provision for pad lock, min. Electrical operation 10,000 upto 63 A rating , minimum phase termination capacity of 35sq.mm. , IP 20 contact protection with existing distribution board / sheet including making connections, testing etc. as required. OEM shall have submit NABL / CPRI / ERDA accredited lab type test reports & All as per pre approved by Engineer in-charge. For additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
55.3.1	Two pole 30 mA sensitivity		
55.3.1.1	6A-32 A rating	Each	3,016.00
55.3.1.2	40 A rating	Each	3,016.00
55.3.1.3	63 A rating	Each	3,796.00
55.3.2	Two pole 100/300mA sensitivity		
55.3.2.1	6A-32 A rating	Each	3,079.00
55.3.2.2	40 A rating	Each	3,114.00
55.3.2.3	63 A rating	Each	4,054.00
55.3.3	Four pole 30 mA sensitivity		
55.3.3.1	6A-32 A rating	Each	3,435.00
55.3.3.2	40 A rating	Each	3,606.00
55.3.3.3	63 A rating	Each	4,322.00
55.3.4	Four pole 100/300 mA sensitivity		
55.3.4.1	6A-32 A rating	Each	3,896.00
55.3.4.2	40 A rating	Each	3,925.00
55.3.4.3	63 A rating	Each	4,403.00
55.4	P&F 240/415 V AC Change Over Miniature circuit breaker with three positions (I-O-II) which allows supply change over from one source to second source & vice- versa, conforming to IS/ IEC 60947-3 in existing board/sheets including making connections, testing etc. as required. OEM shall have submit NABL / CPRI / ERDA accredited lab type test reports & All as per pre approved by Engineer in-charge. For additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
55.4.1	Double Pole		
55.4.1.1	25 Amp, 2 Module	Each	1,037.00
55.4.1.2	40 Amp, 2 Module	Each	1,583.00
55.4.1.3	63 Amp, 3 Module	Each	1,838.00
55.4.2	Four Pole		

Code No	Description	Unit	Rate Rs.
55.4.2.1	40 Amp, 4 Module	Each	2,715.00
55.4.2.2	63 Amp, 6 Module	Each	3,082.00
55.5	Providing & Fixing of 240/415 V Residual current circuit breaker (RCCB) conforming to (IS:12640-1)/ IEC 61008 -1 , rated 4 KV impulse withstand voltage truly current operated and shall operate on CBCT mechanism, provision for pad lock, min. operation 10,000 upto 63 A rating and 5000 for 100 A rating and minimum phase termination capacity of 35 sq.mm. rigid wire , IP 20 contact protection with existing distribution board / sheet including making connections, testing etc. as required. OEM shall have submit NABL / CPRI / ERDA accredited lab type test reports & All as per pre approved by Engineer in-charge. For additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
55.5.1	Two pole 30 mA sensitivity		
55.5.1.1	16/25 A rating	Each	2,051.00
55.5.1.2	32/40 A rating	Each	2,293.00
55.5.1.3	63A rating	Each	2,856.00
55.5.1.4	100 A rating	Each	4,963.00
55.5.2	Two pole 100/300mA sensitivity		
55.5.2.1	16/25 A rating	Each	2,125.00
55.5.2.2	40 A rating	Each	2,425.00
55.5.2.3	63 A rating	Each	2,921.00
55.5.3	Four pole 30 mA sensitivity		
55.5.3.1	25 A rating	Each	2,708.00
55.5.3.2	40 A rating	Each	2,733.00
55.5.3.3	63 A rating	Each	3,097.00
55.5.3.4	100 A rating	Each	5,326.00
55.5.4	Four pole 100/300 mA sensitivity		
55.5.4.1	25 A rating	Each	2,785.00
55.5.4.2	40 A rating	Each	2,831.00
55.5.4.3	63 A rating	Each	2,281.00
55.5.4.4	100 A rating	Each	5,420.00
55.6	Providing & Fixing of din rail mounting surge protection device confirming to IEC 61643-11 for Type 1 + 2 protection and Maximum discharge current 50 kA with following configuration in existing distribution board / sheet including making connections, testing etc. as required. OEM shall have submit NABL / CPRI / ERDA accredited lab type test reports & All as per pre approved by Engineer in-charge. For additional technical parameters of product / work refer Annexure 'A' attached with this BSR		

Code No	Description	Unit	Rate Rs.
55.6.1	1P + N	Each	3,523.00
55.6.2	3P + N	Each	6,473.00
55.7	Providing & Fixing of din rail mounting contactor and accessories confirming to IEC 61095 with following description and configuration in existing distribution board / sheet including making connections, testing etc. as required.OEM shall have submit NABL / CPRI / ERDA accredited lab type test reports & All as per pre approved by Engineer in-charge.For additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
55.7.1	Modular contactor 25A - 1NO	Each	1,573.00
55.7.2	Modular contactor 25A - 2NO	Each	1,967.00
55.7.3	Modular contactor 40A - 2NO	Each	3,352.00
55.7.4	Modular contactor 40A - 3NO	Each	4,793.00
55.7.5	Modular contactor 40A - 4NO	Each	5,626.00
55.7.6	Modular contactor 63A - 2NO + 2 NC	Each	5,966.00
55.7.7	Modular contactor 63A - 3NO	Each	6,112.00
55.7.8	Modular contactor 63A - 4NO	Each	6,719.00
55.7.9	Auxiliary contact, 2 NO	Each	1,617.00
55.7.10	Auxiliary contact, 1 NO + 1 NC	Each	839.00
55.7.11	Under voltage Release	Each	1,951.00
55.7.12	Shunt Trip Release	Each	2,229.00
55.8	Providing & Fixing of din rail mounting LED Indicating Lights with following description and configuration in existing distribution board / sheet including making connections, testing etc. as required.For additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
55.8.1	Red / Yellow / Blue / Green	Each	947.00
55.8.2	Red-yellow-Blue	Each	1,143.00
55.9	Providing & Fixing of Recessed/surface mounting heavy duty Enclosure made out from Galvanized steel / CRCA sheet not less than 1.2 mm thick conforming to IS-8623-1 & 3 / IEC 61439- 1 & 3. powder painted complete with din rail making internal DB terminations with copper lugs, detachable gland plate, including making connections, testing etc. as required.For additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
55.9.1	Suitable for Two / Three / Four module for MCB	Each	677.00
55.9.2	Suitable for Six / Eight module for MCB/ RCCB	Each	1,126.00

Code No	Description	Unit	Rate Rs.
55.10	Providing & Fixing of Recessed/surface mounting heavy duty horizontal type Double Door (Metal / Glazed)Distribution board with Metal end box made out from Galvanized steel / CRCA sheet not less then 1.2 mm thick conforming to IS-8623-1 & 3 / IEC 61439- 1 & 3, powder painted complete with reversible door (for double door DB only)100 amp. insulated copper bus bar/shorting link , copper neutral link, copper earth link , color coded interconnecting wire set of suitable rating and din bar,masking sheet, making internal DB terminations with copper lugs, Ferrules, detachable gland plate, including making connections, testing etc. as required. OEM shall have submit NABL / CPRI / ERDA accredited lab type test reports & All as per pre approved by Engineer in-charge. For additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
55.10.1	Metal door (single phase) IK-09 and IP-43 with Metal end box		
55.10.1.1	4 Way (4+2)	Each	1,840.00
55.10.1.2	6 Way (6+2)	Each	2,068.00
55.10.1.3	8 Way (8+2)	Each	2,239.00
55.10.1.4	12 Way (12+2)	Each	2,655.00
55.10.1.5	16 Way (16+2)	Each	3,474.00
55.10.2	Glazed door (single phase) IK-09 and IP-43 with Metal end box		
55.10.2.1	4 Way (4+2)	Each	2,200.00
55.10.2.2	6 Way (6+2)	Each	2,432.00
55.10.2.3	8 Way (8+2)	Each	2,646.00
55.10.2.4	12 Way (12+2)	Each	3,065.00
55.10.2.5	16 Way (16+2)	Each	4,019.00
55.10.3	Metal door (Three phase) IK-09 and IP-43 with Metal end box		
55.10.3.1	4 Way	Each	3,934.00
55.10.3.2	6 Way	Each	4,931.00
55.10.3.3	8 Way	Each	6,130.00
55.10.3.4	12 Way	Each	9,073.00
55.10.4	Glazed door (Three phase) IK-09 and IP-43 with Metal end box		
55.10.4.1	4 Way	Each	4,926.00
55.10.4.2	6 Way	Each	6,279.00
55.10.4.3	8 Way	Each	7,721.00
55.10.4.4	12 Way	Each	10,927.00
55.10.5	Metal door (Three phase) Per phase isolation, Horizontal IK-09 and IP-43 with Metal end box		
55.10.5.1	4Way(Incomer 8,Sub Incomer2+2+2)	Each	6,478.00

Code No	Description	Unit	Rate Rs.
55.10.5.2	6Way(Incomer 8,Sub Incomer2+2+2)	Each	7,808.00
55.10.5.3	8Way(Incomer 8,Sub Incomer2+2+2)	Each	9,397.00
55.10.5.4	12 Way(Incomer 8,Sub Incomer2+2+2)	Each	12,554.00
55.10.6	Metal door (Three phase) Per phase isolation,Vertical IK-09 and IP-43 with Metal end box		
55.10.6.1	4Way(Incomer 8,Sub Incomer2+2+2)	Each	7,681.00
55.10.6.2	6Way(Incomer 8,Sub Incomer2+2+2)	Each	9,382.00
55.10.6.3	8Way(Incomer 8,Sub Incomer2+2+2)	Each	10,059.00
55.10.6.4	12 Way(Incomer 8,Sub Incomer2+2+2)	Each	10,921.00
55.11	Providing & Fixing of Recessed/surface mounting heavy duty horizontal type TPN phase selector Distribution board with Metal end box made out from Galvanized steel / CRCA sheet not less then 1.2 mm thick conforming to IS-8623-1 & 3 / IEC 61439- 1 & 3. powder painted with reversible door (for double door DB only) complete with 100 amp. insulated copper bus bar/ shorting link , neutral link, earth link , color coded interconnecting wire set of suitable rating and din bar,masking sheet provided with 3 nos 63 Amp rotary switches,3 nos rocker switches for phase identifications etc. making internal DB terminations with copper lugs, ferrules, detachable gland plate, including making connections, testing etc. as required. OEM shall have submit NABL / CPRI / ERDA accredited lab type test reports & All as per pre approved by Engineer in-charge.For additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
55.11.1	Double door. IK-09 and IP-43 with Metal end box		
55.11.1.1	4Way(Incomer 8,Outgoing 4+4+4)	Each	11,881.00
55.11.1.2	6Way(Incomer 8,Outgoing6+6+6)	Each	12,152.00
55.11.1.3	8Way(Incomer 8,Outgoing 8+8+8)	Each	13,545.00
55.11.1.4	12Way(Incomer 8,Outgoing 12+12+12)	Each	15,391.00
55.12	Providing & Fixing of Recessed/surface mounting heavy duty Flexi / Row type Distribution board with Metal end box made out from Galvanized steel / CRCA sheet not less then 1.2 mm thick conforming to IS-8623-1 & 3 / IEC 61439- 1 & 3. powder painted with reversible door (metal or Glazed) complete with 100 Amp. copper shorting link , neutral link, earth link , color coded interconnecting wire set of suitable rating and din bar,masking sheet, making internal DB terminations with copper lugs, ferrules detachable gland plate, including making connections, testing etc. as required. OEM shall have submit NABL / CPRI / ERDA accredited lab type test reports & All as per pre approved by Engineer in-charge.For additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
55.12.1	Metal door IK-09 & IP-43 with Metal end box		

Code No	Description	Unit	Rate Rs.
55.12.1.1	2 Row 28 Module(14 module per row)	Each	4,785.00
55.12.1.2	3 Row 42 Module(14 module per row)	Each	5,559.00
55.12.1.3	4 Row 56 Module(14 module per row)	Each	6,100.00
55.12.1.4	4 Row 64 Module(16 module per row)	Each	7,007.00
55.12.2	Glazed door IK-09 & IP-43 with Metal end box		
55.12.2.1	2 Row 28 Module(14 module per row)	Each	5,119.00
55.12.2.2	3 Row 42 Module(14 module per row)	Each	6,071.00
55.12.2.3	4 Row 56 Module(14 module per row)	Each	6,830.00
55.12.2.4	4 Row 64 Module(16 module per row)	Each	7,544.00
55.13	P&F metal clad / Plastic industrial plug top & socket unit with pin and sleeve type contact on porcelain/ bakelite base in Recessed/surface mounting heavy duty Enclosure made out from Galvanized steel / CRCA sheet not less then 1.2 mm thick conforming to IS-8623-1 & 3 / IEC 61439- 1 & 3. powder painted (without MCB) including making connections, testing etc.as required.For additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
55.13.1	20 amp, 2 pin + scrapping Earth, 1 Module	Each	1,311.00
55.13.2	20 amp, 2 pin + scrapping Earth, 2 Module	Each	1,421.00
55.13.3	20 amp, 3 pin + scrapping Earth, 4 Module	Each	2,103.00
55.13.4	32 amp, 5 pin + scrapping Earth, 8 Module	Each	2,823.00
55.13.5	63 amp, 5 pin + scrapping Earth, 8 Module	Each	10,020.00
55.14	P & F of Industrial plug and socket conforming to IEC 60309-1/2 made out of self extinguishing engineering polymer / polyamide, nickel plated brass sleeve and pins, socket with shutter including making connection etc as reqd. For additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
55.14.1	IP -67 Panel mounted socket		
55.14.1.1	16 A 3 pin(2P+E)	Each	811.00
55.14.1.2	32 A 3 pin(2P+E)	Each	1,003.00
55.14.1.3	32 A 5 pin(3P+N+E)	Each	1,265.00
55.14.1.4	63 A 5 pin(3P+N+E)	Each	3,620.00
55.14.2	IP -67 Surface/Wall mounted socket		
55.14.2.1	16 A 3 pin(2P+E)	Each	1,072.00
55.14.2.2	32 A 3 pin(2P+E)	Each	1,253.00
55.14.2.3	32 A 5 pin(3P+N+E)	Each	2,323.00
55.14.2.4	63 A 5 pin(3P+N+E)	Each	4,630.00

Code No	Description	Unit	Rate Rs.
55.14.3	IP -67 Surface/Wall mounted Interlocked Switched socket Outlet Vertical		
55.14.3.1	16 A 3 pin(2P+E)	Each	7,366.00
55.14.3.2	32 A 3 pin(2P+E)	Each	8,530.00
55.14.3.3	32 A 5 pin(3P+N+E)	Each	10,006.00
55.14.4	IP - 67 Plug top		
55.14.4.1	16 A 3 pin(2P+E)	Each	781.00
55.14.4.2	32 A 3 pin(2P+E)	Each	1,054.00
55.14.4.3	32 A 5 pin(3P+N+E)	Each	1,171.00
55.14.4.4	63 A 5 pin(3P+N+E)	Each	3,065.00
55.15	Providing & Fixing of Recessed/surface mounting heavy duty Vertical TPN Distribution board with Metal end box with provision of incomer suitable for MCB / RCCB and SP / TP MCB as outgoing ,made out from Galvanized steel / CRCA sheet not less than 1.2 mm thick conforming to IS-8623-1 & 3 / IEC 61439- 1 & 3. powder painted with reversible door (for double door DB only) complete with insulated 100 A rating copper bus bar, neutral bars with shrouds, earth bar , color coded interconnecting wire set of suitable rating and din bar,masking sheet, making internal DB terminations with copper lugs, ferrules, detachable gland plate, including making connections, testing etc. as required. OEM shall have submit NABL / CPRI / ERDA accredited lab type test reports & All as per pre approved by Engineer in-charge.For additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
55.15.1	Double door IK-09 & IP-43 with Metal end box		
55.15.1.1	4 Way(8+12)	Each	8,461.00
55.15.1.2	6 Way(8+18)	Each	9,661.00
55.15.1.3	8 Way(8+24)	Each	10,845.00
55.15.1.4	12 Way(8+36)	Each	14,334.00
55.16	Providing & Fixing of Recessed/surface mounting heavy duty Vertical TPN Distribution board with Metal end box with provision of incomer suitable for 3/4 pole MCCB and SP / TP MCB as outgoing ,made out from Galvanized steel / CRCA sheet not less than 1.2 mm thick conforming to IS-8623-1 & 3 / IEC 61439- 1 & 3. powder painted with reversible door (for double door DB only) complete with insulated 160 (upto 160 A Incomer) / 250 Amp. copper bus bar, neutral bars with shrouds, earth bar , color coded interconnecting wire set of suitable rating and din bar,masking sheet, making internal DB terminations with copper lugs, ferrules, detachable gland plate, including making connections, testing etc. as required. OEM shall have submit NABL / CPRI / ERDA accredited lab type test reports & All as per pre approved by Engineer in-charge.For additional technical parameters of product / work refer Annexure 'A' attached with this BSR		

Code No	Description	Unit	Rate Rs.
55.16.1	Double door IP-43 & IK-09 with Provision of Incomer MCCB 100/125 A Rating with Metal end box		
55.16.1.1	4 Way	Each	11,826.00
55.16.1.2	6 Way	Each	13,070.00
55.16.1.3	8 Way	Each	14,119.00
55.16.1.4	12 Way	Each	18,258.00
55.16.2	Double door IP-43 & IK-09 with Provision of Incomer MCCB 160 A Rating with Metal end box		
55.16.2.1	4 Way	Each	14,122.00
55.16.2.2	6 Way	Each	15,656.00
55.16.2.3	8 Way	Each	17,004.00
55.16.2.4	12 Way	Each	19,329.00
55.16.3	Double door IP-43 & IK-09 with Provision of Incomer MCCB 250 A Rating with Metal end box		
55.16.3.1	4 Way	Each	15,580.00
55.16.3.2	6 Way	Each	17,252.00
55.16.3.3	8 Way	Each	18,556.00
55.16.3.4	12 Way	Each	21,274.00
55.17	P & F Surface mounting IP-65, IK-09 Class-II self extinguishing insulating material weather proof cabinets confirming to EN60439-3 with IP-65 Key lock, fully reversible door and cabinet, removable chassis and face plates, of following size. For additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
55.17.1	1 row 3/4 module	Each	2,549.00
55.17.2	1 row 6 module	Each	3,029.00
55.17.3	1 row 12 module	Each	4,664.00
55.17.4	1 row 18 module	Each	5,436.00
55.17.5	2 row x 12 module	Each	6,141.00
55.17.6	2 row x 18 module	Each	8,844.00
55.17.7	3 row x 12 module	Each	10,638.00

56.0 ELECTRICAL ACCESSORIES

Code No	Description	Unit	Rate Rs.
56.1	P & F ISI marked (IS:3854) 6 amp. flush type non modular switch with CM/L no. printed and made out from industrial grade Polycarbonate or fire resistant ABS material including cutting hole in tile and making connection testing etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	24.00
56.2	P & F ISI marked (IS :3854) 16 amp. flush type non modular switch CM/L no. printed and made out from industrial grade Polycarbonate or fire resistant ABS material including cutting hole in tile and making connection testing etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	51.00
56.3	Providing & Fixing of 6 amp. Combined flush type non modular socket and switch set as per PWD specification for electrical Works,made out from industrial grade Polycarbonate or fire resistant ABS material including cutting hole in tile and making connection testing etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	126.00
56.4	Providing & Fixing of 16 amp. Combined flush type non modular socket and switch set with indicator and fuse set as per PWD specification for electrical Works, made out from industrial grade Polycarbonate or fire resistant ABS material including cutting hole in tile and making connection testing etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	185.00
56.5	Providing & Fixing of ISI marked (IS :3854) non modular 6A bell push surface type CM/L no. printed and made out from industrial grade Polycarbonate or fire resistant ABS material including making connection testing etc. as required.All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	35.00
56.6	Providing & Fixing of ISI marked (IS :3854) twin control non modular 6A switch surface type as per PWD specification for electrical Works, made out from industrial grade Polycarbonate or fire resistant ABS material, brass terminal & captive screws including making connection testing etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	49.00

Code No	Description	Unit	Rate Rs.
56.7	Providing & Fixing of ISI marked (IS :3854) non modular 6A bell push flush type CM/L no. printed and made out from industrial grade Polycarbonate or fire resistant ABS material including cutting hole in tile and making connection testing etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	35.00
56.8	Providing & Fixing of ISI marked (IS :3854) twin control non modular 6A switch flush type as per PWD specification for electrical Works, made out from industrial grade Polycarbonate or fire resistant ABS material, including cutting hole in tile and making connection testing etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	31.00
56.9	Providing & Fixing of ISI marked non modular 6A hanging bell push/one way switch made out from industrial grade Polycarbonate or fire resistant ABS material including making connection testing etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	39.00
56.10	Providing & Fixing of 3/5 pin 6 amp. flush type non modular socket made out from industrial grade Polycarbonate or fire resistant ABS material, brass terminal with Porcelain based back cover & captive screws including cutting hole in tile and making connection testing etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	34.00
56.11	Providing & Fixing of 3/6 pin 16 amp flush type non modular socket made out from Industrial grade Polycarbonate or fire resistant ABS material, brass terminal with Porcelain based back cover & captive screws including cutting hole in tile and making connection testing etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	80.00
56.12	Providing & Fixing of ISI marked (IS:371) 6 amp surface type 3 pin ceiling rose with CM/L no. printed and made out from industrial grade Polycarbonate or fire resistant ABS material, brass terminal & captive screws including making connection testing etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	31.00
56.13	Providing & Fixing of ISI marked (IS:1258) batten/angle lamp holder with CM/L no. printed and made out from industrial grade Polycarbonate or fire resistant ABS material, brass terminal & captive screws including making connection testing etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	31.00

Code No	Description	Unit	Rate Rs.
56.14	Providing & Fixing of ISI marked (IS:1293) 6 amp unbreakable 3 pin plug top having lamp indicator with CM/L no. printed and made out from industrial grade Polycarbonate or fire resistant ABS material, brass terminal including making connection testing etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	45.00
56.15	Providing & Fixing of ISI marked (IS:1293) 16 amp unbreakable 3 pin plug top having lamp indicator with CM/L no. printed and made out from industrial grade Polycarbonate or fire resistant ABS material, brass terminal including making connection testing etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	70.00
56.16	Providing & Fixing of flush type non modular 2 pin telephone socket with plug top made out from industrial grade Polycarbonate or fire resistant ABS material, brass terminals including making connection testing etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	60.00
56.17	Providing & Fixing of flush type non modular single line telephone jack made out from industrial grade Polycarbonate or fire resistant ABS material, including making connection testing etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	74.00
56.18	Providing & Fixing of flush type non modular double line telephone jack made out from industrial grade Polycarbonate or fire resistant ABS material including making connection testing etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	88.00
56.19	Providing & Fixing of flush type non modular coaxial T.V. socket made out from industrial grade Polycarbonate or fire resistant ABS material, including making connection testing etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	49.00
56.20	Providing & Fixing of IS 11037:1984 marked non modular socket size flush type 120 watt rotary minimum 5 step fan regulator with CM/L no. printed and made out from industrial grade Polycarbonate or fire resistant ABS material including making connection testing etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	204.00

Code No	Description	Unit	Rate Rs.
56.21	Providing & Fixing of IS 11037:1984 marked non modular socket size flush type 180 watt rotary minimum 5 step fan regulator with CM/L no. printed and made out from industrial grade Polycarbonate or fire resistant ABS material including making connection testing etc. as required.All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	224.00
56.22	P & F ISI marked 32 A D.P. switch with fuse and indicating lamp including making connection testing etc. as required.All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	177.00
56.23	Providing & Fixing of ISI marked (IS:2268-1994) gong bell with CM/L no. printed including making connection testing etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	177.00
56.24	Providing & Fixing of ISI marked surface type buzzer (IS:2268-1994) with CM/L no. printed including making connection testing etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	112.00
56.25	Providing & Fixing of single / multi tone electronic call bell as per PWD specification for electrical Works, including making connection testing etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	504.00
56.26	Providing & Fixing of ding dong/musical chime bell as per PWD specification for electrical Works, including making connection testing etc. as required.All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	336.00
56.27	Providing & Fixing of modular type switch/ bell push duly ISI marked (IS :3854) with CM/L no. printed and made out of unbreakable and fire retardant vergin UV Stabilized Polycarbonate with brass terminals and captive screws & silver alloy contact tip with IP-20 rating ,minimum width of switch toggle(PUSH PART) should not less then 20mm, including all as per pre approved by Engineer in-charge,making connections, testing etc. as required. For additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
56.27.1	10 A one way switch	Each	56.00
56.27.2	10 A two way switch	Each	81.00
56.27.3	10 A bell push	Each	113.00
56.27.4	16 A one way switch With Led Indicator	Each	116.00

Code No	Description	Unit	Rate Rs.
56.27.5	16 Amp. 2 Module switch With Led Indicator	Each	151.00
56.27.6	25 Amp. 2 Module switch With Led Indicator	Each	205.00
56.27.7	32 Amp. 2 Module switch With Led Indicator	Each	378.00
56.28	Providing & Fixing of modular type lockable feature socket duly made out of unbreakable and fire retardant vergin poly carbonate with brass terminals and captive screws & silver alloy contact tip with IP-20 rating , including all as per pre approved by Engineer in-charge,making connections, testing etc. as required. For additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
56.28.1	6 A 3/5 pin shuttered socket	Each	110.00
56.28.2	6/16 A shuttered socket	Each	180.00
56.28.3	13 A flat pin international socket	Each	192.00
56.28.4	25 Amp. 2 Module Socket	Each	234.00
56.29	Providing & Fixing of modular type 120 W Step Fan regulator duly ISI marked (IS 11037:1984) with CM/L no. printed made out of unbreakable and fire retardant vergin poly carbonate with brass terminals and captive screws & silver alloy contact tip with IP-20 rating , including all as per pre approved by Engineer in-charge,making connections, testing etc. as required. For additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
56.29.1	5 step fan regulator 2 Module 360 dgree rotating	Each	408.00
56.30	Providing & Fixing of following modular accessories as per PWD specification for electrical Works, made out of unbreakable and fire retardant vergin poly carbonate with brass terminals and captive screws & silver alloy contact tip with IP-20 rating , including all as per pre approved by Engineer in-charge,making connections, testing etc. as required. For additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
56.30.1	RJ-11 telephone jack single line	Each	146.00
56.30.2	RJ-11 telephone jack Double line	Each	173.00
56.30.3	USB Charger 1 A - 1 M with BIS mark	Each	495.00
56.30.4	RJ-45, Cat 6 computer jack with shutter	Each	324.00
56.30.5	T.V. coaxial socket	Each	163.00
56.30.6	Blanking plate	Each	23.00
56.30.7	25 Amp. 2 Module Motor Starter with on / off Push button	Each	398.00
56.30.8	LED Skirting /Foot Light 2 Module	Each	370.00
56.30.9	Electronic Chime/Buzzer 2M	Each	217.00
56.30.10	Modular MCB 6 A to 32 A SP	Each	231.00

Code No	Description	Unit	Rate Rs.
56.30.11	Modular MCB 6 A to 32 A DP	Each	473.00
56.31	Providing & Fixing of following size mounting grid plates with cover plates made from fire retardent UV established high-performance engineering plastic suitable for all universal metal boxes for front installation & removal direct fit type complete in all respect.All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
56.31.1	1/2 Module	Each	67.00
56.31.2	3 Module	Each	88.00
56.31.3	4 Module	Each	91.00
56.31.4	5 Module	Each	108.00
56.31.5	6 Module	Each	117.00
56.31.6	8 Module	Each	159.00
56.31.7	10 Module	Each	203.00
56.31.8	12 Module	Each	219.00
56.31.9	16/18 Module	Each	324.00
56.32	Providing & Fixing of Wiring Accessories OEM fabricated following size GI box of 1.2 mm thick with earthing terminal and adjustable floating clamp in recess/ surface suitable for modular accessories as required.All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
56.32.1	1-2 Module	Each	88.00
56.32.2	3 Module	Each	123.00
56.32.3	4/5 Module	Each	144.00
56.32.4	6 / 8 module	Each	209.00
56.32.5	10 / 12 module	Each	293.00
56.32.6	16/18 module	Each	427.00
56.33	Providing & Fixing of Wiring Accessories OEM fabricated following size virgin material UPVC modular boxes on surface suitable for modular accessories as required.All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
56.33.1	1-2-3 Module	Each	100.00
56.33.2	4-5 Module	Each	156.00
56.33.3	6-8 Module	Each	221.00
56.33.4	10-12 Module	Each	294.00
56.33.5	16/18 Module	Each	340.00

Code No	Description	Unit	Rate Rs.
56.34	Providing & Fixing of of ISO certified company made Multiple socket with surge and spikes protection cartridge not less then 5 KV as per PWD specification for electrical Works with minimum four nos. universal 6 A sockets, one 6 A switch and 3 pin company fitted plug top and 3 core multistrand copper lead minimum 1.5 mtr. including making connection etc as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	586.00
56.35	Providing & Fixing of ISO certified company made virgin material PVC trunking system as per PWD specification for electrical Works, with double lock feature for cable management including finishing accessories like corners, tees, adjustable angles, junction etc. as required . The trunking system shall have adaptable system for modular type RJ 45 data socket/ wiring accessories/ power sockets and shall be covered with peel off plastic cover. OEM shall have submit NABL accredited /CPET lab test reports before execution & All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
56.35.1	32mm X 20mm	Mtr.	234.00
56.35.2	80mm x 50mm	Mtr.	1,022.00
56.35.3	100/105mm x 50mm	Mtr.	1,211.00
56.35.4	150/160mm x 50mm	Mtr.	2,044.00
56.35.5	195/200mm x 50mm	Mtr.	2,608.00
56.36	Providing and fixing of power plug point with non modular accessories as per PWD specification for electrical Works with Galvanized box of 1.2 mm thick with earth terminal with suitable size phenolic laminated sheet (IS : 2036 - 1995) cover including cost of 16 amp. Switch (IS :3854) and 3/6 pin 16 amp. socket outlet making connection , testing , etc. as required. For specification of Wiring accessories refer Chapter-56 related item & For additional technical parameters of product / work refer Annexure 'A' attached with this BSR	Each	311.00
56.37	Supplying and fixing of power plug point with Modular accessories as per PWD specification for electrical Works, on hot dipped galvanized modular box of 1.2 mm thick with earthing terminal/connector on surface or in recessed with suitable size of modular face plate with grid plate and cover plate including cost of ISI marked modular 16 amp. Switch (IS :3854) and 6/16 amp. socket outlet (IS:1293) making connection , testing , etc. as required. For specification of Wiring accessories refer Chapter-56 related item & For additional technical parameters of product / work refer Annexure 'A' attached with this BSR	Each	595.00

Code No	Description	Unit	Rate Rs.
56.38	P & F Krone module with base frame in the recess / surface made out of 1.2 mm thick sheet steel box, front openable, having locking arrangements duly powder painted, including dressing, ferruling and punching of telephone cable with krone tool etc. as required. For additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
56.38.1	10 Pairs	Each	967.00
56.38.2	20 Pairs	Each	1,243.00
56.38.3	50 Pairs	Each	2,625.00
56.38.4	100 Pairs	Each	5,113.00
56.38.5	200 Pairs	Each	8,635.00

57.0 LT PANELS & ACCESSORIES

Code No	Description	Unit	Rate Rs.
57.1	SITC of IP-42 and general construction confirming to IS:8623 : 1993, wall/ free standing floor mounted dust and vermin proof compartmentalised cubical panel as specifications and Other parameters required as per point (a) ,(b), (c),(d), (e), (f), (g), (h) as below:- (a) Thickness of CRCA sheet shall be 2.0 mm, cable alley compartments having concealed hinged type doors with key type lock with / without detachable extension type structure. Removable 3 mm. thick sheet steel gland plates with appropriate size of knockouts for cables shall be provided (b) complete panel shall undergo a process of degreasing, Water rinsing, Activation, derusting, pickling in acid bath, phosphatising & shall be subjected to nine tank process and then Powder coated with approved shade of minimum 70 microns on both side of panel. The panel having PE foam/ Neoprene rubber gasket of not less than 3mm thickness ,required hardware , concealed hinged door with key type locking arrangement for equipment/switchgear earthed with 2.5 sq.mm braided copper wire. (c) Interconnection between bus bar and switchgears /cable shall be rigidly supported and made out by flexible copper wires (up to 63 amp) and by solid bus bar (>63 amp) . control wiring will be carried out with 1.5 Sq.mm, Earth wire with 2.5 Sq.mm and CT with 2.5 sq.mm flexible copper wire only. All joints / interconnections of copper bus bar shall be dully tinned . Clearance between main bus bar and risers / metal parts shall be at least 10 mm additional to width of bus bar Bus bar is insulated by Heat Shrinkable sleeves . Earth and Neutral bus bar shall be half of the size of phase bus bar. (Cost of Bus bar / Flexible wire for Interconnection between Main busbar and Switchgear is to be Paid Extra) (d)Wiring between components within switchgear and Incoming / outgoing cable shall be done through the terminal block only. Direct connection shall not be permitted. Each terminal block shall be one piece moulded, barrier type, 650 volt grade, complete with washers, heads, studs with two nuts and identification strips and shall have adequate continuous current rating. For tap-offs, adjacent terminals with shorting strips shall be used. 10% Spare terminal blocks shall be provided. Wire identification on marking strip shall correspond to the designation of the wiring diagrams. All wire terminals on the equipment shall also be marked with designation corresponding to those of the wiring diagram. (e)All wiring shall be enclosed in plastic channels and neatly bunched and closed in metering chamber, Wiring between terminals of various devices shall be 'point to point' (no wire splitting or tee		

Code No	Description	Unit	Rate Rs.
	connections) with wires neatly trucked along the back of the panels, adequately supported to prevent sagging.		
	(f) Floor mounted panel shall be mounted on Base frame of ISMC channel size 100 x 50 x 5 mm (to be paid Extra)		
	(g) Tests: The insulation resistance (with 1000 V Megger) and High voltage Power frequency test (by applying a voltage of 2.5KV for one minute) shall be measured between phases, between phase and neutral and between phase and earth. both before and after high voltage power frequency test. The insulation resistance shall not be less than three megaohm. CT Secondary current injection test shall also be carried out.		
	(h) only outer surface area on all sides shall be measured & panel to be fabricated only from CPRI approved fabricator only (CPRI Test certificates to be submitted) All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Sq. Mtr	6,124.00
57.2	Supplying and fixing of Aluminium (IEC 60105 ISO 209-1,2) / Copper (IEC 60028) bus bar by means of SMC / DMC type insulator with standard short circuit withstand capacity , high tensile nuts and bolts spring washers in existing panel including bending , cutting in required shape and size and colour coding with heat shrinkable PVC sleeves. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
57.2.1	Electrolytic grade Aluminium bus bar 6010 grade	Kg.	556.00
57.2.2	Electrolytic grade (Cu-ETP) Tin Coated annealed copper bus bars IACS 100% grade	Kg.	1,334.00
57.3	Providing & Fixing of IS: 13875 & IEC :61326 confirming LED Digital type (up to 500) V range Volt meter / Direct- Ammeter / CT oertated ammeter/ Frequency meter / KWH meter / Multi Function Meter / Power analyzer of class 1 accuracy as per IS : 1248 of size 96mm x 96 mm including making connection by PVC insulated copper conductor with PVC sleeves / channel etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
57.3.1	Single Phase Ammeter	Each	1,201.00
57.3.2	Single Phase Voltmeter	Each	1,201.00
57.3.3	Three phase Ammeter with Inbuilt Selector Switch	Each	1,731.00
57.3.4	Three phase Voltmeter with Inbuilt Selector Switch	Each	1,731.00
57.3.5	Three phase KWH Meter	Each	3,618.00
57.3.6	Three phase KWH Meter Dual Source	Each	3,954.00
57.3.7	Frequency Meter	Each	1,201.00

Code No	Description	Unit	Rate Rs.
57.3.8	Three phase AMP+HZ+PF+KW+KVA+KVAR+T.ENERGY+THD-I, THD-V & RUN HRS	Each	3,333.00
57.3.9	Three phase AMP + HZ + PF + KW + KVA + KVAR + KVARH+KWH+DUAL ENERGY+ ENERGY+THD-I, THD-V & RUN HRS	Each	5,372.00
57.3.10	Three phase with universal Auxiliary supply + AMP + HZ + PF + KW + KVA + KVAR + KVARH + KWH + DUAL ENERGY+ ENERGY+THD-I, THD-V & RUN HRS + MD with RS485	Each	6,429.00
57.4	Providing & Fixing of BIS approved Current Transformer as per PWD specification for electrical Works ,ISI marked as per IS 2705-1992/ conforming to IEC 60044-1, with secondary terminal of CT shall be brought out suitable to a terminal block which shall be easier accessible for testing and terminal connection , with all necessary support in existing panel including connection etc. as required Current transformer Ring Type Tape Wound/Resin Cast Wound as per IS 16227 with, Accuracy Cl, CT ratio and burden as specified. ISF<=5, Cu cross section of secondary wire 1.5sqmm (minimum), including all necessary support in existing panel including connection etc. as required . All as per pre approved by Engineer in-charge.All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
57.4.1	Ring type tape wound CT		
57.4.1.1	C T Class 1, Ratio upto 150/5, Burden 5 VA	Each	629.00
57.4.1.2	C T Class 1, Ratio 200/5 to 300/5, Burden 10 VA	Each	808.00
57.4.1.3	C T Class 1, Ratio 400/5 to 1200/5, Burden 15 VA	Each	942.00
57.4.1.4	C T Class 1, Ratio 1600/5 to 3000/5, Burden 15 VA	Each	1,812.00
57.4.1.5	C T Class 1, Ratio 3200/5 to 4000/5, Burden 15 VA	Each	3,037.00
57.4.2	Resin cast wound type CT		
57.4.2.1	C T Class 1, Ratio upto 150/5, Burden 5 VA	Each	1,244.00
57.4.2.2	C T Class 1, Ratio 200/5 to 300/5, Burden 10 VA	Each	1,345.00
57.4.2.3	C T Class 1, Ratio 400/5 to 1200/5, Burden 15 VA	Each	1,613.00
57.4.2.4	C T Class 1, Ratio 1600/5 to 3000/5, Burden 15 VA	Each	2,651.00
57.4.2.5	C T Class 1, Ratio 3200/5 to 4000/5, Burden 15 VA	Each	4,469.00
57.5	Providing & Fixing of selector switch of 10 A for voltmeter using high grade engineering material to international standards with cam assembly insulation of glass filled polyamide with high tracking index. For reliable and stable electrical and mechanical endurance double butt contacts with silver bi-metal on copper should provided . contact assembly is of operating temp range -25 degree C to 55 degree C, frequency upto 10 KHz. switch life under std. op. conditions shall be mechanically minimum 50000 operations @300 cycles/ hour and electrically 10,000 operations at 100% rated duty		

Code No	Description	Unit	Rate Rs.
	for 100 cycles/ hour including making connection etc. as required . All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
57.5.1	Voltage Between Phases with OFF (4 Position)	Each	360.00
57.5.2	Voltage Between Phases & Individual Phases to Neutral with OFF (7 Position)	Each	709.00
57.6	Providing & Fixing of CT linked selector switch of 10 A for Ampere meter (4 position) using high grade engineering material to international standards with cam assembly insulation of glass filled polyamide with high tracking index. For reliable and stable electrical and mechanical endurance double butt contacts with silver bi-metal on copper should provided . contact assembly is of operating temp range -25 degree C to 55 degree C, frequency upto 10 KHz. switch life under std. op. conditions shall be mechanically minimum 50000 operations @300 cycles/ hour and electrically 10,000 operations at 100% rated duty for 100 cycles/ hour , including making connection etc. as required .All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	394.00
57.7	Providing & Fixing of Cam operated rotary (Auto/manual) switches on existing panel with 2 way and off position using high grade engineering material to international standards with cam assembly insulation of glass filled polyamide with high tracking index. For reliable and stable electrical and mechanical endurance double butt contacts with silver bi-metal on copper should provided contact assembly is of operating temp range -25 degree C to 55 degree C, frequency upto 10 KHz. switch life under std. op. conditions shall be mechanically minimum 50000 operations @300 cycles/ hour and electrically 10,000 operations at 100% rated duty for 100 cycles/ hour including making connection etc. as required . All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
57.7.1	10 AMP	Each	372.00
57.7.2	16 Amp	Each	439.00
57.7.3	32 AMP	Each	517.00
57.7.4	63 AMP	Each	902.00
57.8	Providing & Fixing of 110/220 V, unibody LED Indicating lamp IEC 60947 with integral circuit, IP 65 above panel & IP 20 terminal block, Approx. body dia for panel not less then 20 mm, length min. 50mm, front LED cover dia min. 29 mm, contact material phosphor bronze for Led, PCB contacts shall be of brass (tin plated), impulse dielectric tested for 2.5 KV, Rated insulation resistance shall be 100 M ohm at 500VDC including connection etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		

Code No	Description	Unit	Rate Rs.
57.8.1	Red/yellow/Green colour	Each	174.00
57.8.1	Blue / white Colour	Each	267.00
57.9	Providing & Fixing of flush head push button actuators IEC 60947 with integral circuit, IP 65 above panel & IP 20 terminal block, Approx. body dia for panel not less than 20 mm, length min. 50mm, front LED cover dia min. 29 mm, contact material phosphor bronze for Led, PCB contacts shall be of brass (tin plated), impulse dielectric tested for 2.5 KV, including connection etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work, refer Annexure "A" attached with this BSR.		
57.9.1	Non luminous type	Each	168.00
57.9.2	Luminous type Red, Yellow, Green, Amber	Each	220.00
57.9.3	Luminous type Blue, white	Each	353.00
57.10	Providing & Fixing of Electrical insulating rubber matts as per PWD specification for electrical Works, ISI marked confirming to IS: 15652 / 2006 with one side anti skid abberation marks and pasting the mat with synthetic rubber adhesive as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work, refer Annexure "A" attached with this BSR.		
57.10.1	3.3 KV, class A 2 mm thick with proof voltage 10 KV AC (rms) and Break Down Voltage 30 KV AC (rms)	SQ.Mtr.	1,535.00
57.10.2	11 KV, Class B 2.5 mm thick with proof voltage 22 KV AC (rms) and Break Down Voltage 45 KV AC (rms)	SQ.Mtr.	2,094.00
57.10.3	33 KV, class C 3 mm thick with proof voltage 36 KV AC (rms) for 3 min. and Break Down Voltage 65 KV AC (rms)	SQ.Mtr.	2,374.00
57.11	Providing & Fixing of self healing IP20 MPP type shunt capacitor (banks) conforming to IS:13340-41 / IEC :831-1&2 OR IEC : 60831-1& 2 in existing panel or parallel with load terminals, the capacitor shall be fitted with discharge resistors, pressure sensitive disconnecter (PSD) and shall have dissipation factor less than 0.0025 at 50 Hz, Operating loss less than 0.30 Watt per KVAR. Min over current capacity 1.8 times rated current & peak inrush current min. 300 times of rated current, llife expectancy greater than 100000hrs (temp class - 25 D) in 440 V/480 V Capacitor and for 525 V should life expectancy minimum 1,65,000 hrs (temp class - 25 D) including making connections, testing etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work, refer Annexure "A" attached with this BSR.		
57.11.1	Heavy duty Three phase 440 V, 50 Hz cylindrical type capacitor (Bank)	KVAR	383.00
57.11.2	Heavy duty Three phase 480 V, 50 Hz cylindrical type capacitor (Bank)	KVAR	425.00

Code No	Description	Unit	Rate Rs.
57.11.3	Heavy duty Three phase 525V, 50 Hz cylindrical type capacitor (Bank)	KVAR	482.00
57.12	Providing & Fixing of 3-Phase 415/440 V , 7 % / 14 % Detuned Reactors conforming to IEC 61558-2-20 & IEC 60076-6 Aluminium wound for harmonics filter with 180% to 200 % Linearity, H - Class Insulation (180 degree C), high temp. Disconnection above 155 deg C., ambient temperature: +60 deg C. with thermal cut off switch in existing panel with following Capacitor ratings. including making connections, testing etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
57.12.1	7 % (189 Hz) Aluminium wound Reactors		
57.12.1.1	For 1 to 5 KVAR capacitor		5,427.00
57.12.1.2	10 KVAR		7,616.00
57.12.1.3	12.5 KVAR		8,336.00
57.12.1.4	15 KVAR		8,946.00
57.12.1.5	20 KVAR		10,706.00
57.12.1.6	25 KVAR		11,375.00
57.12.1.7	50 KVAR		17,945.00
57.12.1.8	100 KVAR		36,234.00
57.12.2	14 % (133 Hz) Aluminium wound Reactors		
57.12.2.1	For 1 to 5 KVAR capacitor		8,413.00
57.12.2.2	10 KVAR		10,548.00
57.12.2.3	12.5 KVAR		12,020.00
57.12.2.4	15 KVAR		12,507.00
57.12.2.5	20 KVAR		15,303.00
57.12.2.6	25 KVAR		16,113.00
57.12.2.7	50 KVAR		26,345.00
57.12.2.8	100 KVAR		49,006.00
57.13	Providing & Fixing of IP54 microprocessor based 3 CT's for all 3 phase sensing compensation power factor correction relay Size 139mm x 139 mm, Operating Voltage 415/440 V , IEC / EN 61000-6-(2&4) having 3 CT sensing, sensitivity up to 50 milli amp secondary current , self analysing auto c/k setting according to targeted power factor setting, the relay shall have digit display unit for display of real power factor, targeted power factor, lag/lead capacitor switching status, alarm output for under current, over current, insufficient compensation, communication interface with RS 485, indication of switching on units, auto/manual status, and shall have over load protection, no volt release , having multi parameter like KW, KVA, KVAR, RMS Value, step switching time 2 sec to 1800		

Code No	Description	Unit	Rate Rs.
	sec. Lead & Lag parameters, metering facility and 3 no. Class- 0.5 Cast Resin CT (refer CT specs in this chapter)for sensing the relay including making coonection with 1.5 Sq.mm copper wire etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
57.13.1	6 to 8 stage	Each	15,370.00
57.13.2	12 to 14 stage	Each	20,115.00
57.14	Providing & Fixing of AC operated heavy duty 230 /440 Volt power contactor as per PWD specification for electrical Works, ISI marked IS/IEC 60947-4-1 : 2000 having provision of mechanical interlocking, auxilary contacts, Din rail mounting type including making connections, testing etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
57.14.1	3 pole Power contactors with following AC 3 Rating		
57.14.1.1	Up to 12 Amp	Each	1,059.00
57.14.1.2	13 to 25 Amp	Each	1,380.00
57.14.1.3	32 Amp.	Each	2,854.00
57.14.1.4	40 Amp	Each	4,119.00
57.14.1.5	50 Amp	Each	5,586.00
57.14.1.6	70 Amp	Each	7,808.00
57.14.1.7	80 Amp	Each	9,640.00
57.14.1.8	95 Amp	Each	13,765.00
57.14.1.9	140 Amp	Each	22,454.00
57.14.1.10	185 Amp	Each	25,297.00
57.14.1.11	250 Amp	Each	31,379.00
57.14.1.12	300 Amp	Each	39,603.00
57.14.1.13	400 Amp	Each	50,209.00
57.14.1.14	550 Amp	Each	74,019.00
57.14.1.15	630 Amp	Each	1,12,499.00
57.14.2	4 pole Power contactors with following AC 1 Rating		
57.14.2.1	16 Amp.	Each	1,162.00
57.14.2.2	25/32 Amp.	Each	1,218.00
57.14.2.3	40 Amp	Each	1,743.00
57.14.2.4	50 Amp	Each	2,188.00
57.14.2.5	63 Amp	Each	4,146.00
57.14.2.6	100 Amp	Each	8,045.00

Code No	Description	Unit	Rate Rs.
57.14.2.7	160 Amp	Each	15,022.00
57.14.2.8	200 Amp	Each	20,433.00
57.14.2.9	250 Amp	Each	21,271.00
57.14.2.10	325 Amp	Each	38,856.00
57.14.2.11	400 Amp	Each	49,006.00
57.14.2.12	500 Amp	Each	60,328.00
57.14.2.13	600 Amp	Each	65,628.00
57.14.2.14	700 Amp	Each	83,158.00
57.14.2.15	800 Amp	Each	1,08,546.00
57.15	Providing & Fixing of 440 Volt 3 pole capacitor (AC 6 B) duty contactor with 3 no. early make and post break auxiliary contacts in series with quick discharge damping resistors/ reactors to limit the inrush current as per PWD specification for electrical Works, IS/IEC 60947-4-1 : 2000, insulation voltage 1000V, impulse withstand voltage 8 KV,Din rail mounting type including making connections, testing etc. as required. suitable for following capacity capacitor bank. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
57.15.1	up to 6 KVAR	Each	1,858.00
57.15.2	8.5 KVAR	Each	2,180.00
57.15.3	10 KVAR	Each	2,334.00
57.15.4	12.5 KVAR	Each	2,362.00
57.15.5	15.0 KVAR	Each	3,152.00
57.15.6	20.0 KVAR	Each	3,606.00
57.15.7	25.0 KVAR	Each	3,858.00
57.15.8	30.0 KVAR	Each	6,143.00
57.15.9	40.0 KVAR	Each	10,798.00
57.15.10	50.0 KVAR	Each	11,057.00
57.15.11	60.0 KVAR	Each	12,861.00
57.15.12	75.0 KVAR	Each	14,398.00
57.15.13	85 KVAR	Each	16,307.00
57.15.14	100 KVAR	Each	17,648.00
57.16	P & F of Auxiliary Contactor for AC control standard. 24 V Coil 110, 240 V, 415 V, 50 Hz conforming to IS:13947-4-1/IEC:60947-4-1 with required NO & NC combination including making connections, testing etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	1,363.00

Code No	Description	Unit	Rate Rs.
57.17	P & F of Front / Side mounting Add on Auxiliary Contact Block with required NO & NC combination including making connections, testing etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	645.00
57.18	Providing & Fixing of thermal over load relay with built in single phase protection and having at least 1NO & 1NC contacts, manual /auto reset facility including making connection testing etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
57.18.1	Up to 14 Amp	Each	1,187.00
57.18.2	14 to 23 Amp	Each	1,327.00
57.18.3	20 to 33 Amp	Each	1,886.00
57.18.4	24 to 40 Amp	Each	2,026.00
57.18.5	36 to 60 Amp	Each	3,004.00
57.18.6	45 to 75 Amp	Each	3,425.00
57.18.7	66 to 110 Amp	Each	3,844.00
57.19	P & F of 240 / 415 V Electronic ON - OFF Timer 3 -30 Sec / 12 - 120 Sec including making Connection etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	1,986.00
57.20	Providing & Fixing of mechanical / digital time switch having following day / week programme and minimum 100 hours reserve and AC1 rating of 16-20 amperes including making connection, programming conforming to IEC 60730-1 and 60730-2-7 etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
57.20.1	One day reserve (Analog type)	Each	4,500.00
57.20.2	One day & week reserve (Analog type)	Each	4,807.00
57.20.3	One day & week reserve (digital type)	Each	4,203.00
57.21	Providing & Fixing of 110 - 240 V, AC, 1 ph. , 2 W Astronomical time switch with surge suppressor, memory card, Sunrise / Sunset selectable, software for programming including making connection, etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	5,142.00
57.22	Providing & Fixing of IP51 direct or CT operated, 1x240 / 3x240 volts , 50 Hz static watt-hour meter (kwh) as per PWD specification for electrical Works, ISI marked (IS :13010-2002) having resolution 0.1 / 0.01 kwh , accuracy class 1 as per IS:13779, LED indicators for tamper operation (Reverse &/or earth connection) , pulsating LED		

Code No	Description	Unit	Rate Rs.
	indicator for meterology , LCD Display, cover plate for body and terminal sealing , push button for all standard parameters, including making connection ,testing etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
57.22.1	up to 30 ampere single phase meter	Each	1,743.00
57.22.2	10 A to 60 ampere Single phase meter	Each	1,882.00
57.22.3	3ph, 4W KWh CT Operated Base mounting 240 V, /5A	Each	5,467.00
57.22.4	3ph, 4W KWh Direct Base mounting 240 V 10-40 /5-30 Amp	Each	4,754.00
57.22.5	3ph, 4W KWh Direct Base mounting 240 V 10-60 Amp	Each	5,788.00
57.22.6	3ph, 4W Trivector Meter,240 V(L-N) 5A	Each	22,140.00
57.23	P & F of Automatic Transfer Switch (ATS) confirming to IEC60947-6-1, Utilization cateogory AC-33B in Existing panel for automatic on load transfer between two source power supply of 415V through Solenoid/Motorised mechanism and integrated with three positions realize fast transfer within 100 ms. ATS shall have three postions (S1-OFF-S2) , Manual / Auto Override feature, The two sources can be isolated in the off position with a padlock. capability to expand with RS 485 communication module, which can ensure real-time transmission of communication data. ATS shall have automatic generator start & stop control function; Auxillary contacts to indicate mechanical positions. Minimum Electrical operations 6000, of following Current ratings, including making connections etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
57.23.1	63 Amps	Each	38,694.00
57.23.2	125 Amps	Each	73,115.00
57.23.3	160 Amps	Each	75,125.00
57.23.4	200 Amps	Each	85,759.00
57.23.5	250 Amps	Each	1,08,543.00
57.23.6	315 Amps	Each	1,15,578.00
57.23.7	400 Amps	Each	1,31,256.00
57.23.8	630 Amps	Each	1,60,804.00
57.23.9	800 Amps	Each	1,97,656.00
57.24	P & F Earth leakage relay for continuous surveillance of the earth leakage current of Rating 240 VAC at 50/60 Hz, Overload : x2 continuously, x10 for 3 secs as per BS6253, Voltage Tolerance : : -25% to +10% Operating temp.: : -10 C to +70 C, Setting of trip point : : 0.030, 0.10, 0.30, 0.50, 1.0 ,3.0 ,5.0, 10.0,20.0 & 30.0 (User Selectable) with Alarm Relay Output, Trip Relay Output etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR		

Code No	Description	Unit	Rate Rs.
57.24.1	ELR with 35mm CBCT		2,226.00
57.24.2	ELR with 70mm CBCT		2,449.00
57.24.3	ELR with 120mm CBCT		2,722.00
57.24.4	ELR with 210mm CBCT		3,756.00
57.25	P & F of Direct on line (DOL) / Star - Delta Starter as per IEC type-2 Co-ordination chart of OEM in Existing Panel with circuit breaker having inbuilt overload protection or separate thermal Overload relay , Short circuit, phase loss protection, suitable Contactors, including wiring between switchgears, Indicating lamps for R,Y,B,ON,OFF, Push button for ON, OFF, Volt meter, Ammeter, selector switch for local/remote, auto/manual/OFF operation. Cast resin CT's, provision for potential free contacts making connection, testing etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
57.25.1	Direct on line (DOL) Starter with following Motor rating		
57.25.1.1	Motor rating 0.55 KW	Set	10,240.00
57.25.1.2	Motor rating 0.75 KW	Set	11,544.00
57.25.1.3	Motor rating 1.5 KW	Set	11,786.00
57.25.1.4	Motor rating 2.2 KW	Set	11,821.00
57.25.1.5	Motor rating 4.0 KW	Set	12,595.00
57.25.1.6	Motor rating 5.5 KW	Set	13,076.00
57.25.1.7	Motor rating 7.5 KW	Set	13,402.00
57.25.1.8	Motor rating 9.0 KW	Set	16,597.00
57.25.1.9	Motor rating 11.0 KW	Set	16,713.00
57.25.1.10	Motor rating 15.0 KW	Set	24,993.00
57.25.1.11	Motor rating 18.5 KW	Set	28,188.00
57.25.1.12	Motor rating 22.0 KW	Set	31,122.00
57.25.1.13	Motor rating 30.0 KW	Set	38,610.00
57.25.1.14	Motor rating 37.0 KW	Set	45,674.00
57.25.1.15	Motor rating 45.0 KW	Set	47,184.00
57.25.1.16	Motor rating 55.0 KW	Set	51,168.00
57.25.1.17	Motor rating 75.0 KW	Set	71,375.00
57.25.1.18	Motor rating 90.0 KW	Set	79,775.00
57.25.1.19	Motor rating 110.0 KW	Set	94,682.00
57.25.2	Star - Delta Starter with following Motor rating		
57.25.2.1	Motor rating 4.0 KW	Set	18,230.00
57.25.2.2	Motor rating 5.5 KW	Set	18,888.00

Code No	Description	Unit	Rate Rs.
57.25.2.3	Motor rating 7.5 KW	Set	19,266.00
57.25.2.4	Motor rating 9.0 KW	Set	24,719.00
57.25.2.5	Motor rating 11.0 KW	Set	25,433.00
57.25.2.6	Motor rating 15.0 KW	Set	36,761.00
57.25.2.7	Motor rating 18.5 KW	Set	46,015.00
57.25.2.8	Motor rating 22.0 KW	Set	47,995.00
57.25.2.9	Motor rating 30.0 KW	Set	56,030.00
57.25.2.10	Motor rating 37.0 KW	Set	73,401.00
57.25.2.11	Motor rating 45.0 KW	Set	78,963.00
57.25.2.12	Motor rating 55.0 KW	Set	88,021.00
57.25.2.13	Motor rating 75.0 KW	Set	94,048.00
57.25.2.14	Motor rating 90.0 KW	Set	1,26,928.00
57.25.2.15	Motor rating 110.0 KW	Set	1,60,980.00
57.26	SITC of IP-42 and general construction confirming to IEC 61439-1&2. type tested assembly (TTA) wall/ free standing floor mounted dust and vermin proof compartmentalised cubical panel as specifications and Other parameters required as per point (a) ,(b), (c),(d), (e), (f), (g), (h) as below:- (a) Panel having short circuit withstand capacity of minimum of 50 kA for 1s (Icw rating) at 415 V, 50 HZ AC supply, Rated Impulse withstand voltage (Uimp) of 12kV for withstanding against transient Overvoltages, mechanical impact level of IK10 level and internal arc for 50kA for 0.3 second with aluminum busbar and fully type tested at an Independent Laboratory, Type test certificate has to be submitted for all rating of LV Switchgear to be used in Panel. (b) All four Horizontal Busbars shall be in same compartment. Certified design of switchboards shall be proven design from OEM (Switchgear Manufacturer). OEM name should be mentioned on top of each column of switchboard. Also, OEM Partnership Certificate shall be furnished by Panel builder. Panel shall be fabricated with a double door arrangement. Front Door shall be fitted with transparent Glass to allow maintenance staff to visually access device status, meter readings, indicating lamp status without opening the door. (c) Panels and cubicles shall be fabricated with CRCA Sheet Steel of thickness, same as as per OEM Design. Sheet Steel having vibration free structure chemically treated with nine tank process before painting for surface treatment and powder coated, with suitable electrolytic grade high conductivity Aluminium busbar extensible type, busbar supports, (Cost of Bus bar / Flexible wire for Interconnection between Main busbar and Switchgear is to be Paid Extra)		

Code No	Description	Unit	Rate Rs.
	(d) Wiring between components within switchgear and Incoming / outgoing cable shall be done through the terminal block only. Direct connection shall not be permitted. Each terminal block shall be one piece moulded, barrier type, 650 volt grade, complete with washers, heads, studs with two nuts and identification strips and shall have adequate continuous current rating. For tap-offs, adjacent terminals with shorting strips shall be used. 10% Spare terminal blocks shall be provided. Wire identification on marking strip shall correspond to the designation of the wiring diagrams. All wire terminals on the equipment shall also be marked with designation corresponding to those of the wiring diagram. (e) All wiring shall be enclosed in plastic channels and neatly bunched and closed in metering chamber, Wiring between terminals of various devices shall be 'point to point' (no wire splitting or tee connections) with wires neatly trucked along the back of the panels, adequately supported to prevent sagging. (f) Floor mounted panel shall be mounted on Base frame of ISMC channel size 100 x 50 x 5 mm (to be paid Extra) (g) Tests: The insulation resistance (with 1000 V Megger) and High voltage Power frequency test (by applying a voltage of 2.5KV for one minute) shall be measured between phases, between phase and neutral and between phase and earth. both before and after high voltage power frequency test. The insulation resistance shall not be less than three megaohm. CT Secondary current injection test and Heat run test(type test) shall also be carried out. (h) only outer surface area on all sides shall be measured & panel to be fabricated only from Switchgear OEM approved fabricators only. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Sqm	10,111.00

58.0 AIR-CIRCUIT BREAKERS & MCCB

Code No	Description	Unit	Rate Rs.
58.1	SITC of Draw out type 3/4 pole door interlock Air Circuit Breaker (ACB) as conforming to IS/IEC 60947 P - 2 :2003 in existing LT panel suitable for LT installation 440 V, 50 Hz and having adjustable over load short-circuit, Instantaneous , earth fault (LSIG) with separate LED indication for each type of fault shall confirm to EMI/ EMC test , LCD/LED display, last 10 trip history, provision of ZSI, Communication, Power metering module, Thermal memory , trip free mechanism , suitable for ambient 50 degree and utilization catagary B. In built electrical & mechanical anti pumping feature , 100% rated neutral . ACB shall have separate indication for service, test, isolation & maintenance position, Breaking capacity Icu = Ics = Icw (1 sec) , U imp - 12 KV, break time not more then 25 ms. Provision for electrical & mechanical interlock between ACBs, Min.electrical operation 10000 upto 2000 A rating and 5,000 for 2500 A to 4000 A. including making connections, testing etc. as required. OEM shall have submit NABL / CPRI / ERDA accredited lab type test certificate before execution. All as per pre approved by Engineer in-charge.For additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
58.1.1	Microprocessor based release Draw out type (Manual spring charged) 3 Pole		
58.1.1.1	630/800 A Rating , 50 kA	Each	1,40,274.00
58.1.1.2	1000 A Rating , 50 kA	Each	1,49,979.00
58.1.1.3	1250 A Rating ,50 kA	Each	1,65,925.00
58.1.1.4	1600 A Rating ,50 kA	Each	1,81,816.00
58.1.1.5	2000 A Rating ,50 kA	Each	2,23,838.00
58.1.1.6	2500 A Rating ,50 kA	Each	2,67,546.00
58.1.1.7	3200 A Rating ,65 kA	Each	3,41,664.00
58.1.1.8	4000 A Rating ,65 kA	Each	4,32,784.00
58.1.2	Microprocessor based release Draw out type (Motorised charging type) 3Pole		
58.1.2.1	630/800 A Rating , 50 kA	Each	1,70,650.00
58.1.2.2	1000 A Rating , 50 kA	Each	1,80,348.00
58.1.2.3	1250 A Rating ,50 kA	Each	1,91,002.00
58.1.2.4	1600 A Rating ,50 kA	Each	2,14,054.00
58.1.2.5	2000 A Rating ,50 kA	Each	2,59,597.00
58.1.2.6	2500 A Rating ,50 kA	Each	2,96,460.00
58.1.2.7	3200 A Rating ,65 kA	Each	3,73,285.00

Code No	Description	Unit	Rate Rs.
58.1.2.8	4000 A Rating ,65 kA	Each	4,40,068.00
58.1.3	Microprocessor based release Draw out type (Manual spring charged) 4 Pole		
58.1.3.1	630/800 A Rating , 50 kA	Each	1,76,160.00
58.1.3.2	1000 A Rating , 50 kA	Each	1,83,333.00
58.1.3.3	1250 A Rating ,50 kA	Each	2,14,184.00
58.1.3.4	1600 A Rating ,50 kA	Each	2,32,402.00
58.1.3.5	2000 A Rating ,50 kA	Each	2,88,036.00
58.1.3.6	2500 A Rating ,50 kA	Each	3,41,685.00
58.1.3.7	3200 A Rating ,65 kA	Each	4,16,209.00
58.1.3.8	4000 A Rating ,65 kA	Each	5,78,216.00
58.1.4	Microprocessor based release Draw out type (Motorised charging type) 4 Pole		
58.1.4.1	630/800 A Rating ,50 kA	Each	2,08,919.00
58.1.4.2	1000 A Rating , 50 kA	Each	2,19,447.00
58.1.4.3	1250 A Rating ,50 kA	Each	2,33,521.00
58.1.4.4	1600 A Rating ,50 kA	Each	2,61,910.00
58.1.4.5	2000 A Rating ,50 kA	Each	3,11,624.00
58.1.4.6	2500 A Rating ,50 kA	Each	3,67,957.00
58.1.4.7	3200 A Rating ,65 kA	Each	4,48,892.00
58.1.4.8	4000 A Rating ,65 kA	Each	5,51,931.00
58.2	Supply and fixing of following accessories for Air circuit breaker (ACB) compatible with MAIN ACB OEM as per PWD specification for electrical Works, conforming to IS/IEC 60947 P - 2 :2003 including making connection etc complete in all respect. OEM shall have submit NABL / CPRI / ERDA accredited lab type test certificate before execution. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
58.2.1	Mechanical Interlocking Kit using key & Lock	Each	9,284.00
58.2.2	Closing Release	Each	12,612.00
58.2.3	Shunt Trip Release	Each	2,853.00
58.2.4	Under voltage Release	Each	4,545.00
58.2.5	External Neutral CT cast resin	Each	6,796.00
58.2.6	Microswitch for Indication	Each	2,482.00
58.2.7	Operation Counter	Each	8,354.00
58.2.8	Door Interlock	Each	3,384.00

Code No	Description	Unit	Rate Rs.
58.2.9	Auxiliary Contact 4 NO + 4 NC	Each	5,642.00
58.2.10	Breaker Control Switch (TNC)	Each	1,322.00
58.3	SITC of 3 /4 pole current limiting Moulded case circuit breaker (MCCB) made of flame retardent & heat resistant material having following current rating, short circuit breaking capacity at 440/415 V, 50 Hz; O/L & S/C settings , conforming to IS/IEC 60947 P -2 :2003 with front face and centralised adjustable, trip free mechanism, true contact position indicator, line load interchangeability, designed for both horizontal & vertical mounting without any adverse effect on electrical performance, suitable for operation upto 55 degree and without derating upto 40 degree, pollution degree 3, having positive isolation capability, push (test) to trip, trip time less then 10 ms under s/c condition, Breaking capacity Ics = 100% ICU. U imp =8 KV, rated insulation voltage 690 V. provision for UVR , shunt trip , earth fault trip, door interlock, pad lock & rotary handle , including making connections etc. as required.OEM shall have submit NABL / CPRI / ERDA accredited lab type test certificate before execution All as per pre approved by Engineer in-charge. For additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
58.3.1	3 pole MCCB With Thermal Magnetic release		
58.3.1.1	up to 100 Amp , 10 kA, fixed O/L & fixed S/C setting	Each	1,740.00
58.3.1.2	up to 100 Amp , 25 kA, adjustable O/L & adjustable S/C setting,	Each	5,299.00
58.3.1.3	125 Amp , 25 kA, adjustable O/L & adjustable S/C setting,	Each	6,547.00
58.3.1.4	160 Amp , 25 kA, adjustable O/L & adjustable S/C setting,	Each	10,210.00
58.3.1.5	200 Amp , 25 kA, adjustable O/L & adjustable S/C setting,	Each	13,518.00
58.3.1.6	250 Amp , 25 kA, adjustable O/L & adjustable S/C setting,	Each	15,709.00
58.3.1.7	250 Amp , 35 kA, adjustable O/L & adjustable S/C setting,	Each	16,520.00
58.3.1.8	400 Amp , 35 kA, adjustable O/L & adjustable S/C setting,	Each	20,225.00
58.3.1.9	630 Amp , 50 kA, adjustable O/L & adjustable S/C setting,	Each	28,943.00
58.3.1.10	800 Amp , 50 kA, adjustable O/L & adjustable S/C setting,	Each	52,726.00
58.3.2	3 pole MCCB With Microprocessor based release with adjustable O/L & S/C setting with Inbuilt Instantaneous and Ground fault Protection.		
58.3.2.1	250 Amp , 25 kA	Each	29,194.00
58.3.2.2	400 Amp , 35 kA	Each	34,766.00
58.3.2.3	630 Amp , 50 kA	Each	38,779.00
58.3.2.4	800 Amp , 50 kA	Each	65,107.00
58.3.3	4 pole MCCB With Thermal Magnetic release		
58.3.3.1	up to 100 Amp , 10 kA, fixed O/L & fixed S/C setting	Each	2,270.00

Code No	Description	Unit	Rate Rs.
58.3.3.2	up to 100 Amp , 25 kA, adjustable O/L & adjustable S/C setting,	Each	7,290.00
58.3.3.3	125 Amp , 25 kA, adjustable O/L & adjustable S/C setting,	Each	8,601.00
58.3.3.4	160 Amp , 25 kA, adjustable O/L & adjustable S/C setting,	Each	12,131.00
58.3.3.5	200 Amp , 25 kA, adjustable O/L & adjustable S/C setting,	Each	15,732.00
58.3.3.6	250 Amp , 25 kA, adjustable O/L & adjustable S/C setting,	Each	17,917.00
58.3.3.7	250 Amp , 35 kA, adjustable O/L & adjustable S/C setting,	Each	20,287.00
58.3.3.8	400 Amp , 35 kA, adjustable O/L & adjustable S/C setting,	Each	24,442.00
58.3.3.9	630 Amp , 50 kA, adjustable O/L & adjustable S/C setting,	Each	35,376.00
58.3.3.10	800 Amp , 50 kA, adjustable O/L & adjustable S/C setting,	Each	40,152.00
58.3.4	4 pole MCCB With Microprocessor based release with adjustable O/L & S/C setting with Inbuilt Instantaneous and Ground fault Protection.		
58.3.4.1	Upto 160 Amp , 50 kA	Each	35,688.00
58.3.4.2	250 Amp , 50 kA	Each	39,156.00
58.3.4.3	400 Amp , 50 kA	Each	41,801.00
58.3.4.4	630 Amp, 50 kA	Each	47,694.00
58.3.4.5	800 Amp , 50 kA	Each	78,055.00
58.4	Supply and fixing of following accessories for Moulded case circuit breaker (MCCB) compatible to main MCCB OEM as per PWD specification for electrical Works, conforming to IS/IEC 60947 P - 2 :2003 including making connection etc complete in all respect. OEM shall have submit NABL / CPRI / ERDA accredited lab type test certificate before execution. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
58.4.1	Shunt Trip Release	Each	1,460.00
58.4.2	Under Voltage Release	Each	2,740.00
58.4.3	Extended Rotary Handle	Each	2,781.00
58.4.4	Direct Rotary Handle	Each	1,692.00
58.4.5	Mechanical Interlocking kit	Each	7,117.00
58.4.6	Motor mechanism for 250A MCCB (240V, 50Hz)	Each	22,849.00
58.4.7	Motor mechanism for 400A MCCB (240V, 50Hz)	Each	28,133.00
58.4.8	Motor mechanism for 630A MCCB (240V, 50Hz)	Each	42,252.00
58.4.9	Auxiliary contact	Each	1,379.00
58.4.10	Trip Alarm contact	Each	1,379.00
58.4.11	Auxiliary + Trip alarm contact	Each	1,675.00
58.4.12	Spreaders upto 125A, 3 Pole MCCB	set	399.00

Code No	Description	Unit	Rate Rs.
58.4.13	Spreaders for 160A, 3 Pole MCCB	set	1,191.00
58.4.14	Spreaders for 160A, 4 Pole MCCB	set	1,545.00
58.4.15	Spreaders for 250A, 3 Pole MCCB	set	1,226.00
58.4.16	Spreaders for 250A, 4 Pole MCCB	set	1,580.00
58.4.17	Spreaders for 400A, 3Pole MCCB	set	2,259.00
58.4.18	Spreaders for 400A, 4Pole MCCB	set	3,179.00
58.4.19	Spreaders for 630A, 3Pole MCCB	set	2,659.00
58.4.20	Spreaders for 630A, 4Pole MCCB	Set	3,513.00
58.4.21	Spreaders for 800A, 3Pole MCCB	Set	5,510.00
58.4.22	Spreaders for 800A, 4Pole MCCB	Set	6,936.00
58.4.23	Phase Barriers up to 630A, 3/4Pole MCCB	set	1,134.00
58.4.24	External Neutral CT with Adaptor Kit	set	4,711.00
58.4.25	Current Metering Module	set	19,603.00
58.5	Providing & Fixing of IK08 and IP-30 Recessed/surface mounting heavy duty Enclosure suitable for mounting 3 / 4 pole MCCB, Inbuilt neutral link made out from Galvanized steel / CRCA sheet not less than 1.2 mm thick conforming to IS-8623-1 & 3 / IEC 61439- 1 & 3. powder painted complete with din rail making internal DB terminations, detachable gland plate, including making connections, testing etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
58.5.1	Suitable to accommodate up to 70 sqmm 3.5 core Al arm. Cable	Each	1,876.00
58.5.2	Suitable to accommodate above 70 sqmm 3.5 core Al arm. Cable to 185 Sqm , 3.5 core Al Arm. Cable	Each	4,050.00
58.6	SITC of IP-43 surface mounting heavy duty modular Sub main Distribution board (SMDB) fabricated by switchgear OEM having short circuit withstand current 35 kA (upto 400 amp.Incomer) and 50 kA for 630 amp. Incomer with suitable bottom cabling box, 4 no. corner boxes, 2 no. side cabling boxes, metering Extension box with provision of incomer suitable for 3 pole MCCB and 3 pole MCCB as outgoing ,made out from Galvanized steel / CRCA sheet not less than 1.6 mm thick conforming to IEC 61439 Part 1 & 2. , U imp 8 KV, form of separation 2b, powder painted complete with insulated suitable rating tinned copper bus bar, neutral bars with shrouds, earth bar , din bar, making internal DB terminations with copper lugs, detachable gland plate, including making connections, testing etc. as required. (Without MCCB, ammeter, voltmeter, selector switch , Indicating lamp) OEM shall have submit NABL / CPRI / ERDA accredited lab type test certificate before execution. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		

Code No	Description	Unit	Rate Rs.
58.6.1	SMDB with 250 Amp. Incoming and 4 no. 100 Amps Outgoing	Set	64,122.00
58.6.2	SMDB with 250 Amp. Incoming and 8 no. 100 Amps Outgoing	Set	74,160.00
58.6.3	SMDB with 250 Amp. Incoming and 12 no. 100 Amps Outgoing	Set	88,162.00
58.6.4	SMDB with 400 Amp. Incoming and 4 no. 100 Amps Outgoing	Set	74,294.00
58.6.5	SMDB with 400 Amp. Incoming and 8 no. 100 Amps Outgoing	Set	82,007.00
58.6.6	SMDB with 400 Amp. Incoming and 12 no. 100 Amps Outgoing	Set	96,413.00
58.6.7	SMDB with 630 Amp. Incoming and 4 no. 100 Amps Outgoing	Set	1,06,567.00
58.6.8	SMDB with 630 Amp. Incoming and 8 no. 100 Amps Outgoing	Set	1,11,672.00
58.6.9	SMDB with 630 Amp. Incoming and 12 no. 100 Amps Outgoing	Set	1,38,947.00
58.6.10	SMDB with 630 Amp. Incoming and 6 no. 100 Amps + 2 No. 250 amp. Outgoing	Set	1,15,035.00
58.6.11	SMDB with 630 Amp. Incoming and 10 no. 100 Amps + 2 No. 250 amp. Outgoing	Set	1,40,571.00

59.0 SWITCH FUSE UNIT & CHANGE OVER SWITCH

Code No	Description	Unit	Rate Rs.
59.1	Providing & Fixing of ISO certified company made TP&N 415 V side handle operated double break fuse switch unit in sheet steel enclosure as per PWD specification for electrical Works conforming to IS/IEC 60947-3 : 1999 (W/O HBC fuses) including making connections with suitable lugs, testing etc. as required. Appropriate type test certificate / OEM test report shall be submitted . All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
59.1.1	63 A rating	Each	6,775.00
59.1.2	100 A rating	Each	9,198.00
59.1.3	200 A rating	Each	15,660.00
59.1.4	300/320 A rating	Each	17,897.00
59.1.5	400 A rating	Each	25,573.00
59.1.6	500 A rating	Each	35,847.00
59.2	Providing & Fixing of ISO certified company made TP&N 415 V AC-23A front handle operated switch disconnecter fuse unit, cubical type, with metallic enclosure, as per PWD specification for electrical Works conforming to IS/IEC 60947-3 : 1999 with HBC fuses including making connections with lugs, testing etc as required. Appropriate type test certificate / OEM test report shall be submitted . All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
59.2.1	32 A rating	Each	3,937.00
59.2.2	63 A rating	Each	4,650.00
59.2.3	100/125 A rating	Each	7,528.00
59.2.4	160 A rating	Each	9,553.00
59.2.5	200 A rating	Each	13,025.00
59.2.6	250 A rating	Each	14,961.00
59.2.7	300/320 A rating	Each	17,464.00
59.2.8	400 A rating	Each	19,926.00
59.2.9	630 A rating	Each	31,620.00
59.3	Providing & Fixing of ISO certified company made TP&N 415 V AC-23A front handle operated switch disconnecter fuse unit, cubical type, without metallic enclosure (For Panel Mounting), as per PWD specification for electrical Works conforming to IS/IEC 60947-3 : 1999 in existing panel With HBC fuses including making connections		

Code No	Description	Unit	Rate Rs.
	with lugs, testing etc as required. Appropriate type test certificate / OEM test report shall be submitted . All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
59.3.1	32 A rating	Each	2,019.00
59.3.2	63 A rating	Each	2,785.00
59.3.3	100/125 A rating	Each	5,751.00
59.3.4	160 A rating	Each	7,937.00
59.3.5	200 A rating	Each	9,954.00
59.3.6	250 A rating	Each	11,587.00
59.3.7	300/320 A rating	Each	14,143.00
59.3.8	400 A rating	Each	17,415.00
59.3.9	630 A rating	Each	27,349.00
59.4	Providing & Fixing of ISO certified company made bakelite fuse fitting for HBC fuse links (front/bus bar connections) Conforms To IS 13703/IEC 269 w/o HBC fuses as per PWD specification for electrical Works on existing board including making connections with lugs, testing etc. as required. Appropriate type test certificate / OEM test report shall be submitted . All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
59.4.1	20 A rating	Each	174.00
59.4.2	32 A rating	Each	195.00
59.4.3	63 A rating	Each	320.00
59.4.4	100/125 A rating	Each	900.00
59.5	Providing & Fixing of ISO certified company made 240/415 V porcelain kitkat fuse (/HBC type) as per PWD specification for electrical Works conforming to IS:2086,1983 on existing board/ sheet including making connections with lugs, testing etc. as required . Appropriate type test certificate / OEM test report shall be submitted . All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
59.5.1	16 A ,240 V	Each	90.00
59.5.2	16 A ,415 V	Each	136.00
59.5.3	32 A ,240 V	Each	138.00
59.5.4	32 A ,415 V	Each	168.00
59.5.5	63 A , 415 V	Each	256.00
59.5.6	100 A ,415 V	Each	498.00
59.5.7	200 A , 415 V	Each	915.00

Code No	Description	Unit	Rate Rs.
59.5.8	320 A , 415 V	Each	1,397.00
59.6	Providing & Fixing of ISO certified company made bolted type/ Din type HBC (High breaking capacity) fuse links of 80 KA breaking capacity,as per PWD specification for electrical Works conforming to IS:13703 in the existing fuse base, fuse switch unit etc. of the following type and rating. Appropriate type test certificate / OEM test report shall be submitted . All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
59.6.1	Cylindrical Fuse Link		
59.6.1.1	2 A to 32 A	Each	92.00
59.6.1.2	40 A	Each	101.00
59.6.1.3	50 A	Each	215.00
59.6.1.4	63A	Each	258.00
59.6.2	Offset tag type		
59.6.2.1	2 A to 20 A	Each	45.00
59.6.2.2	25 A to 32 A	Each	77.00
59.6.2.3	35 A to 63 A	Each	108.00
59.6.2.4	80 A to 125 A	Each	377.00
59.6.3	Central tag type		
59.6.3.1	80 A to 125 A	Each	300.00
59.6.3.2	160 A to 200 A	Each	341.00
59.6.3.3	250 A to 315 A	Each	499.00
59.6.3.4	400 A to 500 A	Each	1,358.00
59.6.3.5	630 A	Each	1,484.00
59.6.4	Din (knife type) type		
59.6.4.1	63 A to 125 A Size 000	Each	366.00
59.6.4.2	63 A to 160 A Size 00	Each	398.00
59.6.4.3	80 A to 200 A Size 0	Each	547.00
59.6.4.4	125 A to 315 A Size 1	Each	655.00
59.6.4.5	200 A to 400 A Size 2	Each	864.00
59.6.4.6	315A to 800 A Size 3	Each	2,902.00
59.7	Providing & Fixing of ISO certified company made on load change over switch, front handle operated, four pole 415 V as per PWD specification for electrical Works conforming to IS/IEC 60947-3 : 1999 including connections , testing etc. as required .in the following rating. Appropriate type test certificate / OEM test report shall be submitted . All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		

Code No	Description	Unit	Rate Rs.
59.7.1	Open execution type		
59.7.1.1	63 A	Each	4,139.00
59.7.1.2	125 A	Each	7,328.00
59.7.1.3	160 A	Each	8,969.00
59.7.1.4	200 A	Each	11,983.00
59.7.1.5	250 A	Each	16,374.00
59.7.1.6	320 A	Each	18,135.00
59.7.1.7	400 A	Each	26,664.00
59.7.1.8	630 A	Each	34,200.00
59.7.1.9	800 A	Each	44,742.00
59.7.1.10	1000 A	Each	52,433.00
59.7.2	With sheet steel enclosure made out from CRCA sheet door 1.2mm & body 1.6mm thick, powder quoted, door locking system allow opening of door in OFF position only with 2 nos external earthing points.		
59.7.2.1	63 A	Each	5,454.00
59.7.2.2	125 A	Each	9,352.00
59.7.2.3	160 A	Each	11,575.00
59.7.2.4	200 A	Each	13,391.00
59.7.2.5	250 A	Each	17,884.00
59.7.2.6	320 A	Each	21,581.00
59.7.2.7	400 A	Each	30,003.00
59.7.2.8	630 A	Each	35,733.00
59.7.2.9	800 A	Each	51,082.00
59.7.2.10	1000 A	Each	59,006.00
59.8	Providing & Fixing of ISO certified company made off load change over switch four pole/two pole, 230/ 415 V ,side handle operated conforming to IS:13947 P-III in sheet steel enclosure complete with connections with lugs, testing etc. as required in the following rating: All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
59.8.1	32 A, Double pole	Each	1,556.00
59.8.2	32 A, Four pole	Each	2,658.00
59.8.3	63 A Four pole	Each	5,208.00
59.8.4	100 A Four pole	Each	10,051.00
59.8.5	200 A Four pole	Each	15,159.00

Code No	Description	Unit	Rate Rs.
59.8.6	315 A Four pole	Each	19,470.00
59.8.7	400 A Four pole	Each	22,417.00
59.9	Providing & Fixing of ISO certified company made Four Pole By pass Change Over Switch conforming to IS:13947(Part 3) : IEC:60947-3-1 and IEC:60947-6-1, Open execution type in the following ratings. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
59.9.1	63 A	Each	13,766.00
59.9.2	100 A	Each	15,773.00
59.9.3	200 A	Each	21,566.00
59.9.4	320 A	Each	32,257.00
59.9.5	400 A	Each	47,980.00
59.9.6	630 A	Each	54,697.00
59.9.7	800 A	Each	69,623.00
59.9.8	1000 A	Each	1,24,823.00
59.10	Providing & Fixing of ISO certified company made bus bar chamber housed in sheet metal box as per PWD specification for electrical Works Confirming to IEC-60439/IS-8623 & IEC-60529/IS-2147 made out from 1.6 mm thick powder coated CRCA sheet,degree of protection IP-31, front openable bus bar made out of aluminium or wrought aluminium alloy suitable for 100 amp. Capacity , bus bar fixed on porcelain/DMC insulators at approved spacing including making connections etc. as required. Appropriate type test certificate / OEM test report shall be submitted . All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
59.10.1	300 mm long , 2 strip	Each	834.00
59.10.2	300 mm long , 4 strip	Each	1,037.00
59.10.3	450 mm long , 2 strip	Each	1,183.00
59.10.4	450 mm long , 4 strip	Each	1,763.00
59.10.5	600 mm long ,2 strip	Each	1,532.00
59.10.6	600 mm long , 4 strip	Each	2,021.00
59.10.7	900 mm long , 2 strip	Each	2,020.00
59.10.8	900 mm long , 4 strip	Each	2,859.00
59.11	Providing & Fixing of ISO certified company made bus bar chamber housed in sheet metal box as per PWD specification for electrical Works Confirming to IEC-60439/ IS-8623 & IEC-60529/ IS-2147 made out from 1.6 mm thick powder coated CRCA sheet,degree of protection IP-31 front openable bus bar made out of aluminium or wrought aluminium alloy suitable for 200 amp. Capacity , bus bar		

Code No	Description	Unit	Rate Rs.
	fixed on porcelain/DMC insulators at approved spacing including making connections etc. as required. Appropriate type test certificate / OEM test report shall be submitted . All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
59.11.1	300 mm long , 4 strip	Each	1,744.00
59.11.2	450 mm long , 4 strip	Each	2,720.00
59.11.3	600 mm long , 4 strip	Each	2,896.00
59.11.4	900 mm long , 4 strip	Each	3,907.00
59.12	Providing & Fixing of ISO certified company made bus bar chamber housed in sheet metal box as per PWD specification for electrical Works Confirming to IEC-60439/IS-8623 & IEC-60529/IS-2147 made out from 1.6 mm thick powder coated CRCA sheet,degree of protection IP-31, front openable bus bar made out of Copper suitable for 100 amp. Capacity , bus bar fixed on porcelain/DMC insulators at approved spacing including making connections etc. as required. Appropriate type test certificate / OEM test report shall be submitted . All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
59.12.1	300 mm long , 2 strip	Each	2,163.00
59.12.2	300 mm long , 4 strip	Each	4,399.00
59.12.3	450 mm long , 2 strip	Each	2,651.00
59.12.4	450 mm long , 4 strip	Each	5,167.00
59.12.5	600 mm long ,2 strip	Each	3,490.00
59.12.6	600 mm long , 4 strip	Each	6,706.00
59.12.7	900 mm long , 2 strip	Each	4,816.00
59.12.8	900 mm long , 4 strip	Each	8,731.00
59.13	Providing & Fixing of ISO certified company made bus bar chamber housed in sheet metal box as per PWD specification for electrical Works Confirming to IEC-60439/IS-8623 & IEC-60529/IS-2147 made out from 1.6 mm thick powder coated CRCA sheet,degree of protection IP-31, front openable bus bar made out of Copper suitable for 200 amp. Capacity , bus bar fixed on porcelain/DMC insulators at approved spacing including making connections etc. as required. Appropriate type test certificate / OEM test report shall be submitted . All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
59.13.1	300 mm long , 4 strip	Each	5,098.00
59.13.2	450 mm long , 4 strip	Each	5,866.00
59.13.3	600 mm long , 4 strip	Each	8,382.00
59.13.4	900 mm long , 4 strip	Each	11,527.00

60.0 LT CABLES

Code No	Description	Unit	Rate Rs.
60.1	Providing & Laying P.V.C. / XLPE insulated & P.V.C. sheathed Un-Armoured Aluminium cable confirming to IS:1554 P-I / IS :7098 P - I of 1.1 KV with H4- Grade electrolytic aluminium conductor confirming to IS 8130 of purity >99.6 %, Inner / outer sheath confirming to IS:5831 in existing RCC / Hume / Stoneware / PVC pipe/ open duct/cable trench / Cable tray (with cable tie) including testing etc. as required of following size. OEM must have it's own in house NABL accredited Laboratory for testing procedure as per IS:10810. For additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
60.1.1	4.0 Sq. mm		
60.1.1.1	2 core	Mtr	63.00
60.1.1.2	3 core	Mtr	78.00
60.1.1.3	4 core	Mtr	89.00
60.1.2	6.0 Sq. mm		
60.1.2.1	2 core	Mtr	81.00
60.1.2.2	3 core	Mtr	100.00
60.1.2.3	4 core	Mtr	117.00
60.1.3	10.0 Sq. mm		
60.1.3.1	2 core	Mtr	114.00
60.1.3.2	3 core	Mtr	135.00
60.1.3.3	4 core	Mtr	150.00
60.1.4	16.0 Sq. mm		
60.1.4.1	2 core	Mtr	123.00
60.1.4.2	3 core	Mtr	151.00
60.1.4.3	4 core	Mtr	183.00
60.1.5	25.0 Sq. mm		
60.1.5.1	2 core	Mtr	158.00
60.1.5.2	3 core	Mtr	212.00
60.1.5.3	3.5 core	Mtr	262.00
60.1.6	35.0 Sq. mm		
60.1.6.1	2 core	Mtr	215.00
60.1.6.2	3 core	Mtr	288.00
60.1.6.3	3.5 core	Mtr	320.00

Code No	Description	Unit	Rate Rs.
60.1.7	50.0 Sq. mm		
60.1.7.1	2 core	Mtr	261.00
60.1.7.2	3 core	Mtr	363.00
60.1.7.3	3.5 core	Mtr	427.00
60.1.8	70.0 Sq. mm		
60.1.8.1	2 core	Mtr	361.00
60.1.8.2	3 core	Mtr	514.00
60.1.8.3	3.5 core	Mtr	581.00
60.1.9	95.0 Sq. mm		
60.1.9.1	1 core	Mtr	257.00
60.1.9.2	3.5 core	Mtr	732.00
60.1.10	120.0 Sq. mm		
60.1.10.1	1 core	Mtr	314.00
60.1.10.2	3.5 core	Mtr	927.00
60.1.11	150.0 Sq. mm		
60.1.11.1	1 core	Mtr	372.00
60.1.11.2	3.5 core	Mtr	1,088.00
60.1.12	185.0 Sq. mm		
60.1.12.1	1 core	Mtr	456.00
60.1.12.2	3.5 core	Mtr	1,360.00
60.1.13	240.0 Sq. mm		
60.1.13.1	1 core	Mtr	525.00
60.1.13.2	3.5 core	Mtr	1,636.00
60.1.14	300.0 Sq. mm		
60.1.14.1	1 core	Mtr	643.00
60.1.14.2	3.5 core	Mtr	2,077.00
60.1.15	400.0 Sq. mm		
60.1.15.1	1 core	Mtr	808.00
60.1.15.2	3.5 core	Mtr	2,632.00
60.1.16	500.0 Sq. mm		
60.1.16.1	1 core	Mtr	1,046.00
60.1.16.2	3.5 core	Mtr	3,387.00
60.1.17	630.0 Sq. mm		
60.1.17.1	1 core	Mtr	1,295.00

Code No	Description	Unit	Rate Rs.
60.1.17.2	3.5 core	Mtr	4,618.00
60.1.18	800.0 Sq. mm		
60.1.18.1	1 core	Mtr	1,676.00
60.1.19	1000.0 Sq. mm		
60.1.19.1	1 core	Mtr	2,131.00
60.2	Providing & Laying P.V.C. / XLPE insulated & P.V.C. sheathed Armoured Aluminium cable confirming to IS:1554 P-I / IS :7098 P - I of 1.1 KV with H4- Grade electrolytic aluminium conductor confirming to IS 8130 of purity >99.6 %, round / flat strip armouring of cables, Inner / outer sheath confirming to IS:5831 in existing RCC / Hume / Stoneware / PVC pipe/ open duct/cable trench / Cable tray(with cable tie) including testing etc. as required of following size. OEM must have it's own in house NABL accredited Laboratory for testing procedure as per IS:10810.For additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
60.2.1	4.0 Sq. mm		
60.2.1.1	2 core	Mtr	112.00
60.2.1.2	3 core	Mtr	126.00
60.2.1.3	4 core	Mtr	142.00
60.2.2	6.0 Sq. mm		
60.2.2.1	2 core	Mtr	131.00
60.2.2.2	3 core	Mtr	150.00
60.2.2.3	4 core	Mtr	170.00
60.2.3	10.0 Sq. mm		
60.2.3.1	2 core	Mtr	156.00
60.2.3.2	3 core	Mtr	183.00
60.2.3.3	4 core	Mtr	197.00
60.2.4	16.0 Sq. mm		
60.2.4.1	2 core	Mtr	175.00
60.2.4.2	3 core	Mtr	198.00
60.2.4.3	4 core	Mtr	238.00
60.2.5	25.0 Sq. mm		
60.2.5.1	2 core	Mtr	205.00
60.2.5.2	3 core	Mtr	250.00
60.2.5.3	3.5 core	Mtr	292.00
60.2.6	35.0 Sq. mm		
60.2.6.1	2 core	Mtr	252.00

Code No	Description	Unit	Rate Rs.
60.2.6.2	3 core	Mtr	326.00
60.2.6.3	3.5 core	Mtr	356.00
60.2.7	50.0 Sq. mm		
60.2.7.1	2 core	Mtr	308.00
60.2.7.2	3 core	Mtr	426.00
60.2.7.3	3.5 core	Mtr	468.00
60.2.8	70.0 Sq. mm		
60.2.8.1	1 core	Mtr	261.00
60.2.8.2	2 core	Mtr	408.00
60.2.8.3	3 core	Mtr	558.00
60.2.8.4	3.5 core	Mtr	625.00
60.2.9	95.0 Sq. mm		
60.2.9.1	1 core	Mtr	294.00
60.2.9.2	3.5 core	Mtr	784.00
60.2.10	120.0 Sq. mm		
60.2.10.1	1 core	Mtr	362.00
60.2.10.2	3.5 core	Mtr	969.00
60.2.11	150.0 Sq. mm		
60.2.11.1	1 core	Mtr	421.00
60.2.11.2	3.5 core	Mtr	1,123.00
60.2.12	185.0 Sq. mm		
60.2.12.1	1 core	Mtr	508.00
60.2.12.2	3.5 core	Mtr	1,450.00
60.2.13	240.0 Sq. mm		
60.2.13.1	1 core	Mtr	631.00
60.2.13.2	3.5 core	Mtr	1,776.00
60.2.14	300.0 Sq. mm		
60.2.14.1	1 core	Mtr	765.00
60.2.14.2	3.5 core	Mtr	2,165.00
60.2.15	400.0 Sq. mm		
60.2.15.1	1 core	Mtr	964.00
60.2.15.2	3.5 core	Mtr	2,774.00
60.2.16	500.0 Sq. mm		
60.2.16.1	1 core	Mtr	1,174.00

Code No	Description	Unit	Rate Rs.
60.2.16.2	3.5 core	Mtr	3,534.00
60.2.17	630.0 Sq. mm		
60.2.17.1	1 core	Mtr	1,429.00
60.2.17.2	3.5 core	Mtr	4,840.00
60.2.18	800.0 Sq. mm		
60.2.18.1	1 core	Mtr	1,820.00
60.2.19	1000.0 Sq. mm		
60.2.19.1	1 core	Mtr	2,278.00
60.3	Providing & Laying P.V.C. / XLPE insulated & P.V.C. sheathed Un-armoured Copper cable confirming to IS:1554 P-I / IS :7098 P - I of 1.1 KV with electrolytic grade Copper made of copper rods confirming to IS 613-1964, of purity >99.7 %, Inner / outer sheath confirming to IS:5831 in existing RCC / Hume / Stoneware / PVC pipe/ open duct/cable trench / Cable tray (with cable tie) including testing etc. as required of following size. OEM must have it's own in house NABL accredited Laboratory for testing procedure as per IS:10810 For additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
60.3.1	1.5 Sq. mm		
60.3.1.1	2 core	Mtr	90.00
60.3.1.2	3 core	Mtr	112.00
60.3.1.3	4 core	Mtr	138.00
60.3.1.4	6 core	Mtr	189.00
60.3.1.5	8 core	Mtr	252.00
60.3.1.6	10 core	Mtr	310.00
60.3.1.7	12 core	Mtr	323.00
60.3.2	2.5 Sq. mm		
60.3.2.1	2 core	Mtr	123.00
60.3.2.2	3 core	Mtr	161.00
60.3.2.3	4 core	Mtr	206.00
60.3.2.4	6 core	Mtr	282.00
60.3.2.5	8 core	Mtr	383.00
60.3.2.6	10 core	Mtr	435.00
60.3.2.7	12 core	Mtr	531.00
60.3.3	4.0 Sq. mm		
60.3.3.1	2 core	Mtr	170.00
60.3.3.2	3 core	Mtr	233.00

Code No	Description	Unit	Rate Rs.
60.3.3.3	4 core	Mtr	288.00
60.3.4	6.0 Sq. mm		
60.3.4.1	2 core	Mtr	238.00
60.3.4.2	3 core	Mtr	328.00
60.3.4.3	4 core	Mtr	414.00
60.3.5	10.0 Sq. mm		
60.3.5.1	2 core	Mtr	400.00
60.3.5.2	3 core	Mtr	544.00
60.3.5.3	4 core	Mtr	640.00
60.3.6	16.0 Sq. mm		
60.3.6.1	1 core	Mtr	299.00
60.3.6.2	2 core	Mtr	498.00
60.3.6.3	3 core	Mtr	782.00
60.3.6.4	4 core	Mtr	975.00
60.3.7	25.0 Sq. mm		
60.3.7.1	1 core	Mtr	444.00
60.3.7.2	2 core	Mtr	823.00
60.3.7.3	3 core	Mtr	1,182.00
60.3.7.4	4 core	Mtr	1,509.00
60.4	Providing & Laying P.V.C. / XLPE insulated & P.V.C. sheathed Armoured Copper cable confirming to IS:1554 P-I / IS :7098 P - I of 1.1 KV with electrolytic grade Copper made of copper rods confirming to IS 613-1964, of purity >99.7 %, round / flat strip armouring, Inner / outer sheath confirming to IS:5831 in existing RCC / Hume / Stoneware / PVC pipe/ open duct/cable trench / Cable tray(with cable tie) including testing etc. as required of following size. OEM must have it's own in house NABL accredited Laboratory for testing procedure as per IS:10810 For additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
60.4.1	1.5 Sq. mm		
60.4.1.1	2 core	Mtr	120.00
60.4.1.2	3 core	Mtr	146.00
60.4.1.3	4 core	Mtr	171.00
60.4.1.4	6 core	Mtr	229.00
60.4.1.5	8 core	Mtr	288.00
60.4.1.6	10 core	Mtr	344.00
60.4.1.7	12 core	Mtr	380.00

Code No	Description	Unit	Rate Rs.
60.4.2	2.5 Sq. mm		
60.4.2.1	2 core	Mtr	159.00
60.4.2.2	3 core	Mtr	193.00
60.4.2.3	4 core	Mtr	237.00
60.4.2.4	6 core	Mtr	329.00
60.4.2.5	8 core	Mtr	423.00
60.4.2.6	10 core	Mtr	480.00
60.4.2.7	12 core	Mtr	559.00
60.4.3	4.0 Sq. mm		
60.4.3.1	2 core	Mtr	201.00
60.4.3.2	3 core	Mtr	260.00
60.4.3.3	4 core	Mtr	332.00
60.4.4	6.0 Sq. mm		
60.4.4.1	2 core	Mtr	270.00
60.4.4.2	3 core	Mtr	357.00
60.4.4.3	4 core	Mtr	475.00
60.4.5	10.0 Sq. mm		
60.4.5.1	2 core	Mtr	418.00
60.4.5.2	3 core	Mtr	565.00
60.4.5.3	4 core	Mtr	707.00
60.4.6	16.0 Sq. mm		
60.4.6.1	1 core	Mtr	357.00
60.4.6.2	2 core	Mtr	545.00
60.4.6.3	3 core	Mtr	818.00
60.4.6.4	4 core	Mtr	1,047.00
60.4.7	25.0 Sq. mm		
60.4.7.1	1 core	Mtr	510.00
60.4.7.2	2 core	Mtr	855.00
60.4.7.3	3 core	Mtr	1,258.00
60.4.7.4	4 core	Mtr	1,611.00
60.4.8	35 Sq. mm		
60.4.8.1	1 core	Mtr	685.00
60.4.8.2	2 core	Mtr	1,183.00
60.4.8.3	3 core	Mtr	1,692.00

Code No	Description	Unit	Rate Rs.
60.4.8.4	4 core	Mtr	2,307.00
60.4.9	50 Sq. mm		
60.4.9.1	1 core	Mtr	961.00
60.4.9.2	2 core	Mtr	1,609.00
60.4.9.3	3 core	Mtr	2,338.00
60.4.9.4	4 core	Mtr	3,088.00
60.5	Add Extra for Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade direct in ground including excavation of trench of size 75 cm (Depth) x 35 cm(Width) , with procedure as per following points:- (a) Make a river sand bed of height 125 mm along the trench, (b) Lay the cable in the middle of the trench, (c) Provide river sand bed of height 125 mm on top of the cable, (d) Lay the protective Common burnt clay F.P.S. Bricks of Class designation 75 / Sand stone slabs of 50 mm thickness and 225 mm wide just above the sand bed vertically across the cable (Approx. 9 no. Bricks per Mtr.), (e) Backfill the excavated soil leaving 300 mm from the Ground level, (f)Lay the Cable warning tape and again back-fill the remaining portion of the trench upto the ground level and compacting the earth	Mtr	190.00
60.6	Add Extra in Item no.60.5 if Excavation done in Hard Rock / CC road / TAR Road and making Good the same	Mtr	25.00
60.7	Add Extra for Laying of one number additional PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade direct in ground in the same trench in one tier horizontal formation including excavation of trench of size additional 20 cm in width, with procedure as per following points :- (a) Make a river sand bed of height 125 mm along the trench, (b) Lay another cable in middle of trench in such manner that spacing between another cable is 20 cm., (c) Provide river sand bed of height 125 mm on top of the cable. (d) Lay the protective Common burnt clay F.P.S. Bricks of Class designation 75 /Sand stone slabs of 50 mm thickness and 225 mm wide just above the sand bed vertically across the cable (Approx. 9 no. Bricks per Mtr.), (e) Backfill the excavated soil leaving 300 mm from the Ground level, (f)Lay the Cable warning tape and again back-fill the remaining portion of the trench upto the ground level and compacting the earth	Mtr	130.00
60.8	Add Extra in Item no. 60.7 if Excavation done in Hard Rock / CC road / TAR Road and making Good the same	Mtr	14.00
60.9	Add Extra in item no. 60.1 to 60.4 for 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.		
60.9.1	Up to 35 Sq.mm fixed with 25 mm x 2 mm thick suitable length red oxide and enamel painted MS clamp and base, pvc rawl plug and screws of sufficient size with spacing 0.6 Mtr. Between Clamps.	Mtr	40.00

Code No	Description	Unit	Rate Rs.
60.9.2	Above 35 sq. mm and upto 95 sq. mm fixed with 40 mm x 3 mm thick suitable length red oxide and enamel painted MS clamp and base, pvc rawl plug and screws of sufficient size with spacing 0.6 Mtr. Between Clamps.	Mtr	69.00
60.9.3	Above 95 sq. mm and upto 185 sq. mm fixed with 40 mm x 4 mm thick suitable length red oxide and enamel painted MS clamp and base, pvc rawl plug and screws of sufficient size with spacing 0.6 Mtr. Between Clamps.	Mtr	94.00
60.9.4	Above 185 sq. mm and upto 400 sq. mm fixed with 50 mm x 5 mm thick suitable length red oxide and enamel painted MS clamp and base, pvc rawl plug and screws of sufficient size with spacing 0.6 Mtr. Between Clamps.	Mtr	145.00
60.10	Add extra in item no. 60.1 to 60.4 for Laying Charges for cable through Manual Boggi by making pit at regular interval and repairing the pit after laying of cable with PCC/ Bitumin as required.	Mtr	117.00
60.11	Add Extra in item no. 60.1 to 60.4 for Laying Charges for cable through Vermeer machine by making pit at regular interval and repairing the pit after laying of cable with PCC/ Bitumin as required.	Mtr	274.00

61.0 LT CABLE TERMINATION & ACCESSORIES

Code No	Description	Unit	Rate Rs.
61.1	Supplying and making one end termination with Nickel plated heavy duty brass single compression gland (as per IS 12943-1990)) SIBG type consisting of Check Nut, Gland Body, Metal Washer(3 Nos.), Outer Seal Rubber Ring, Compression Nut, heavy duty aluminium lugs (as per IS 8309 -1993) duly crimped with crimping tool, PVC tape as per IS 8337-1976 of following size of PVC insulated & PVC sheathed/ XLPE aluminium conductor cable of 1100 volt grade as required.All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
61.1.1	2 x 4.0 sq.mm	Set	109.00
61.1.2	2 x 6.0 sq.mm	Set	146.00
61.1.3	2 x 10.0 sq.mm	Set	147.00
61.1.4	2 x 16.0 sq.mm	Set	149.00
61.1.5	2 x 25.0 sq.mm	Set	176.00
61.1.6	2 x 35.0 sq.mm	Set	205.00
61.1.7	2 x 50.0 sq.mm	Set	223.00
61.1.8	2 x 70.0 sq.mm	Set	257.00
61.1.9	3 x 4.0 sq.mm	Set	124.00
61.1.10	3 x 6.0 sq.mm	Set	161.00
61.1.11	3 x 10.0 sq.mm	Set	163.00
61.1.12	3 x 16.0 sq.mm	Set	176.00
61.1.13	3 x 25.0 sq.mm	Set	221.00
61.1.14	3 x 35.0 sq.mm	Set	224.00
61.1.15	3 x 50.0 sq.mm	Set	270.00
61.1.16	3 x 70.0 sq.mm	Set	289.00
61.1.17	3.5 x 25.0 sq.mm	Set	237.00
61.1.18	3.5 x 35.0 sq.mm	Set	264.00
61.1.19	3.5 x 50.0 sq.mm	Set	293.00
61.1.20	3.5 x 70.0 sq.mm	Set	392.00
61.1.21	3.5 x 95.0 sq.mm	Set	616.00
61.1.22	3.5 x 120.0 sq.mm	Set	726.00
61.1.23	3.5 x 150.0 sq.mm	Set	796.00
61.1.24	3.5 x 185.0 sq.mm	Set	1,099.00

Code No	Description	Unit	Rate Rs.
61.1.25	3.5 x 240.0 sq.mm	Set	1,203.00
61.1.26	3.5 x 300.0 sq.mm	Set	1,477.00
61.1.27	3.5 x 400.0 sq.mm	Set	2,122.00
61.1.28	3.5 x 500.0 sq.mm	Set	2,705.00
61.1.29	3.5 x 630.0 sq.mm	Set	3,224.00
61.1.30	4 x 4.0 sq.mm	Set	139.00
61.1.31	4 x 6.0 sq.mm	Set	176.00
61.1.32	4 x 10.0 sq.mm	Set	190.00
61.1.33	4 x 16.0 sq.mm	Set	194.00
61.1.34	1 x 70.0 sq.mm	Set	207.00
61.1.35	1 x 95.0 sq.mm	Set	208.00
61.1.36	1 x 120.0 sq.mm	Set	240.00
61.1.37	1 x 150.0 sq.mm	Set	260.00
61.1.38	1 x 185.0 sq.mm	Set	383.00
61.1.39	1 x 240.0 sq.mm	Set	359.00
61.1.40	1 x 300.0 sq.mm	Set	477.00
61.1.41	1 x 400.0 sq.mm	Set	733.00
61.1.42	1 x 500.0 sq.mm	Set	882.00
61.1.43	1 x 630.0 sq.mm	Set	976.00
61.1.44	1 x 800.0 sq.mm	Set	1,632.00
61.1.45	1 x 1000.0 sq.mm	Set	1,886.00
61.2	Supplying and making one end termination with Nickel plated heavy duty brass single compression gland (as per IS 12943-1990)) SIBG type consisting of Check Nut, Gland Body, Metal Washer(3 Nos.), Outer Seal Rubber Ring, Compression Nut, heavy duty Copper lugs (IS 8337- 1976) duly crimped with crimping tool, PVC tape for following size of PVC insulated & PVC sheathed/ XLPE copper conductor cable of 1100 volt grade as required.All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
61.2.1	1 x 16.0 sq.mm	Set	116.00
61.2.2	1 x 25.0 sq.mm	Set	136.00
61.2.3	1 x 35.0 sq.mm	Set	144.00
61.2.4	1 x 50.0 sq.mm	Set	207.00
61.2.5	1 x 70.0 sq.mm	Set	234.00
61.2.6	1 x 95.0 sq.mm	Set	285.00
61.2.7	1 x 120.0 sq.mm	Set	345.00

Code No	Description	Unit	Rate Rs.
61.2.8	2 x 4.0 sq.mm	Set	131.00
61.2.9	2 x 6.0 sq.mm	Set	134.00
61.2.10	2 x 10.0 sq.mm	Set	158.00
61.2.11	2 x 16.0 sq.mm	Set	165.00
61.2.12	2 x 25.0 sq.mm	Set	202.00
61.2.13	2 x 35.0 sq.mm	Set	215.00
61.2.14	2 x 50.0 sq.mm	Set	286.00
61.2.15	2 x 70.0 sq.mm	Set	360.00
61.2.16	2 x 95.0 sq.mm	Set	433.00
61.2.17	2 x 120.0 sq.mm	Set	595.00
61.2.18	3 x 1.5 sq.mm	Set	133.00
61.2.19	3 x 2.5 sq.mm	Set	135.00
61.2.20	3 x 4.0 sq.mm	Set	152.00
61.2.21	3 x 6.0 sq.mm	Set	178.00
61.2.22	3 x 10.0 sq.mm	Set	180.00
61.2.23	3 x 16.0 sq.mm	Set	202.00
61.2.24	3 x 25.0 sq.mm	Set	261.00
61.2.25	3 x 35.0 sq.mm	Set	280.00
61.2.26	3 x 50.0 sq.mm	Set	363.00
61.2.27	3 x 70.0 sq.mm	Set	443.00
61.2.28	3 x 95.0 sq.mm	Set	619.00
61.2.29	3 x 120.0 sq.mm	Set	928.00
61.2.30	4 x 1.5 sq.mm	Set	138.00
61.2.31	4 x 2.5 sq.mm	Set	140.00
61.2.32	4 x 4.0 sq.mm	Set	180.00
61.2.33	4 x 6.0 sq.mm	Set	186.00
61.2.34	4 x 10.0 sq.mm	Set	213.00
61.2.35	4 x 16.0 sq.mm	Set	228.00
61.2.36	4 x 25.0 sq.mm	Set	293.00
61.2.37	4 x 35.0 sq.mm	Set	341.00
61.2.38	4 x 50.0 sq.mm	Set	421.00
61.2.39	4 x 70.0 sq.mm	Set	603.00
61.2.40	4 x 95.0 sq.mm	Set	996.00
61.2.41	4 x 120.0 sq.mm	Set	1,156.00

Code No	Description	Unit	Rate Rs.
61.2.42	6 x 1.5 sq.mm	Set	186.00
61.2.43	6 x 2.5 sq.mm	Set	188.00
61.2.44	8 x 1.5 sq.mm	Set	195.00
61.2.45	8 x 2.5 sq.mm	Set	209.00
61.2.46	10 x 1.5 sq.mm	Set	230.00
61.2.47	10 x 2.5 sq.mm	Set	234.00
61.2.48	12 x 1.5 sq.mm	Set	240.00
61.2.49	12 x 2.5 sq.mm	Set	272.00
61.3	Supplying and making end termination with heavy aluminium lugs (Pin / ring type) confirming to IS 8309 -1993 & IS 8337-1976 duly crimped with crimping tool, PVC tape etc of following size.All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
61.3.1	1.5 Sq.mm	Each	2.00
61.3.2	2.5 Sq.mm	Each	2.00
61.3.3	4.0 Sq.mm	Each	2.00
61.3.4	6.0 Sq.mm	Each	3.00
61.3.5	10.0 Sq.mm	Each	4.00
61.3.6	16.0 Sq.mm	Each	5.00
61.3.7	25.0 Sq.mm	Each	7.00
61.3.8	35.0 Sq.mm	Each	9.00
61.3.9	50.0 Sq.mm	Each	12.00
61.3.10	70.0 Sq.mm	Each	18.00
61.3.11	95.0 Sq.mm	Each	19.00
61.3.12	120.0 Sq.mm	Each	27.00
61.3.13	150.0 Sq.mm	Each	35.00
61.3.14	185.0 Sq.mm	Each	45.00
61.3.15	240.0 Sq.mm	Each	71.00
61.3.16	300.0 Sq.mm	Each	97.00
61.3.17	400.0 Sq.mm	Each	138.00
61.3.18	500.0 Sq.mm	Each	203.00
61.3.19	630.0 Sq.mm	Each	249.00
61.3.20	800.0 Sq.mm	Each	409.00
61.3.21	1000.0 Sq.mm	Each	568.00

Code No	Description	Unit	Rate Rs.
61.4	Supplying and making end termination with heavy duty Copper lugs (ANY type) confirming to IS 8337 -1976 duly crimped with crimping tool, PVC tape etc of following size.All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
61.4.1	1.5 Sq.mm	Each	6.00
61.4.2	2.5 Sq.mm	Each	6.00
61.4.3	4.0 Sq.mm	Each	7.00
61.4.4	6.0 Sq.mm	Each	8.00
61.4.5	10.0 Sq.mm	Each	10.00
61.4.6	16.0 Sq.mm	Each	13.00
61.4.7	25.0 Sq.mm	Each	21.00
61.4.8	35.0 Sq.mm	Each	28.00
61.4.9	50.0 Sq.mm	Each	44.00
61.4.10	70.0 Sq.mm	Each	69.00
61.4.11	95.0 Sq.mm	Each	90.00
61.4.12	120.0 Sq.mm	Each	131.00
61.5	Supply, Fabricating & installing following sizes of perforated Hot dipped Galvanized iron cable tray (Galvanized thickness not less than 50 microns) with perforation not more than 17.5% in convenient section including horizontal and vertical bends, reducers tees,cross members and other accessories as required and duly suspended from the ceiling with GI suspenders including GI bolts & nuts , fastners, supports etc. as required.All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
61.5.1	100mm x 50mm x 1.6mm	Mtr	567.00
61.5.2	150mm x 50mm x 1.6mm	Mtr	692.00
61.5.3	225mm x 50mm x 1.6mm	Mtr	896.00
61.5.4	300mm x 50mm x 1.6mm	Mtr	1,079.00
61.5.5	375mm x 50mm x 2.0mm	Mtr	1,674.00
61.5.6	450mm x 50mm x 2.0mm	Mtr	1,923.00
61.5.7	600mm x 50mm x 2.0mm	Mtr	2,435.00
61.5.8	300mm x 62.5mm x 2.0mm	Mtr	1,508.00
61.5.9	375mm x 62.5mm x 2.0mm	Mtr	1,771.00
61.5.10	450mm x 62.5mm x 2.0mm	Mtr	2,020.00
61.5.11	600mm x 62.5mm x 2.0mm	Mtr	2,532.00
61.5.12	750mm x 62.5mm x 2.0mm	Mtr	3,072.00

Code No	Description	Unit	Rate Rs.
61.5.13	600mm x 75mm x 2.0mm	Mtr	2,629.00
61.5.14	750mm x 75mm x 2.0mm	Mtr	3,155.00
61.6	Supply, Fabricating & installing following sizes of perforated Powder coated MS cable tray with perforation not more than 17.5% in convenient section including horizontal and vertical bends, reducers tees, cross members and other accessories as required and duly suspended from the ceiling with GI suspenders including GI bolts & nuts, fasteners, supports etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work, refer Annexure "A" attached with this BSR.		
61.6.1	100mm x 50mm x 1.6mm	Mtr	492.00
61.6.2	150mm x 50mm x 1.6mm	Mtr	599.00
61.6.3	225mm x 50mm x 1.6mm	Mtr	774.00
61.6.4	300mm x 50mm x 1.6mm	Mtr	930.00
61.6.5	375mm x 50mm x 2.0mm	Mtr	1,437.00
61.6.6	450mm x 50mm x 2.0mm	Mtr	1,649.00
61.6.7	600mm x 50mm x 2.0mm	Mtr	2,087.00
61.6.8	300mm x 62.5mm x 2.0mm	Mtr	1,297.00
61.6.9	375mm x 62.5mm x 2.0mm	Mtr	1,522.00
61.6.10	450mm x 62.5mm x 2.0mm	Mtr	1,733.00
61.6.11	600mm x 62.5mm x 2.0mm	Mtr	2,171.00
61.6.12	750mm x 62.5mm x 2.0mm	Mtr	2,635.00
61.6.13	600mm x 75mm x 2.0mm	Mtr	2,255.00
61.6.14	750mm x 75mm x 2.0mm	Mtr	2,706.00
61.7	Supply, Fabricating & installing following sizes of Hot dipped Galvanized iron cable tray (Galvanized thickness not less than 50 microns) with rungs at span of 250mm including horizontal and vertical bends, reducers tees, cross members and other accessories as required and duly suspended from the ceiling/wall with M.S. suspenders etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work, refer Annexure "A" attached with this BSR.		
61.7.1	100mm x 50mm x 1.6mm	Mtr	451.00
61.7.2	150mm x 50mm x 1.6mm	Mtr	546.00
61.7.3	225mm x 50mm x 1.6mm	Mtr	706.00
61.7.4	300mm x 50mm x 1.6mm	Mtr	847.00
61.7.5	375mm x 50mm x 2.0mm	Mtr	1,306.00
61.7.6	450mm x 50mm x 2.0mm	Mtr	1,497.00
61.7.7	600mm x 50mm x 2.0mm	Mtr	1,893.00

Code No	Description	Unit	Rate Rs.
61.7.8	300mm x 62.5mm x 2.0mm	Mtr	1,179.00
61.7.9	375mm x 62.5mm x 2.0mm	Mtr	1,384.00
61.7.10	450mm x 62.5mm x 2.0mm	Mtr	1,574.00
61.7.11	600mm x 62.5mm x 2.0mm	Mtr	1,970.00
61.7.12	750mm x 62.5mm x 2.0mm	Mtr	2,393.00
61.7.13	600mm x 75mm x 2.0mm	Mtr	2,048.00
61.7.14	750mm x 75mm x 2.0mm	Mtr	2,457.00
61.8	Supplying and fixing of CE certified and UL listed GI wire mesh cable tray made from spot welded steel wire hot dipped galvanised between 60 and 80 microns of zinc as per BS 729 including horizontal and vertical bends, reducers, tees, cross members and other OEM made accessories like wall clamp, hold down clamps, Earthing terminal, brackets as required, and duly suspended from the ceiling with electro-zinc coated TF rods, etc. as required of following sizes All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work, refer Annexure "A" attached with this BSR.		
61.8.1	100 mm x 50 mm x 6 mm	Mtr	546.00
61.8.2	150 mm x 50 mm x 6 mm	Mtr	665.00
61.8.3	200 mm x 50 mm x 6 mm	Mtr	862.00
61.8.4	300 mm x 50 mm x 6 mm	Mtr	1,037.00
61.8.5	400 mm x 50 mm x 6 mm	Mtr	1,608.00
61.8.6	500 mm x 50 mm x 6 mm	Mtr	1,847.00
61.8.7	100 mm x 100 mm x 6 mm	Mtr	798.00
61.8.8	150 mm x 100 mm x 6 mm	Mtr	918.00
61.8.9	200 mm x 100 mm x 6 mm	Mtr	1,051.00
61.8.10	300 mm x 100 mm x 6 mm	Mtr	1,289.00
61.8.11	400 mm x 100 mm x 6 mm	Mtr	1,543.00
61.8.12	500 mm x 100 mm x 6 mm	Mtr	1,781.00
61.9	Supply and fixing following size of Hot dipped Galvanized (275 GSM) floor raceways / Under floor trunking with/ without partition, including common cover, joint sleeve, cross over junction Box etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work, refer Annexure "A" attached with this BSR.		
61.9.1	75 mm x 25 mm x 1.5 mm	Mtr	1,135.00
61.9.2	100 mm x 25 mm x 1.5 mm	Mtr	1,399.00
61.9.3	150 mm x 25 mm x 1.5 mm	Mtr	2,073.00
61.9.4	250 mm x 25 mm x 1.5 mm	Mtr	3,248.00

Code No	Description	Unit	Rate Rs.
61.9.5	300 mm x 25 mm x 1.5 mm	Mtr	3,798.00
61.9.6	75 mm x 38 mm x 1.5 mm	Mtr	1,528.00
61.9.7	100 mm x 38 mm x 1.5 mm	Mtr	1,755.00
61.9.8	150 mm x 38 mm x 1.5 mm	Mtr	2,279.00
61.9.9	250 mm x 38 mm x 1.5 mm	Mtr	3,269.00
61.9.10	300 mm x 38 mm x 1.5 mm	Mtr	3,895.00
61.9.11	150 mm x 38 mm x 2.0 mm with 2 Compartment	Mtr	3,380.00
61.9.12	250 mm x 38 mm x 2.0 mm with 3 Compartment	Mtr	4,925.00
61.9.13	300 mm x 38 mm x 2.0 mm with 3 Compartment	Mtr	5,353.00
61.10	Supply and fixing following Hot dipped Galvanized (275 GSM) accessories for floor raceways / Under floor trunking etc. as required.All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
61.10.1	Access Outlet 200 mm x 200 mm x 40-75 mm with Galvanized Lid	Mtr	9,028.00
61.10.2	Access Outlet 250 mm x 250 mm x 40-75 mm with Galvanized Lid	Mtr	11,490.00
61.10.3	Access Outlet 300 mm x 300 mm x 40-75 mm with Galvanized Lid	Mtr	14,259.00
61.10.4	Access Outlet 350 mm x 350 mm x 40-75 mm with Galvanized Lid	Mtr	19,289.00
61.10.5	Access Outlet 250 mm x 250 mm x 40-75 mm with stainless steel Lid	Mtr	14,433.00
61.10.6	Access Outlet 300 mm x 300 mm x 40-75 mm with stainless steel Lid	Mtr	22,280.00
61.10.7	Access Outlet 350 mm x 350 mm x 60-120 mm with stainless steel Lid	Mtr	27,416.00
61.11	S & Making Heat shrinkable type Tubular sleeve version outdoor straight through joint for following size of PVC/ XLPE insulated aluminium conductor cable of 1.1 KV grade as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
61.11.1	1 x 25 sq.mm-50 sq.mm	Set	2,047.00
61.11.2	1 x 70 sq.mm-150 sq.mm	Set	3,277.00
61.11.3	1 x 185 sq.mm-300 sq.mm	Set	4,943.00
61.11.4	1 x 400 sq.mm	Set	4,656.00
61.11.5	1 x 500 sq.mm	Set	5,277.00
61.11.6	1 x 630 sq.mm	Set	5,460.00
61.11.7	1 x 800 sq.mm	Set	6,038.00
61.11.8	1 x 1000 sq.mm	Set	7,331.00

Code No	Description	Unit	Rate Rs.
61.11.9	2 x 1.5 sq.mm-6 sq.mm	Set	641.00
61.11.10	2 x 10.0-16.0 sq.mm	Set	1,584.00
61.11.11	2 x 25.0 sq.mm-50 sq.mm	Set	2,592.00
61.11.12	2 x 70.0 sq.mm-150 sq.mm	Set	4,500.00
61.11.13	2 x 185.0 sq.mm-300 sq.mm	Set	8,510.00
61.11.14	2 x 400 sq.mm	Set	9,155.00
61.11.15	2 x500 sq.mm	Set	9,875.00
61.11.16	3/3.5/4 x 1.5 sq.mm-6 sq.mm	Set	1,041.00
61.11.17	3/3.5/4 x 10.0-16.0 sq.mm	Set	1,812.00
61.11.18	3/3.5/4 x 25.0 sq.mm-50 sq.mm	Set	3,312.00
61.11.19	3/3.5/4 x 70.0 sq.mm-150 sq.mm	Set	5,041.00
61.11.20	3/3.5/4 x 185.0 sq.mm-300 sq.mm	Set	9,231.00
61.11.21	3/3.5/4 x 400 sq.mm	Set	9,867.00
61.11.22	3/3.5/4 x500 sq.mm	Set	11,666.00
61.12	S/F cable route marker with 10cm x 10cm x 5mm thick or 10 cm dia. G.I.plate with inscription thereon, bolted/welded to 35mm x 35mm x 5mm angle iron, 60cm long and fixing the same in ground in C C (1:3:6) as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	398.00
61.13	P / L of Double wall corrugated HDPE pipe confirming to IS : 16205 P-24, Stiffness Class 750 N, Externally corrugated and having smooth surface inside with HDPE Coupler, Elbow, Tee at required Depth below the ground for laying cable of following Nominal Outer dia. MFR Test report from NABL accredited is to be submitted.(Excavation of Earth & Back filling with compaction is to be Paid Extra)All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
61.13.1	50 mm	Mtr	87.00
61.13.2	63 mm	Mtr	101.00
61.13.3	75 mm	Mtr	133.00
61.13.4	90 mm	Mtr	180.00
61.13.5	110 mm	Mtr	232.00
61.13.6	120 mm	Mtr	262.00
61.13.7	160 mm	Mtr	375.00
61.13.8	200 mm Dia.	Mtr	506.00

Code No	Description	Unit	Rate Rs.
61.14	Providing and laying Non Pressure NP-3 class 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) etc. as required. (Excavation of Earth & Back filling with compaction is to be Paid Extra). All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
61.14.1	200 mm Dia.	Mtr	574.00
61.14.2	250 mm dia.	Mtr	715.00
61.14.3	300 mm dia	Mtr	940.00
61.14.4	450 mm dia.	Mtr	1,797.00
61.15	labour charges for Excavating trenches of required width for pipes dressing of sides, ramming of bottoms, depth up to 1.5 Mtr. including taking out the excavated soil, and then returning the soil as required in layers not exceeding 20cm in depth including consolidating each deposited layer by ramming, watering etc. and disposal of surplus excavated soil as directed within a lead of 50 Mtr.:		
61.15.1	All kind of Soils	Cum	218.00
61.15.2	Ordinary Rocks	Cum	313.00

62.0 H T CABLES & TERMINATION KITS

Code No	Description	Unit	Rate Rs.
62.1	Providing & Laying XLPE insulated three core Armoured Aluminium cable for working voltage 11 K.V.(E) confirming IS :7098 P - 2 with H4- Grade electrolytic aluminium conductor confirming to IS: 8130 class-2 of purity >99.6 %, Insulation Screening: Extruded Semiconducting Compound followed by helically wrapped Copper Tape, round / flat strip armouring of cables , Inner / outer sheath PVC type ST-2 confirming to IS:5831 in existing RCC / Hume / Stoneware / PVC pipe/ open duct/cable trench / Cable tray including testing etc. as required of following size. OEM must have it's own in house NABL accredited Laboratory for testing procedure as per IS:10810 All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
62.1.1	3 core 95.0 Sq.mm	Mtr	1,319.00
62.1.2	3 core 120.0 Sq.mm	Mtr	1,502.00
62.1.3	3 core 150.0 Sq.mm	Mtr	1,694.00
62.1.4	3 core 185.0 Sq.mm	Mtr	1,952.00
62.1.5	3 core 240.0 Sq.mm	Mtr	2,356.00
62.1.6	3 core 300.0 Sq.mm	Mtr	2,757.00
62.2	Providing & Laying XLPE insulated three core Armoured Aluminium cable for working voltage 33 K.V.(E) confirming IS :7098 P - 2 with H4- Grade electrolytic aluminium conductor confirming to IS: 8130 class-2 of purity >99.6 %, Insulation Screening: Extruded Semiconducting Compound followed by helically wrapped Copper Tape, round / flat strip armouring of cables , Inner / outer sheath PVC type ST-2 confirming to IS:5831 in existing RCC / Hume / Stoneware / PVC pipe/ open duct/cable trench / Cable tray including testing etc. as required of following size. OEM must have it's own in house NABL accredited Laboratory for testing procedure as per IS:10810 All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
62.2.1	3 core 150.0 Sq.mm	Mtr	2,850.00
62.2.2	3 core 185.0 Sq.mm	Mtr	3,145.00
62.2.3	3 core 240.0 Sq.mm	Mtr	3,624.00
62.2.4	3 core 300.0 Sq.mm	Mtr	4,058.00

Code No	Description	Unit	Rate Rs.
62.3	Add Extra for Laying of one number XLPE power cable of 11/33 KV (Earthed) voltage grade direct in ground including excavation of trench of size 120 cm (Depth) x 35 cm(Width) , with procedure as per following points:- (a) Make a river sand bed of height 125 mm along the trench, (b) Lay the cable in the middle of the trench, (c) Provide river sand bed of height 125 mm on top of the cable. (d) Lay the protective Common burnt clay F.P.S. Bricks of Class designation 75 / Sand stone slabs of 50 mm thickness and 225 mm wide just above the sand bed vertically across the cable (Approx. 9 no. Bricks per Mtr.), (e) Backfill the excavated soil leaving 300 mm from the Ground level, (f)Lay the Cable warning tape and again back-fill the remaining portion of the trench upto the ground level and compacting the earth	Mtr	239.00
62.4	Add Extra in Item no. 62.3 if Excavation done in Hard Rock / CC road / TAR Road and making Good the same	Mtr	40.00
62.5	Add Extra for Laying of one number additional XLPE power cable of 11/33 KV (Earthed) voltage grade direct in ground in the same trench in one tier horizontal formation including excavation of trench of size additional 20 cm in width, with procedure as per following points:- (a) Make a river sand bed of height 125 mm along the trench, (b) Lay another cable in middle of trench in such manner that spacing between another cable is 20 cm, (c) Provide sand bed of height 125 mm on top of the cable. (d) Lay the protective Common burnt clay F.P.S. Bricks of Class designation 75 / Sand stone slabs of 50 mm thickness and 225 mm wide just above the sand bed vertically across the cable (Approx. 9 no. Bricks per Mtr.) (e) Backfill the excavated soil leaving 300 mm from the Ground level. (f)Lay the Cable warning tape and again back-fill the remaining portion of the trench upto the ground level and compacting the earth	Mtr	159.00
62.6	Add Extra in Item no. 62.5 if Excavation done in Hard Rock / CC road / TAR Road and making Good the same	Mtr	23.00
62.7	Providing & making heat shrinkable type indoor/outdoor/straight through terminations/ joint kit suitable for 11 KV / 33 KV (Earthed) cable with required components, prepration of cable ends. Type test report should be as per IS13573:2011 which covered all sequence for table 2 for termination kit and table 3 for streight through joint inclusive thermal & dynamic short circuit test, humidity test, soil fog test. Cross linking shall be done out side factory with E- beam/ peroxide technology. Extrusion process shall be in house OEM within same vicinity. including testing etc. as required of following sizes. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
62.7.1	11 KV End Termination Kit Indoor type		
62.7.1.1	3 core up to 35 Sqmm	Each	4,074.00
62.7.1.2	3 core 50/70/95 Sq.mm	Each	4,932.00

Code No	Description	Unit	Rate Rs.
62.7.1.3	3 core 120/150/185 Sq.mm	Each	6,009.00
62.7.1.4	3 core 240/300 Sq.mm	Each	7,016.00
62.7.1.5	3 core 400 Sq.mm	Each	8,036.00
62.7.2	11 KV End Termination Kit Outdoor type		
62.7.2.1	3 core up to 35 Sqmm	Each	6,137.00
62.7.2.2	3 core 50/70/95 Sq.mm	Each	7,217.00
62.7.2.3	3 core 120/150/185 Sq.mm	Each	8,265.00
62.7.2.4	3 core 240/300 Sq.mm	Each	9,563.00
62.7.2.5	3 core 400 Sq.mm	Each	10,389.00
62.7.3	11 KV Straight Through Joint Kit		
62.7.3.1	3 core up to 35 Sq.mm	Each	8,489.00
62.7.3.2	3 core 50/70/95 Sq.mm	Each	9,497.00
62.7.3.3	3 core 120/150/185 Sq.mm	Each	12,378.00
62.7.3.4	3 core 240/300 Sq.mm	Each	14,716.00
62.7.3.5	3 core 400 Sq.mm	Each	16,370.00
62.7.4	33 KV End Termination Kit Indoor type		
62.7.4.1	3 core 95 Sq.mm	Each	7,392.00
62.7.4.2	3 core 120/150/185 Sq.mm	Each	8,396.00
62.7.4.3	3 core 240/300/400 Sq.mm	Each	10,133.00
62.7.5	33 KV End Termination Kit Outdoor type		
62.7.5.1	3 core 95 Sq.mm	Each	7,628.00
62.7.5.2	3 core 120/150/185 Sq.mm	Each	9,172.00
62.7.5.3	3 core 240/300/400 Sq.mm	Each	10,590.00
62.7.6	33 KV Straight Through Joint Kit		
62.7.6.1	3 core 95/120/150 Sq.mm	Each	18,744.00
62.7.6.2	3 core 185/240/300 Sq.mm	Each	22,198.00
62.7.6.3	3 core 400 Sq.mm	Each	25,196.00

63.0 EARTHING & LIGHTNING ARRESTER

Code No	Description	Unit	Rate Rs.
63.1	Pipe Earthing as per IS:3043- 1987 with 3.0 Mtr. Long, 40 mm dia. ' B ' class G.I. Pipe IS: 1239 (Part-1) 2004, Equivalent to BS : 1387 with perforated holes of 12 mm dia ,including all accessories like nut, bolts, reducer, nipple, wire meshed funnel, and Heavy duty weather proof poly-propylene earth pit chamber with lockable Jam free lid suitable for safe working load 5000 Kg or more of size Top Dia. 225 to 260 mm, Bottom Dia 300 to 350 mm. and Height 250 to 300 mm. and embodying the pipe complete with alternate layers salt and coke/ charcoal, testing of earth resistance for value of 5 ohms or less as required & must record by engineer in-charge during site visit and ensure to enter in measurment book.All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Set	3,734.00
63.2	Plate Earthing as per IS:3043 with Hot dipped G.I. Earth plate of size 600mm x 600mm x 6.0mm by embodying 3 to 4 mtr. below the ground level with 20 mm dia. G.I. 'B' class watering Pipe ,including all accessories like nut, bolts, reducer, nipple, wire meshed funnel, and Heavy duty weather proof poly-propylene earth pit chamber with lockable Jam free lid suitable for safe working load 5000 Kg or more of size Top Dia. 225 to 260 mm, Bottom Dia 300 to 350 mm. and Height 250 to 300 mm. and embodying the pipe complete with alternate layers salt and coke/ charcoal, testing of earth resistance for value of 5 ohms or less as required & must record by engineer in-charge during site visit and ensure to enter in measurment book.All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Set	5,876.00
63.3	Plate Earthing as per IS:3043 with copper Earth plate of purity >95% of size 600mm x 600mm x 3.0mm by embodying 3 mtr. below the ground level with 20 mm dia. G.I. 'B' class watering Pipe ,including all accessories like nut, bolts, reducer, nipple, wire meshed funnel, and Heavy duty weather proof poly-propylene earth pit chamber with lockable Jam free lid suitable for safe working load 5000 Kg or more of size Top Dia. 225 to 260 mm, Bottom Dia 300 to 350 mm. and Height 250 to 300 mm. and embodying the pipe complete with alternate layers salt and coke/ charcoal, testing of earth resistance for value of 5 ohms or less as required & must record by engineer in-charge during site visit and ensure to enter in measurment book. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Set	15,523.00
63.4	Supply and installation of high tensile low carbon steel rod molecularly bonded with 99.9 % Copper thickness (250 microns)		

Code No	Description	Unit	Rate Rs.
	and confirming to UL 467, IS/IEC 62561-2 of following size and length and as per point mentioned (a), (b), (c), (d), (e), (f) below :-		
	(a) Bore a hole of dia. 100 mm of required length, Place the rod in the centre of Hole		
	(b) filled with anti corrosive conductive compounds with the permanent sealings at both the ends, CPRI/ ERDA tested with RMS capacity of minimum 30 KA for withstanding 1 second .To ensure the moisture content and electrical conductivity, 25 kg for 2000 mm & 50 Kgs for 3000mm of resistance lowering earth enhancement material shall be used as a backfill compound. The compound shall be tested form NABL acredated lab for low resistivity (less than 0.12 Ohm - meter) & high conductivity in nature with carbon as a major content as per referance of IS 3043-1987,IEEE 80-2013 (clause 14.5d) , IEEE 837 & IER 1956 with latest amendemnts		
	(c) Connect the rod with copper Strip/Conductor/Wire with suitable clamp made from tinned copper and SS 304 Bolt		
	(d) Place Heavy duty weather proof poly-propylene earth pit chamber with lockable Jam free lid suitable for safe working load 5000 Kg or more of size Top Dia. 225 to 260 mm, Bottom Dia 300 to 350 mm. and Height 250 to 300 mm.		
	(e) Testing of earth resistance for value of 5 ohms or less as required & must record by engineer in-charge during site visit and ensure to enter in measurment book.		
	(f) Test certificates for confirming above standards from OEM is mandatory. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
63.4.1	17.2 mm thick and 3 Mtr. Long	Set	7,185.00
63.4.2	25 mm thick and 3 Mtr. Long	Set	8,154.00
63.5	Supply & Laying following size earth strip in horizontal or vertical run in surface by means of Earth strip DMC Insulator including riveting/ soldering/ welding, Jointing shall be done by overlapping and with 2 set of Brass (for Cu strip) / GI (for GI Strip) nut bolt & spring washer spaced at 50cm making connection etc. as required.All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
63.5.1	20mm x 3mm copper strip	Mtr.	801.00
63.5.2	25mm x 3mm copper strip	Mtr.	1,063.00
63.5.3	25mm x 5mm copper strip	Mtr.	1,590.00
63.5.4	30mm x 5 mm copper strip	Mtr.	1,989.00
63.5.5	40mm x 6mm copper strip	Mtr.	3,167.00
63.5.6	50mm x 6mm copper strip	Mtr.	4,223.00

Code No	Description	Unit	Rate Rs.
63.5.7	20mm x 3mm tinned copper strip	Mtr.	888.00
63.5.8	25mm x 3mm tinned copper strip	Mtr.	1,179.00
63.5.9	25mm x 5mm tinned copper strip	Mtr.	1,763.00
63.5.10	30mm x 5 mm tinned copper strip	Mtr.	2,206.00
63.5.11	40mm x 6mm tinned copper strip	Mtr.	3,515.00
63.5.12	50mm x 6mm tinned copper strip	Mtr.	4,686.00
63.5.13	20mm x 3mm G.I. (Hot Dipped) Strip	Mtr.	90.00
63.5.14	25mm x 3mm G.I. (Hot Dipped) Strip	Mtr.	108.00
63.5.15	25mm x 6mm G.I. (Hot Dipped) Strip	Mtr.	201.00
63.5.16	32mm x6mm G.I. (Hot Dipped) Strip	Mtr.	251.00
63.5.17	50mm x 6mm G.I. (Hot Dipped) Strip	Mtr.	416.00
63.5.18	20mm x 3mm Alum. Strip	Mtr.	113.00
63.5.19	25mm x 3mm Alum. Strip	Mtr.	136.00
63.5.20	25mm x 4 mm Alum. Strip	Mtr.	181.00
63.5.21	25mm x 5 mm Alum. Strip	Mtr.	220.00
63.5.22	30mm x 6mm Alum. Strip	Mtr.	312.00
63.5.23	50mm x 5mm Alum. Strip	Mtr.	440.00
63.5.24	50mm x 8mm Alum. Strip	Mtr.	712.00
63.5.25	100mm x 8mm Alum. Strip	Mtr.	1,397.00
63.5.26	100mm x 10mm Alum. Strip	Mtr.	1,732.00
63.5.27	200mm x 20mm Alum. Strip	Mtr.	6,436.00
63.6	Supply & Laying following size earth wire in horizontal or vertical run in ground/surface/recess including riveting, soldering, saddles, making connection with GI/Cu purity purity >95% thimble etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
63.6.1	6 SWG tinned copper Wire	Mtr.	238.00
63.6.2	8 SWG tinned copper Wire	Mtr.	167.00
63.6.3	10 SWG tinned copper. Wire	Mtr.	110.00
63.6.4	6 SWG copper Wire	Mtr.	215.00
63.6.5	8 SWG copper Wire	Mtr.	152.00
63.6.6	10 SWG copper. Wire	Mtr.	99.00
63.6.7	6 SWG G.I. (Hot Dipped) Wire	Mtr.	28.00
63.6.8	8 SWG G.I. (Hot Dipped) Wire	Mtr.	21.00
63.6.9	10 SWG G.I. (Hot Dipped) Wire	Mtr.	14.00

Code No	Description	Unit	Rate Rs.
63.6.10	16 Sq.mm Copper coated steel stranded conductor (Wt. 130 Kg/Km	Mtr.	49.00
63.6.11	25 Sq.mm Copper coated steel stranded conductor (Wt. 200Kg/Km	Mtr.	76.00
63.7	Supply & Laying following size' B ' class , G.I. Pipe confirming to IS : 1239 P - 1 (2004) with accessories like bend, socket etc. for laying earth conductor/ strip / cable in ground/ surface/ recess as required. All as per pre approved by Engineer in-charge. (Earth Excavation will be Paid Extra)All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annex ure "A" attached with this BSR .		
63.7.1	15 mm dia.	Mtr.	210.00
63.7.2	20 mm dia.	Mtr.	265.00
63.7.3	25 mm dia.	Mtr.	367.00
63.7.4	32mm dia	Mtr.	459.00
63.7.5	40 mm dia.	Mtr.	529.00
63.7.6	50 mm dia.	Mtr.	736.00
63.7.7	65 mm dia.	Mtr.	938.00
63.7.8	80 mm dia.	Mtr.	1,184.00
63.7.9	100 mm dia.	Mtr.	1,698.00
63.7.10	150 mm dia.	Mtr.	2,639.00
63.8	Mesh earthing as per IS:3043 with Hot dipped galvanized earth strip of size 25 mm x 6 mm to form a mesh of size 1000 mm x 1000 mm in horizontal formation to create equal sections of 200 mm x 200 mm by means of welding and embodying 1 mtr. Below the ground level, refilling the pit by alternative layers of charcoal & salt up to 500 mm with 20 mm dia. GI 'B' class watering pipe, wire mesh funnel and and Heavy duty weather proof poly-propylene earth pit chamber with lockable Jam free lid suitable for safe working load 5000 Kg or more of size Top Dia. 225 to 260 mm, Bottom Dia 300 to 350 mm. and Height 250 to 300 mm testing of earth resistance for value of 5 ohms or less as required & must record by engineer in-charge during site visit and ensure to enter in measurment book. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	7,416.00
63.9	P & F of Heavy duty weather proof poly-propylene earth pit chamber with lockable Jam free lid suitable for safe working load 5000 Kg or more of size Top Dia. 225 to 260 mm, Bottom Dia 300 to 350 mm. and Height 250 to 300 mm. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	1,037.00
63.10	S & F of Earth Bar with Disconnecting link Made out from 50 mm x 6 mm copper purity purity >95% /GI strip pre fitted on epoxy powder coated metal base mounted on hexagonal SMC Insulators of following Size.All as per pre approved by Engineer in-charge. For		

Code No	Description	Unit	Rate Rs.
	additional technical parameters of products/ work , refer Annex ure "A" attached with this BSR .		
63.10.1	400 mm , 6 Way Copper	Each	2,214.00
63.10.2	600 mm , 10 Way Copper	Each	3,044.00
63.10.3	400 mm , 6 Way GI	Each	829.00
63.10.4	600 mm , 10 Way GI	Each	1,106.00
63.11	Providing & Making of Exothermic joint in Tee / Square / Straight through joint in Strip for permanently bonding of copper to copper or copper to GI including required exothermic jointing kit comprising of graphite mould, weld powder, tools etc. as required.All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annex ure "A" attached with this BSR .	per Joint	1,174.00
63.12	Supply, installation, testing & commissioning of following size & Material air termination rods confirming to IEC/EN 62561 with suitable OEM recommended mounting arrangement on parapet wall all as per standard , complete as required. the test report accredited by third party accreditation body like VDE/ ILAC/ DAKKS/ UL/ NABL is to be submitted.All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annex ure "A" attached with this BSR .		
63.12.1	700 mm long, 10 mm Dia. Aluminium / AlMgSi	Set	1,798.00
63.12.2	1000 mm long, 10 mm Dia. Aluminium / AlMgSi	Set	2,491.00
63.12.3	1500 mm long, 10 mm Dia. Aluminium / AlMgSi	Set	3,458.00
63.12.4	2000 mm long, 16mm rod tapered to 10 mm, AlMgSi	Set	8,715.00
63.12.5	3000 mm long, 16mm rod tapered to 10 mm, AlMgSi	Set	13,137.00
63.13	Supply & Laying of Aluminum / SS / AlMgSi Round Conductor confirming to IEC/EN 62561 etc. as required. the test report accredited by third party accreditation body like VDE/ILAC/ DAKKS/ UL/ NABL is to be submitted. (Supporting Clamps to be paid Extra)All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annex ure "A" attached with this BSR .		
63.13.1	8 mm Dia. Aluminium conductor	Mtr	270.00
63.13.2	8 mm Dia. AlMgSi conductor	Mtr	293.00
63.14	Supply & Fixing Air-termination rod clamps for connecting air-termination rods with one or two conductors. Material of clamp Al, with clamping range of air-termination rod 10 / 16 mm and Clamping range of conductor Rd 2x 8-10 mm, & Complied as per Standard EN 62561-1, tested to carry from 100KA (10/350µs) lightning current the test report accredited by third party accreditation body like VDE/ILAC/ DAKKS/ UL/ NABL is to be submitted. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annex ure "A" attached with this BSR .	Set	526.00

Code No	Description	Unit	Rate Rs.
63.15	Supply and Fixing of stainless steel clamp for holding 8 mm dia. conductor on Parapet Wall / Side FI 20 mm, Height- 20 mm & Complied as per Standard EN 62561-4. With accessories SS Screw and Gitty etc. as required. the test report accredited by third party accreditation body like VDE/ILAC/ DAKKS/ UL/ NABL is to be submitted. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Set	148.00
63.16	Supply and Fixing Polyamide Roof conductor Holder for Roof with Concrete Block with 8 mm conductor Holder including adhesive material to paste with roof where drilling not allowed.All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annex ure "A" attached with this BSR .	Set	401.00
63.17	Supply and Fixing of Test Joint (Folding Clamp) made of SS,suitable to connect 8mm round conductor with 25 mm x 6 mm GI strip etc. as required. the test report accredited by third party accreditation body likeVDE/ILAC/ DAKKS/ UL/ NABL is to be submitted. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annex ure "A" attached with this BSR .	Set	1,480.00
63.18	Supply and Fixing GI flat (25x6mm) Strip. Having width- 25mm, Thickness- 6mm, Material- Hot dipped Galvanized Iron, Coating thickness- Avg. 70 microns. & Complied as per IEC 62561-2 GI strip holder of material- Dow moulded compound, at spacing of 0.5 Mtr. having height- 19mm, Slot Size- 25x6 mm Etc. as required.All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annex ure "A" attached with this BSR .	Mtr.	373.00
63.19	Clamps to connect reinforcing steel mesh or reinforcement at every 2 meters with round and flat conductors. of material- St/bare, having clamping range- Rd / Rd 6-22 / 6-10 mm, Clamping range- Rd / FI 6-22 / 40 mm & Complied as per Standard EN 62561-1 the test report accredited by third party accreditation body like VDE/ILAC/ DAKKS/ UL/ NABL is to be submitted. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annex ure "A" attached with this BSR .	Each	554.00
63.20	P & F cross universal connector: For T and cross / parallel connection, to route vertical down conductor /mesh formation made of hot dipped galvanised iron with necessary screws etc as required. Installed with 4 hexagonal bolts M8*25 with M8 hexagonal nuts Complied as per Standard EN 62561-1.,the test report accredited by third party accreditation body like VDE/ILAC/ DAKKS/ UL/ NABL is to be submitted. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annex ure "A" attached with this BSR .	Each	664.00

Code No	Description	Unit	Rate Rs.
63.21	P & F Universal clamp made of SS to connect rod with flat conductor Complied as per Standard EN 62561-1.,the test report accredited by third party accreditation body like VDE/ILAC/ DAKkS/ UL/ NABL is to be submitted.All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annex ure "A" attached with this BSR .	Each	1,287.00
63.22	P & F Lightning counter - To count no of lightning strike & it can record the date and time of the lightning incident also tested as per IEC 62561-6. the test report accredited by third party accreditation body like VDE/ILAC/ DAKkS/ UL/ NABL is to be submitted.All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annex ure "A" attached with this BSR .	Each	9,272.00
63.23	Providing & Fixing of ISO Certified company made lightning conductor finial as per PWD specification for electrical Works as per IS 2309-1989 made out of 25 mm dia.,300 mm long copper solid rod having single prong at top with 85 mm dia., 3 mm thick copper base plate including holes etc. complete as required. All as per pre approved by Engineer in-charge. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annex ure "A" attached with this BSR .	Each	3,180.00
63.24	Providing & Fixing of ISO Certified company made lightning conductor finial as per PWD specification for electrical Works as per IS 2309-1989 made out of 25 mm dia.,300 mm long G.I. solid Rod having single prong at top with 85 mm dia., 3 m thick G.I. base plate including holes etc. complete as required. All as per pre approved by Engineer in-charge. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annex ure "A" attached with this BSR .	Each	1,796.00
63.25	Providing & Fixing of testing joint, made out of 20mm x 3mm copper Strip, 125 mm long, with 4 no. tinned brass bolts, nuts, checknuts, spring washer etc. complete as required. All as per pre approved by Engineer in-charge.All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annex ure "A" attached with this BSR .	Each	1,037.00
63.26	Providing & Fixing of testing joint, made out of 20mm x 3mm G.I. Strip, 125 mm long, with 4 no.G.I. bolts, nuts, checknuts, spring washer etc. complete as required. All as per pre approved by Engineer in-charge. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annex ure "A" attached with this BSR .	Each	621.00

64.0 FANS

Code No	Description	Unit	Rate Rs.
64.1	Making of hole in wall (brick/stone) of required and placing NP-2 RCC pipe ring of required size for housing exhaust fan and making good the same, with cement plaster required of following size. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
64.1.1	Up to 457 mm size	Each	357.00
64.1.2	more than 457 mm & up to 610 mm	Each	500.00
64.2	Supply & Fixing of phenolic laminated board of 6.4 mm thick for fresh air fan/exhaust fan up to size of 300 mm on existing window frame including cost of board, cutting of hole , Nut bolts etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Sqm	1,403.00
64.3	Installation , testing and Commissioning of ceiling fan (any size) including wiring the down rod up to 30 cm with 3 x 1.5 sq.mm pvc insulated flexible copper conductor making connection testing etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
64.3.1	With regulator	Each	103.00
64.3.2	Without regulator	Each	89.00
64.4	Providing & Fixing of 1200 mm sweep BLDC technology power saving ceiling fan which can withstand on votage fluctuations from 140 volts to 240 volts ,power factor not less then 0.9 , service value (CMM/W) minimun 6.85 , air delivery minimun 220 CMM, speed minimum 330 RPM (tolerance as per IS:374 2019) THD less then 10% and complete with down rod of 15 mm dia. ERW (Electrical resistance welded) of 1.6mm nominal thick medium duty steel pipe up to 80 cm , cotter pin with 3 x 1.5 sq.mm pvc insulated flexible copper conductor making connection testing etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
64.4.1	Without Remote	Each	3,462.00
64.4.2	With Remote	Each	3,657.00
64.5	Providing & Fixing of of BLDC Technology ventilating fans , single phase with PVC impeller, ABS body, Double Ball bearing, automatic back lower shutter including making connection, testing etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		

Code No	Description	Unit	Rate Rs.
64.5.1	150 mm sweep with Min. Air delivery 350 cmh, 2000 RPM	Each	2,477.00
64.5.2	200 mm sweep with Min. Air delivery 800 cmh, 1600 RPM	Each	2,601.00
64.5.3	250 mm sweep with Min. Air delivery 1150 cmh, 1300 RPM	Each	2,810.00
64.6	Providing & Fixing of 400 mm Sweep BLDC technology Oscillating type Wall mounting / Pedestal type fans with Three speed, ON and OFF position, Double Wall bearing with front and back 120 or more ribs guard; Three no. blades, noise level should be <= 75 dB, including fixing with anchor bolts, making connection testing etc. as required. (With Remote) All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
64.6.1	Wall mounting type with Service value 2.0 CMM /W, Min. Air Delivery 71 CMM	Each	4,816.00
64.6.2	Pedestal Type having Adjustable Height with Service value 2.6 CMM /W, Min. Air Delivery 85 CMM	Each	6,174.00
64.7	Providing & Fixing of BEE Star rated copper wounded double ball bearing capacitor start, aluminium body & Metallic blade ceiling fan Conforming to all the performance requirements laid down in IS 374:2019 including all amendments, as applicable ; & Carry BIS licensing (i.e. ISI marking) with down rod up to 80 cm with secondary support safety cable (steel rope) , cotter pin with 3 x 1.5 sq.mm pvc insulated flexible copper conductor making connection testing etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
64.7.1	1200 mm Sweep BEE 1 Star rated (service value >=4.0 to < 4.5)	Each	1,937.00
64.7.2	1200 mm Sweep BEE 2 Star rated (service value >=4.5 to < 5)	Each	2,076.00
64.7.3	1200 mm Sweep BEE 3 Star rated (service value >=5.0 to< 5.5)	Each	2,245.00
64.7.4	1400 mm Sweep BEE 2 Star rated (service value >=4.5 to < 5)	Each	2,491.00
64.7.5	1400 mm Sweep BEE 3 Star rated (service value >=5.0 to< 5.5)	Each	2,629.00
64.8	Providing & Fixing of shackle (iron hook) made from 2mm nominal thick CRCA sheet and bolts (2nos) of 6mm with spring washer nut, checknut & split pin as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	138.00
64.9	Providing & Fixing of of M.S. J- hook of standard design made out of 16 mm dia. M.S. round bar and fixed with cement concrete mortar with required support as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	183.00
64.10	P & F 1.2mm thick M.S. Recessed fan box, hexagonal/ round of size 130 mm dia, depth 75mm, 12 mm dia rod fan hook with 100 mm length extended on each side . All as per pre approved by Engineer in-charge. For additional technical parameters of product / work refer Annexure 'A' attached with this BSR	Each	131.00

Code No	Description	Unit	Rate Rs.
64.11	Providing & Fixing of of Double ball bearing, copper wounded capacitor start single phase metallic blade fresh air fan, in existing opening including cost of hardware , flexible 3 core copper conductor ,making connections, testing etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
64.11.1	225 mm sweep	Each	1,729.00
64.11.2	300 mm sweep	Each	1,868.00
64.12	Providing & Fixing of Heavy duty capacitor start, copper wound Double ball bearing 900/1400 RPM single phase Exhaust fan conforming to IS:2312 ISI marked in existing opening including making connections testing etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
64.12.1	300 mm sweep(900/1400 RPM)	Each	3,254.00
64.12.2	380 mm sweep(900/1400 RPM)	Each	4,361.00
64.12.3	450 mm sweep(900/1400 RPM)	Each	6,030.00
64.12.4	600 mm sweep(700 / 900 RPM)	Each	10,823.00
64.13	Providing & Fixing of of ventilating fans Capacitor start, copper wounded, single phase with PVC impeller, ABS body, automatic openable louver shutter in existing opening including making connection, testing etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
64.13.1	150 mm sweep	Each	1,618.00
64.13.2	200 mm sweep	Each	1,729.00
64.13.3	250 mm sweep	Each	2,006.00
64.14	Providing & Fixing of Wall mounting / Pedestal type Heavy duty Air Circulator , Double ball bearing and with metal sturdy mesh guard; Aluminium alloy one piece blade and conforming to IS:2997, including fixing with anchor bolts, making connection testing etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
64.14.1	450 mm sweep Wall mounting and three speed regulator with Minimum Air Delivery 150 Cum. / Minute	Each	7,447.00
64.14.2	450 mm sweep Pedestal type and three speed regulator with Minimum Air Delivery 150 Cum. / Minute	Each	8,160.00
64.14.3	600 mm sweep Wall mounting with Minimum Air Delivery 270 Cum. / Minute	Each	9,695.00
64.14.4	600 mm sweep Pedestal type with Minimum Air Delivery 270 Cum. / Minute	Each	10,076.00

Code No	Description	Unit	Rate Rs.
64.14.5	750 mm sweep Wall mounting with Minimum Air Delivery 400 Cum. / Minute	Each	11,810.00
64.14.6	750 mm sweep Pedestal type with Minimum Air Delivery 400 Cum. / Minute	Each	12,225.00
64.15	Providing & Fixing of 450 mm Sweep Oscillating type Wall mounting / Pedestal type fans with Three speed, ON and OFF position, Sintered Iron bush oil impregnated, with metal front and back 120 or more ribs guard; Three no. Aluminium blades, minimum Air delivery 100 Cum. / Minute , Minimum Service Value 1.11 Cum./min/watt, noise level should be <= 75 dB, power consumption <= 120 watts, motor protection through thermal overload protection device, including fixing with anchor bolts, making connection testing etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
64.15.1	Wall mounting type with Adjustable Vertical Angle	Each	5,093.00
64.15.2	Pedestal Type with Adjustable Height	Each	5,426.00
64.16	Providing & Fixing of extra down rod of 15 mm dia . ERW (Electrical resistance welded) of 1.6mm nominal thick medium duty steel pipe including cutting, threading, drilling, fixing quarter pin etc as reqd. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Mtr.	217.00
64.17	Numbering of ceiling fans/ fixtures with approved enamel paint etc as reqd. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	28.00
64.18	P & F of Gravity Louver shutter of superior quality made out of frame of 18 swg M.S. sheet & Louvers made from 24 swg MS Sheet with enamel paint including cost of nuts, bolts, etc as reqd. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
64.18.1	Up to 380 mm size	Each	294.00
64.18.2	above 380 mm size	Each	370.00
64.19	P & F of Wall cowl with Bird Screen Suitable for Outside Wall of Exhaust Fan Opening of following size and made out from 24 SWG GI sheet as per instructions of Engineer in-charge including fixing with suitable fasteners etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
64.19.1	Suitable for 300 mm sweep Exhaust Fan	Each	1,117.00
64.19.2	Suitable for 380 mm sweep Exhaust Fan	Each	1,562.00
64.19.3	Suitable for 450 mm sweep Exhaust Fan	Each	2,084.00

Code No	Description	Unit	Rate Rs.
64.20	S & F Extruded Aluminium Fresh Air / External Weather Louvre, Small Format type with 38 mm Flange width & 50 mm depth. Finish - Powder coated Off white with Alum. Mesh of required Size. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Sqm	8,978.00

65.0 STORAGE WATER HEATERS

Code No	Description	Unit	Rate Rs.
65.1	Providing & Fixing of Vertical(BEE 5 star rated) / Horizontal(BEE 3 star rated) storage water heater with outer casing made of Engineering Plastic sheet (Upto 25 Ltr) / Metal rust proof Body (35 & 50 Ltr), Glass - line / Titanium Enamel coated Pressure Pump Compatible 8 bar pressure Inner tank, Glass Line Coated , mineral filled heating element, stem type, snap action adjustable thermostat , Dual indicating lamps Injected PUF insulation, Multi Function Valve etc. as required held in position with 2/4 no. 10/12 mm anchor Fastener, duly wired with 3 core 2.5/4.0 Sqmm PVC insulated & sheathed copper conductor and 16 A/25A three pin plug top with Portable Residual Current Device (PRCD) , including making inlet, outlet Flexible alloy connection, testing etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
65.1.1	6 Ltr.	Each	8,724.00
65.1.2	10 Ltr.	Each	9,419.00
65.1.3	15 Ltr.	Each	10,562.00
65.1.4	25 Ltr.	Each	11,857.00
65.1.5	35 Ltr.	Each	14,319.00
65.1.6	50 Ltr.	Each	16,979.00
65.2	Providing & Fixing of stem type ISI marked (IS 3017 / 85) snap action adjustable thermostat storage water heater including making connection testing etc. complete in all respect. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	617.00
65.3	Providing & Fixing of stem type ISI marked (IS 3017 / 85) , snap action bipolar adjustable thermostat with built in auto thermal cut out of storage water heater including making connection testing etc. complete in all respect. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	905.00
65.4	Providing & Fixing 2 / 3 KW nickle plated, mineral filled heating element including making connection testing etc complete in all respect. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	1,069.00

Code No	Description	Unit	Rate Rs.
65.5	Providing & Fixing of Glass Line Coated , mineral filled heating element including making connection testing etc complete in all respect. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	1,850.00
65.6	Providing & Fixing of Multi safety valve of 8.5 bar capacity with built in drain, NRV, Vacuum release, Pressure release etc. as required complete in all respect. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .I technical parameters of products/ work , refer Annex ure "A" attached with this BSR .	Each	452.00
65.7	Providing & Fixing of Twin neon indicating lamp of superior quality for storage water heater complete in all respect. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	123.00
65.8	Providing & Fixing of 13 mm Brass with C.P. finished ISI marked angle valve for storage water heater as required complete in all respect. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	444.00
65.9	Providing & Fixing of heavy duty flexible alloy pipe for storage water heater for inlet and outlet of suitable length including the cost of nuts, washers etc complete in all respect. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
65.9.1	450 mm	Set	576.00
65.9.2	600 mm	Set	658.00
65.10	Charges for descaling of storage water heater including replacement of Multi Function Valve as required.	P.Job	738.00
65.11	Charges for Fixing of storage water heater including 10/12 mm Anchor fasteners of suitable size, testing, carrying from store to site,etc. as required.	P.Job	321.00
65.12	Providing & Fixing of 2.0 KW twin ceramic cartridge, Withstands temperatures up to 1000 C long lasting even in hard water including making connection testing etc complete in all respect. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	1,069.00
65.13	SITC of MNRE approved & confirming to IS:12933 P-1,2,3 & 5 Flat Plate Collector type solar hot water system having collector with Zinalum sheet outer body , Glass - line / Titanium Enamel coated Inner tank with Metal rust proof PUF insulated Body including electrical back up, Thermostat, Powder coated / Hot dipped galvanized MS stand for Collector & Tank etc. as required. of		

Code No	Description	Unit	Rate Rs.
	following capacity complete in all respect. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
65.13.1	100 litre/ day	Set	32,257.00
65.13.2	200 litre/ day	Set	60,600.00
65.13.3	250 litre/ day	set	75,228.00
65.13.4	300 litre/ day	Set	92,327.00
65.13.5	500 litre/ day	Set	1,63,690.00

66.0 INDOOR LIGHTING

Code No	Description	Unit	Rate Rs.
66.1	Providing & Fixing of IP20 SMD Mid Power LED batten type integrated light fixture made from Powder coated Extruded aluminium housing with in built driver , System lumen efficacy ≥ 110 lm/Watt output, internal surge protection of 2.5 KV with Short & Open circuit protection ,THD < 10% , P. F. ≥ 0.95 , CRI >80 , life time of minimum 50000 Burning Hours with , 70% of intial Lumen maintaned till life ends , CCT 3000°K / 4000°K / 5700°K /6000°K/6500°K (As per ANSI Bin) , Maximum power consumption should not more than the specified rating and Fixture shall be of BIS standard and trade mark certificate (T.C.). Manufactures Word Mark/ Name Engraved/ Embossing/ Screen printing on housing. OEM must have its own in house NABL lab setup for all testing facilities for LED fixtures. (LM79 & LM80) certificate / Report from OEM shall be submitted. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
66.1.1	1170mm(+/-10%) LED batten with min. lumen output 2200 lm	Each	504.00
66.1.2	570mm (+/-10%) batten with min. lumen output 1000 lm	Each	415.00
66.2	Providing & Fixing of energy efficient direct fit (Retrofit) Polycarbonate/ Glass housing SMD Mid Power LED tube rod (with integral driver & alumn. heat sink), on existing fixture. system lumen efficacy ≥ 100 lm/Watt output, internal surge protection of 2.5 KV ,THD < 20% ,p.f. ≥ 0.95 ,CRI >80 , life time of minimum 35000 Burning Hours with , 70% of intial Lumen maintaned till life ends , CCT 3000°K / 4000°K / 5700°K /6000°K/6500°K (As per ANSI Bin) , maximum power consumption should not more than the specified rating and Fixture shall be of BIS standard and trade mark certificate (T.C.). Manufactures Word Mark/ Name Engraved/ Embossing/ Screen printing on housing. OEM must have its own in house NABL lab setup for all testing facilities for LED fixtures. (LM79 & LM80)certificate / Report from OEM shall be submitted. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
66.2.1	600mm , Min. Lumens output 1800 lm LED Tube rod with Polycarbonate Housing	Each	207.00
66.2.2	1200mm , Min. Lumens output 2000 lm LED Tube rod with Polycarbonate Housing	Each	277.00
66.2.3	1200mm, Min. Lumens output 2000 lm LED Tube rod with Glass Housing	Each	256.00
66.3	Providing & Fixing of IP-20 LED Recessed / Surface Mounted, Round / Sqaure SMD Mid Power LED Downlight with power coated die-cast aluminum housing with UV Stabilized non yellowish		

Code No	Description	Unit	Rate Rs.
	Diffuser with BIS compliance 2.5 KV surge protected Isolated driver, with Short & Open circuit protection, having efficiency > 85% . System Lumen efficacy of ≥ 110 lm / watt, THD < 10 % , Pf. ≥ 0.95 , CRI >80, life time of minimum 50000 Burning Hours with , 70% of initial Lumen maintained till life ends , CCT 3000°K / 4000°K/ 5700°K /6000°K/6500°K (As per ANSI Bin) , maximum power consumption should not more than the specified rating and Fixture shall be of BIS standard and trade mark certificate (T.C.). Manufactures Word Mark/ Name Engraved/ Embossing/ Screen printing on housing.		
	OEM must have its own in house NABL lab setup for all testing facilities for LED fixtures. (LM79 & LM80) certificate / Report from OEM shall be submitted. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
66.3.1	Recessed Mounting		
66.3.1.1	Minimum lumen output 330 lm	Each	519.00
66.3.1.2	Minimum lumen output 650 lm	Each	692.00
66.3.1.3	Minimum lumen output 1300 lm	Each	1,072.00
66.3.1.4	Minimum lumen output 1600 lm	Each	1,190.00
66.3.1.5	Minimum lumen output 1950 lm	Each	1,487.00
66.3.1.6	Minimum lumen output 2400 lm	Each	1,896.00
66.3.2	Surface Mounting (with extruded alumn. Housing)		
66.3.2.1	Minimum lumen output 650 lm	Each	830.00
66.3.2.2	Minimum lumen output 1300 lm	Each	1,211.00
66.3.2.3	Minimum lumen output 1950 lm	Each	1,661.00
66.3.2.4	Minimum lumen output 2400 lm	Each	2,110.00
66.4	Providing & Fixing of IP20, 2'x2' LED Surface/ Recessed mounting Mid power SMD type LED Light fixture not less than 50mm housing depth made from CRCA sheet steel housing, high purity / transmissivity UV stabilized Non -yellowish diffuser for uniform light distribution. High efficiency with 4 KV internal/external surge protection BIS certified isolated driver having efficiency > 85% , with Short & Open circuit protection (Integral with light fixture). System lumen efficacy of ≥ 120 lm/Watt ,THD < 10 % , p.f. ≥ 0.95 ,CRI >80 , life time of minimum 50000 Burning Hours with , 70% of initial Lumen maintained till life ends , CCT 3000°K / 4000°K / 5700°K /6000°K/6500°K (As per ANSI Bin) , maximum power consumption should not more than the specified rating and Fixture shall be of BIS standard and trade mark certificate (T.C.). Manufactures Word Mark/ Name Engraved/ Embossing/ Screen printing on housing.		
	OEM must have its own in house NABL lab setup for all testing facilities for LED fixtures. (LM79 & LM80) certificate / Report from OEM shall be submitted. All as per pre approved by Engineer in-		

Code No	Description	Unit	Rate Rs.
	charge. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
66.4.1	Recessed Mounting		
66.4.1.1	Minimum lumen output 3000 lm	Each	2,345.00
66.4.1.2	Minimum lumen output 3600 lm	Each	2,622.00
66.4.1.3	Minimum lumen output 4200 lm	Each	3,059.00
66.4.2	Surface Mounting		
66.4.2.1	Minimum lumen output 3000 lm	Each	2,553.00
66.4.2.2	Minimum lumen output 3600 lm	Each	2,934.00
66.4.2.3	Minimum lumen output 4200 lm	Each	3,391.00
66.5	Providing & Fixing of IP20, 1100-1200 mm x 50-60 mm x 70-85 mm size Suspended mounting Mid power SMD type LED linear Light fixture made from Extruded Aluminium housing, PMMI diffuser for uniform light distribution. High efficiency with 4 KV internal/external surge protection BIS certified isolated driver having efficiency > 85% , with Short & Open circuit protection (Integral with light fixture). System lumen efficacy of ≥ 100 lm/Watt ,THD < 10 % , p.f.≥ 0.95,CRI >80 , life time of minimum 50000 Burning Hours with , 70% of intial Lumen maintaned till life ends , CCT 3000°K / 4000°K / 5700°K /6000°K/6500°K (As per ANSI Bin) , maximum power consumption should not more than the specified rating and Fixture shall be of BIS standard and trade mark certificate (T.C.). Manufactures Word Mark/ Name Engraved/ Embossing/ Screen printing on housing. OEM must have its own in house NABL lab setup for all testing facilities for LED fixtures. (LM79 & LM80) certificate / Report from OEM shall be submitted. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
66.5.1	Minimum lumen output 2000 lm	Each	4,578.00
66.5.2	Minimum lumen output 3000 lm	Each	5,558.00
66.6	Providing & Fixing of IP65 IK08 rated Integrated SMD Mid power LED bulk head type light fixture made from Pressure Die Cast AL housing suitable with integral driver, system lumen efficacy ≥ 100 lm/Watt output , THD < 10% ,p.f.≥ 0.95,CRI >80 , life time of minimum 50000 Burning Hours with , 70% of intial Lumen maintaned till life ends , CCT 3000°K / 4000°K / 5700°K /6000°K/6500°K (As per ANSI Bin) , maximum power consumption should not more than the specified rating and Fixture shall be of BIS standard and trade mark certificate (T.C.). Manufactures Word Mark/ Name Engraved/ Embossing/ Screen printing on housing. surge protection 4 KV. OEM must have its own in house NABL lab setup for all testing facilities for LED fixtures. (LM79 & LM80) certificate / Report from OEM shall be submitted. All as per pre approved by Engineer in-charge. For additional technical		

Code No	Description	Unit	Rate Rs.
	parameters of products/ work , refer Annexure "A" attached with this BSR .		
66.6.1	Minimum lumen output 1000 lm	Each	1,688.00
66.7	Providing & Fixing of IP65 IK08 rated Integrated High power LED (each LED between 3 to 5 watt power with secondary lencs on each LED) Highbay light fixture made from Pressure Die Cast Aluminium housing, toughned glass diffuser, potted driver, Eye bolt for mounting, system lumen efficacy ≥ 140 lm/Watt output , THD < 10% ,p.f.≥ 0.95,CRI >80 , life time of minimum 50000 Burning Hours with , 70% of intial Lumen maintaned till life ends , CCT 3000°K / 4000°K / 5700°K /6000°K/6500°K (As per ANSI Bin) , maximum power consumption should not more than the specified rating and Fixture shall be of BIS standard and trade mark certificate (T.C.). Manufactures Word Mark/ Name Engraved/ Embossing/ Screen printing on housing. surge protection 4 KV inbuilt & 10 KV external inside fixture. OEM must have its own in house NABL lab setup for all testing facilities for LED fixtures. (LM79 & LM80) certificate / Report from OEM shall be submitted. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
66.7.1	Minimum lumen output 10000 lm	Each	6,850.00
66.7.2	Minimum lumen output 14000 lm	Each	7,958.00
66.7.3	Minimum lumen output 16500 lm	Each	10,035.00
66.8	Providing & Fixing of Suspended mounting IP66 IK08 rated Integrated High power LED Wellglass light fixture made from Pressure Die Cast Aluminium housing, potted driver, Eye bolt for mounting, PC clear / Opal Diffuser, system lumen efficacy ≥ 120 lm/Watt output , THD < 10% ,p.f.≥ 0.95,CRI >70 , life time of minimum 50000 Burning Hours with , 70% of intial Lumen maintaned till life ends , CCT 3000°K / 4000°K / 5700°K /6000°K/6500°K (As per ANSI Bin) , maximum power consumption should not more than the specified rating and Fixture shall be of BIS standard and trade mark certificate (T.C.). Manufactures Word Mark/ Name Engraved/ Embossing/ Screen printing on housing. surge protection 4 KV . OEM must have its own in house NABL lab setup for all testing facilities for LED fixtures. (LM79 & LM80)certificate / Report from OEM shall be submitted. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
66.8.1	Minimum lumen output 3500 lm	Each	2,490.00
66.8.2	Minimum lumen output 4800 lm	Each	3,320.00
66.9	Providing & Fixing of energy efficient /energy saving IP 20 LED direct retrofit Bulb in existing holder or fixture as required with system lumen efficacy ≥ 100 lm/Watt output ,pf 0.95 , CRI >70,		

Code No	Description	Unit	Rate Rs.
	minimum life time of minimum 25000 Burning Hours with , 70% of initial Lumen maintained till life ends , CCT 3000°K / 4000°K / 5700°K /6000°K/6500°K (As per ANSI Bin) , maximum power consumption should not more than the specified rating and Fixture shall be of BIS standard and trade mark certificate (T.C.). Manufactures Word Mark/ Name Engraved/ Embossing/ Screen printing on housing. OEM must have its own in house NABL lab setup for all testing facilities for LED fixtures. (LM79/LM80) certificate / Report from OEM shall be submitted. All as per pre approved by engineer in-charge . for additional technical parameters of product/ work, refer Annexure "A" attached with this BSR.		
66.9.1	2/3 Watt	Each	83.00
66.9.2	6/7 Watt	Each	96.00
66.9.3	9 Watt	Each	118.00
66.9.4	15 Watt	Each	138.00
66.9.5	18/20 Watt	Each	166.00
66.10	Providing & Fixing of IP20 SMD Mid Power LED batten with integrated box (min.1200mmx40mmx60mm including reflector) with replacable driver fixture made from Powder coated Extruded aluminium housing ,Min. lumen output 4400 lm, System lumen efficacy ≥ 110 lm/Watt output, internal surge protection of 4.0 KV with Short & Open circuit protection,THD < 10% , P. F.≥0.95, CRI >80 , life time of minimum 50000 Burning Hours with , 70% of initial Lumen maintained till life ends , CCT 3000°K / 4000°K / 5700°K /6000°K/6500°K (As per ANSI Bin) , Maximum power consumption should not more than the specified rating and Fixture shall be of BIS standard and trade mark certificate (T.C.). Manufactures Word Mark/ Name Engraved/ Embossing/ Screen printing on housing. OEM must have its own in house NABL lab setup for all testing facilities for LED fixtures. (LM79 & LM80) certificate / Report from OEM shall be submitted. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	1,661.00
66.11	Providing & Fixing of IP 20 box made out from 1.2mm thick CRCA sheet steel with depth of minimum 30 mm and finished with powder coating and suitable for mounting LED tube including side covers, holders , internal wiring to illuminate the single sided connection LED tube. (Without tube). All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
66.11.1	Suitable for 2' LED Tube shape fixture for single rod	Each	155.00
66.11.2	Suitable for 4' LED Tube shape fixture for single rod	Each	233.00
66.11.3	Suitable for 4' LED Tube shape fixture for double rod	Each	367.00

67.0 OUTDOOR LIGHTING

Code No	Description	Unit	Rate Rs.
67.1	Supply and erection of Galvanized Iron pole with galvanizing done in single dipping (Average coating thickness Minimum 65 Microns) continuously tapered poles having Octagonal / Circular cross-sections designed to withstand the maximum wind speed as per IS 875, The pole shaft shall be made from sheet steel (HT Steel Conforming to grade S355JO) and confirming to BSEN 10025 and shall be continuously tapered with single longitudinal welding. There shall not be any circumferential welding. The welding of pole shaft shall be done by Submerged Arc Welding (SAW) process. pole shafts shall be provided with the rigid flange plate of suitable thickness (Fe 410 conforming to IS 226 / IS 2062) with provision for fixing 4 no. foundation bolts, This base plate shall be fillet welded to the pole shaft at two locations i.e. from inside and outside. The octagonal Poles shall have lockable door of approximate 500 mm length at the elevation of 500 mm from the Base plate with bakelite sheet having 6A SP MCB and 16 sqmm stud type connector (4 nos) inside the pole at door opening for cable connection of following length and dimension as per table P-01 with base plate and foundation bolt on the Existing cement concrete foundation. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
67.1.1	Poles with Octagonal Cross Section		
67.1.1.1	3 Mtr.	Each	6,520.00
67.1.1.2	4 Mtr.	Each	8,001.00
67.1.1.3	5 Mtr.	Each	9,828.00
67.1.1.4	6 Mtr.	Each	11,443.00
67.1.1.5	7 Mtr.	Each	13,481.00
67.1.1.6	8 Mtr.	Each	15,520.00
67.1.1.7	9 Mtr.	Each	19,456.00
67.1.1.8	10 Mtr.	Each	23,394.00
67.1.1.9	11 Mtr.	Each	31,493.00
67.1.1.10	12 Mtr.	Each	36,339.00
67.2	Supply and Fixing of Pole OEM fabricated hot dipped galvanised M.S. Overhang (48.3 X 3.25 mm) with cap (400 x 88.9 / 114.3 x 3.25 mm) over the existing poles. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
67.2.1	Single arm overhang	Mtr.	1,936.00

Code No	Description	Unit	Rate Rs.
67.2.2	Double arm overhang	Mtr.	3,397.00
67.3	Supply and erection of Galvanized Iron pole with galvanizing done in single dipping (Average coating thickness Minimum 65 Microns) Swaged tubular pole conforming to IS: 2713-1980 (part I to II) with galvanised base plate, The pole shall be made from steel tube & Pipe (IS:1141, Fe 410) including excavation of the pit and filling the same with C.C. of M-20 grade (1:1.5:3) from base plate to 50 cm above ground level, with the help of steel frame not less than 40 cm dia up to 114.3mm outer dia and 50 cm beyond 114.3mm outer dia around the pole. Duly finished with cement plaster, earthing terminals, cable entry with 32 mm dia. 'B' class GI cable sleeves complete as required. of following height & designation. (See Table P - 02 for specs.) All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
67.3.1	7.5 Mtr. (410 SP - 5)	Each	15,804.00
67.3.2	8.5 Mtr. (410 SP - 17)	Each	17,525.00
67.3.3	9.0 Mtr. (410 SP - 28)	Each	21,461.00
67.3.4	10 Mtr. (410 SP - 42)	Each	27,342.00
67.3.5	11 Mtr. (410 SP - 51)	Each	30,645.00
67.3.6	12 Mtr. (410 SP - 60)	Each	37,748.00
67.4	Add for supply and fixing of Pole OEM fabricated Galvanized Overhang of following size over the existing poles. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
67.4.1	76.1 mm OD x 3.25 mm thickness	Mtr.	1,792.00
67.4.2	88.9 mm OD x 3.25 mm thickness	Mtr.	2,332.00
67.4.3	114.3 mm OD x 3.65 mm thickness	Mtr.	3,246.00
67.5	Supply and erection of Mild steel Swaged tubular pole conforming to IS: 2713-1980 (part I to II) with base plate, The pole shall be made from steel tube & Pipe (IS:1141, Fe 410) including excavation of the pit and filling the same with C.C. of M-20 grade (1:1.5:3) from base plate to 50 cm above ground level, with the help of steel frame not less than 40 cm dia up to 114.3mm outer dia and 50 cm beyond 114.3mm outer dia around the pole. Duly finished with cement plaster, earthing terminals, cable entry with 32 mm dia. 'B' class GI cable sleeves. After erection pole shall be painted with two coat of red oxide primer and two quote of enamel paint of silver colour as per the direction of Engineer incharge complete as required of following height & designation. (See Table P - 02 for specs.) All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		

Code No	Description	Unit	Rate Rs.
67.5.1	7.5 Mtr. (410 SP - 5)	Each	13,430.00
67.5.2	8.5 Mtr. (410 SP - 17)	Each	14,861.00
67.5.3	9.0 Mtr. (410 SP - 28)	Each	18,108.00
67.5.4	10 Mtr. (410 SP - 42)	Each	22,944.00
67.5.5	11 Mtr. (410 SP - 51)	Each	25,671.00
67.5.6	12 Mtr. (410 SP - 60)	Each	31,507.00
67.6	Add for supply and fixing of Pole OEM fabricated Mild steel Overhang of following size over the existing poles, Overhang shall be painted with two coat of red oxide primer and two quote of enamel paint of silver colour as per the direction of Engineer incharge. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
67.6.1	76.1 mm OD x 3.25 mm thickness	Mtr.	1,527.00
67.6.2	88.9 mm OD x 3.25 mm thickness	Mtr.	2,064.00
67.6.3	114.3 mm OD x 3.65 mm thickness	Mtr.	2,883.00
67.7	Supply installation testing & Commissioning of high mast lighting system (as per PLG 07 of ILP UK technical report no 7 of ILE UK /IS:875 Part-1 – 2015//BSEN10025/and IS:2062)consisting of totally hot dip galvanised by piecwise single dipped method high mast, lantern carriage suitable for up to 12 nos luminaries with welded arm (excluding luminaires), mast head frame assembly with full cover, including 1 No. LED 15 Watts aviation obstruction lights, double drum type self sustaining winch, integral power tool accesible from door with padlocking arrangement (winch motor with control circuit) hot dipped galvanised heavy duty pipe lightening finial, Stainless steel 6 mm dia. wire ropes (AISI 316, 7 / 19 costruction 3 no. rope for lantern carrage & 2 no. rope for winch assembly) foundation bolt, torque limiter,EPR insulated PCP sheathed 5 core x 2.5 Sq.mm trailing cable, including outdoor type control panel for auto on / off, reverse / forward motor operation. The mast is constructed from mild steel plates (as per IS 5986 Gr. 510) cut and folded to form a polygonal section, telescopic jointed and welding as per BS 5135.etc. as required on Existing Foundation. (See table P - 03 for specs.) OEM Must have Type test certificate for wind tunnel test . All as per pre approved by Engineer in-charge. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
67.7.1	12.5 Mtr HM (in 2 section) suitable for 6 No. Luminaries 2 no. rope for lantern carrage & 2 no. rope for winch assembly	Each	2,31,321.00
67.7.2	16.0 Mtr HM (in 2 section) suitable for 9 No. Luminaries	Each	2,94,474.00
67.7.3	20.0 Mtr Hm (in 2 section) suitable for 12 No. Luminaries	Each	3,38,738.00
67.7.4	25.0 Mtr HM (in 3 section) suitable for 12 No. Luminaries	Each	4,95,693.00

Code No	Description	Unit	Rate Rs.
67.7.5	30.0 Mtr HM (in 3 section) suitable for 12 No. Luminaries	Each	5,69,169.00
67.8	Providing and Laying RCC Foundation for Octagonal / Conical Street Light poles, High mast Poles as per Drawing attach at Table P-4 with Following Procedure & All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR . A) Excavation of Pit for Foundation Size upto required depth from Ground level B) Dressing of Pit and Dry stone pitching 200 mm thick including supply of stones and preparing surface complete. C) Providing and laying in position cement concrete of M-10 grade of 75 mm thickness D) Reinforcement for R.C.C. work with TMT bars including straightening, cutting, bending, placing in position and binding all complete. E) Centring and shuttering including strutting , propping etc. and removal of form work for Footing and Pedestal F) Providing & Fixing of 2 no. Required Size PLB HDPE Pipe & Foundation Bolt with template as per OEM Recommendations. G) Providing and Laying Reinforce cement Concrete of M-25 grade in Footing and Pedestal including Curing the foundation for 7 days. H) Providing and Fixing Nosing Angle 40 mm x 40 mm x 6mm with 2 no. 100 mm long, 10 mm dia. Lugs on each face.		
67.8.1	Pole Foundation for Octagonal pole from 3 Mtr. To 6 Mtr.		5,973.00
67.8.2	Pole Foundation for Octagonal pole from 7 Mtr. To 9 Mtr.		8,142.00
67.8.3	Pole Foundation for Octagonal pole from 10 Mtr. To 12 Mtr.		12,219.00
67.9	Providing & Fixing of IP-65 Protected LED aviation obstruction light luminaire comprising of die cast aluminium alloy housing with Polycarbonate enclosure having more than 200 No's Low Power LED's having minimum power consumption 15 watts complete in all respect. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
67.9.1	aviation obstruction LED light luminaire Min. 15 Watts	Each	5,631.00
67.10	Providing & Fixing of IK08 IP65 protected Top/Bottom mounted LED Post top Luminarie made of single piece construction powder coated die cast aluminium housing with UV stabalized Clear / frosted Polycarbonate diffuser and Aluminium anodised with sand blast reflector. The System level Luminous efficacy ≥ 100 Lumen/W. SMD LEDs is to be used, System CRI>70, CCT: 3000/4000/6500 K. The integral electronic driver must be potted & has a unique BIS R number must be potted & has a unique BIS R number constant current and Internal/external surge protection device of min. 4KV(L-		

Code No	Description	Unit	Rate Rs.
	N) and efficiency > 85%, PF>0.9, THD<10% and input Voltage range of 140-270V AC at 50Hz. System life of 50000 Burning hours with 70% of Initial Lumens maintained . Driver current <750mA. Fixture must be in compliance with BIS Standards and Trade mark Certificate complete in all respect.OEM Must have its own in house NABL lab setup for all testing facilities for LED fixtures. (LM79/LM80) Certificate/ report with liable warranty of product/accessories from OEM shall be submitted. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
67.10.1	Minimum lumen output 2500 lm Post top Luminarie	Each	5,202.00
67.10.2	Minimum lumen output 3000 lm Post top Luminarie	Each	5,846.00
67.10.3	Minimum lumen output 4000 lm Post top Luminarie	Each	6,739.00
67.10.4	Minimum lumen output 4500 lm Post top Luminarie	Each	8,400.00
67.11	Providing & Fixing of IK08 IP-66 protected high power LED flood light system with single piece Pressure diecast aluminium housing, toughened glass diffuser with suitable lenses on LED to achieve various beam angles, of high power LED of 3 to 5 watt each . Integrated potted driver as a unique BIS R number having efficiency more than 85 % and in compliance to BIS certified and Trade mark certificate. The System level Luminaire efficacy >=125 lm/ wt. LED driver Input Voltage AC 120 to 270 V AC with High voltage Cutoff @>=300 V AC and Auto resetting Safety .Power Factor >0.95 , THD(I) <10% , driver current <=750mA. driver should be Phase to phase protection of 440 V for 4 Hrs. Electrical Connector , Surge Protection Min >=4KV internal and 10KV external but inside driver compartment, System life of 50000 Burning hours with 70% of Initial Lumens maintained, CRI>70 and CCT 5700K ±355K. Manufactures Word Mark/Name Engraved/Embossing/Screen printing on die cast housing to allow traceability/authenticity. Fixture shall be IS 10322 Complied.OEM Must have its own in house NABL lab setup for all testing facilities for LED fixtures. (LM79/LM80) Certificate/ report with liable warranty of product/accessories from OEM shall be submitted. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
67.11.1	High Power LED Flood Light Minimum lumen output 3700 lm	Each	2,725.00
67.11.2	High Power LED Flood Light Minimum lumen output 6200 lm	Each	3,293.00
67.11.3	High Power LED Flood Light Minimum lumen output 8700 lm	Each	3,832.00
67.11.4	High Power LED Flood Light Minimum lumen output 10000 lm	Each	4,941.00
67.11.5	High Power LED Flood Light Minimum lumen output 12400 lm	Each	6,048.00
67.11.6	High Power LED Flood Light Minimum lumen output 14800 lm	Each	9,094.00
67.11.7	High Power LED Flood Light Minimum lumen output 18650 lm	Each	11,128.00

Code No	Description	Unit	Rate Rs.
67.11.8	High Power LED Flood Light Minimum lumen output 22400 lm	Each	13,633.00
67.11.9	High Power LED Flood Light Minimum lumen output 25000 lm	Each	15,973.00
67.11.10	High Power LED Flood Light Minimum lumen output 30000 lm	Each	19,267.00
67.11.11	High Power LED Flood Light Minimum lumen output 37500 lm	Each	21,993.00
67.11.12	High Power LED Flood Light Minimum lumen output 43750 lm	Each	27,918.00
67.12	Providing & Fixing of IK08, IP 66 protected LED Street Light Luminaire on existing bracket/pole. Fixture made of powder coated single piece pressure die cast aluminum material with heat dissipation fins on housing with UV stabilized PC (UV stablization report submitted for UV cover) /Toughened Glass cover and secondary lens on each LED & should be SMD type of 3 to 5 watt each . The System efficacy ≥ 125 lm/ wt and potted driver & has a unique BIS R number with Input Voltage AC 120 to 270 V AC with High voltage Cutoff ≥ 300 V AC and Auto resetting Safety , Power Factor >0.95 driver Efficiency $>85\%$,THD(I) $<10\%$ Humidity 10% to 90% RH Working Temp -5C to 45C . driver current <750 mA. The luminaire shall be BIS certified and Trade mark certified. Life Expectancy Equal or more than 50000 burning hrs with Minimum 70% lumen maintained , CRI >70 and CCT 5700K +355K. Surge protection shall be min ≥ 4 KV internal and min 10 KV external inside driver compartment. driver should be Phase to phase protection of 440 V for 4 Hrs. Manufactures Word Mark/Name Engraved/Embossing on die cast housing to allow traceability/authenticity. Fixture shall be AS PER IS 10322 Complianced.OEM Must have its own in house NABL lab setup for all testing facilities for LED fixtures. (LM79/LM80) Certificate/ report with liable warranty of product/accessories from OEM shall be submitted. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
67.12.1	LED Street Light fixture with Minimum lumen output 2450 lm	Each	2,618.00
67.12.2	LED Street Light fixture with Minimum lumen output 3700 lm	Each	3,454.00
67.12.3	LED Street Light fixture with Minimum lumen output 5600 lm	Each	4,249.00
67.12.4	LED Street Light fixture with Minimum lumen output 7500 lm	Each	5,066.00
67.12.5	LED Street Light fixture with Minimum lumen output 8700 lm	Each	5,993.00
67.12.6	LED Street Light fixture with Minimum lumen output 11225 lm	Each	6,934.00
67.12.7	LED Street Light fixture with Minimum lumen output 12500 lm	Each	7,862.00
67.12.8	LED Street Light fixture with Minimum lumen output 15000 lm	Each	8,941.00
67.12.9	LED Street Light fixture with Minimum lumen output 17500 lm	Each	10,795.00
67.12.10	LED Street Light fixture with Minimum lumen output 18750 lm	Each	11,751.00
67.12.11	LED Street Light fixture with Minimum lumen output 22500 lm	Each	13,287.00
67.12.12	LED Street Light fixture with Minimum lumen output 25000 lm	Each	14,892.00

Code No	Description	Unit	Rate Rs.
67.13	Providing & Fixing of IK10 IP65 protected 600 mm height LED Bollard Luminarie with base plate made of powder coated die cast aluminium housing with UV stabilized PC diffuser. The System level Luminous efficacy ≥ 90 Lumen/W. SMD LEDs is to be used, System CRI>70, CCT: 3000/4000/6500 K. The integral electronic driver must be potted & has a unique BIS R number must be potted & has a unique BIS R number constant current and Internal/external surge protection device of min. 4KV(L-N) and efficiency > 85%, PF>0.9, THD<20% and input Voltage range of 90-270V AC at 50Hz. System life of 30000 Burning hours with 70% of Initial Lumens maintained Light output in Cool white or Warm White Colour as per engineers choice. driver current <750mA. Fixture must be in compliance with BIS Standards and Trade mark Certificate complete in all respect.OEM Must have its own in house NABL lab setup for all testing facilities for LED fixtures. (LM79/LM80) Certificate/ report with liable warranty of product/accessories from OEM shall be submitted. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
67.13.1	Minimum lumen output 800 lm Bollard	Each	9,785.00
67.13.2	Minimum lumen output 980 lm Bollard	Each	11,522.00
67.14	Providing & Fixing of IK10 IP66 / IP67 protected Rectangular shape LED Step Luminarie made of powder coated die cast aluminium housing with UV stabilized PC diffuser. The System level Luminous efficacy ≥ 90 Lumen/W. SMD LEDs is to be used, System CRI>70, CCT: 3000/4000/6500 K. The integral electronic driver must be potted & has a unique BIS R number constant current and Internal/external surge protection device of min. 4KV(L-N) and efficiency > 85%, PF>0.9, THD<10% and input Voltage range of 140-270V AC at 50Hz. System life of 50000 Burning hours with 70% of Initial Lumens maintained . driver current <750mA . Fixture must be in compliance with BIS Standards and Trade mark Certificate complete in all respect.OEM Must have its own in house NABL lab setup for all testing facilities for LED fixtures. (LM79/LM80) Certificate/ report with liable warranty of product/accessories from OEM shall be submitted. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
67.14.1	Minimum lumen output 450 lm Step light	Each	3,790.00
67.14.2	Minimum lumen output 630 lm Step light	Each	4,621.00
67.14.3	Minimum lumen output 800 lm Step light	Each	5,008.00
67.15	Providing & Fixing of IK10 IP65 / IP66 protected LED Up - Down Luminarie Wall / Surface mounting made of powder coated die cast aluminium housing with UV stabilized PC diffuser. The System level Luminous efficacy ≥ 90 Lumen/W. COB LEDs is to be used, System CRI>70, CCT: 3000/4000/6500 K. The integral electronic driver must be potted & has a unique BIS R number constant current		

Code No	Description	Unit	Rate Rs.
	and Internal/external surge protection device of min. 4KV(L-N) and efficiency > 85%, PF>0.9, THD<10% and input Voltage range of 140-270V AC at 50Hz. System life of 50000 Burning hours with 70% of Initial Lumens maintained Light output in Cool white or Warm White Colour as per engineers choice. driver current <750mA. Fixture must be in compliance with BIS Standards and Trade mark Certificate complete in all respect.OEM Must have its own in house NABL lab setup for all testing facilities for LED fixtures. (LM79/LM80) Certificate/ report with liable warranty of product/accessories from OEM shall be submitted. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
67.15.1	Minimum lumen output 800 lm Up-Down Luminary	Each	6,587.00
67.15.2	Minimum lumen output 1300 lm Up-Down Luminary	Each	8,276.00
67.15.3	Minimum lumen output 2150 lm Up-Down Luminary	Each	9,757.00
67.16	Providing and fixing of fuse box size 250(H) x 200(W) x 150(D) mm fabricated of 1.6mm MS sheet with hinged cover, dust and vermin proof, rubber gasket, locking arrangement, duly holded with 2 nos pole clamps of 20 mm x 3 mm flat with nut and bolts, complete with anticorrosive treatment, finished with two coat of approved enamel paint. The box shall be provided with 2 / 4 nos copper bus bar 125 x 20 x 3 mm with brass screws suitable supports,earth terminal, inter connection, knock outs for 20 / 25 mm cable gland, 1 no. 6 Amp MCB complete in all respect. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	2,331.00
67.17	Providing and fixing of IP 65 protected Polycarbonate / Polysterene fuse box moulded with inside knock outs of following size with hinged cover, transparent window, PU gasket, locking arrangement, duly holded with 2 nos. pole clamps of 20 mm x 3 mm flat with nut and bolts, The box shall be provided with Din rail, 4 / 8 way 10.0 / 16.0 sq.mm heavy duty connector, earth terminal, complete in all respect. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
67.17.1	125 mm X 200 mm X 122 mm	Each	1,873.00
67.17.2	160 mm X 225 mm X 100 mm	Each	2,240.00
67.17.3	200 mm X 200 mm X 122 mm	Each	2,925.00
67.17.4	225 mm X 225 mm X 100 mm	Each	3,639.00
67.18	Providing & Fixing of Street light bracket made out from following size of ' B ' class , Medium class G.I. Pipe confirming to IS : 1239 P - 1 (2004) with heavy duty pole clamp, Saddles suitable fastners etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		

Code No	Description	Unit	Rate Rs.
67.18.1	20 mm Dia.	Mtr.	415.00
67.18.2	25 mm Dia.	Mtr.	554.00
67.18.3	32 mm Dia.	Mtr.	761.00
67.18.4	40 mm Dia.	Mtr.	982.00
67.19	Providing & Fixing of IP - 65 protected impact resistant polycarbonate / Polysterene enclosures with knock out for cable entry/out including fixing with nut, bolt, fatner etc as required complete in all respect of following sizes.All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
67.19.1	180 x 180 x 91 mm	Each	1,535.00
67.19.2	250 x 200 x 115 mm	Each	2,228.00
67.19.3	300 x 450 x 132 mm	Each	3,536.00
67.19.4	320 x 440 x 179 mm	Each	5,107.00
67.19.5	320 x 640 x 179 mm	Each	6,781.00
67.20	Supply and erection of PU coated , 6 to 7 mm thick Glass / Fibre Reinforced Pole (GRP /FRP) made by CNC filament winding machine using thermoset resin polyester/epoxy resin system) having minimum 62% glass content. designed to withstand the maximum wind speed as per IS 875, and Tested for deflection not more than 15% length of pole as per ASTM D 4923, The pole should be in one piece and tapered round in shape, pole shafts shall be provided with FRP Anchor with suitable MS cated Base with provision for fixing 4 no. foundation bolts(Including cost of Foundation Bolt), The Pole shall have lockable door of approximate 500 mm length at the elevation of 500 mm from the Base plate with bakelite sheet having 6A SP MCB and 16 sqmm stud type connector (4 nos) inside the pole at door opening for cable connection of following length and dimension on Existing cement concrete foundation. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
67.20.1	3 Mtr. Long, Top/ Bottom OD Dia 89/126mm ± 2mm approx. With Base 250X250 X 10mm	Each	17,333.00
67.20.2	4 Mtr. Long, Top/ Bottom OD Dia 89/131mm ± 2mm approx. With Base 250X250 X 10mm	Each	21,189.00
67.20.3	5 Mtr. Long, Top/ Bottom OD Dia 89/141mm ± 2mm approx. With Base 250X250 X 10mm	Each	22,643.00
67.20.4	6 Mtr. Long, Top/ Bottom OD Dia 89/152mm ± 2mm approx. With Base 250X250 X 10mm	Each	24,391.00
67.20.5	7 Mtr. Long, Top/ Bottom OD Dia 89/157mm ± 2mm approx. With Base 300X300 X 12mm	Each	29,762.00

Code No	Description	Unit	Rate Rs.
67.20.6	8 Mtr. Long, Top/ Bottom OD Dia 89/157mm $\pm$ 2mm approx. With Base 300X300 X 12mm	Each	32,062.00
67.20.7	9 Mtr. Long, Top/ Bottom OD Dia 89/183mm $\pm$ 2mm approx. With Base 300X300 X 12mm	Each	33,989.00
67.20.8	10 Mtr. Long, Top/ Bottom OD Dia 89/207mm $\pm$ 2mm approx. With Base 350X350 X 15mm	Each	43,103.00
67.20.9	11 Mtr. Long, Top/ Bottom OD Dia 89/217mm $\pm$ 2mm approx. With Base 350X350 X 15mm	Each	45,352.00
67.20.10	12 Mtr. Long, Top/ Bottom OD Dia 89/226mm $\pm$ 2mm approx. With Base 400X400 X 20mm	Each	54,633.00
67.21	Supply, Erection and Fixing of GRP Overhang with cap over the existing poles. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
67.21.1	Single arm overhang	Mtr.	4,426.00
67.21.2	Double arm overhang	Mtr.	6,322.00

68.0 OVER HEAD LINES

Code No	Description	Unit	Rate Rs.
68.1	Supply and erection of P.C.C. pole as per REC manual no 15/1979 (ammended upto date) and as per latest Discom specifications with factor of safety 2.5 including excavation of pit upto pole planting depth 1/6th of pole length. and back filling with stone aggregate/boulders and soil by ramming and watering etc complete as required. All as per pre approved by Engineer in-charge.For additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
68.1.1	8.0 Mtr long PCC pole of 200 Kg Working Load	Each	3,427.00
68.1.2	9.0 Mtr long PCC pole of 200 Kg Working Load	Each	5,163.00
68.1.3	9.0 Mtr long PCC pole of 400 Kg Working Load	Each	6,066.00
68.1.4	11.0 Mtr long PCC pole of 400 Kg Working Load	Each	7,356.00
68.2	Supply and erection of GI stay set confirming to pattern-1 of BS:16/1974 and as per latest Discom Specifications complete with stay rod with anchor plate fitted with cast iron cross head and steel bow, in cement concrete 1:3:6 including excavation of pit-re-filling etc complete as reqd. All as per pre approved by Engineer in-charge.For additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
68.2.1	Stay set of dia 20mm, 2.4m long stay rod and anchor plate 380 x 380 x 4.0 mm	Each	1,392.00
68.2.2	Stay set of dia 16mm, 1.8m long stay rod and anchor plate 300 x 300 x 4.0 mm	Each	857.00
68.3	Supply and fixing of following LT Supporting accessories with nut bolt & Clamps made out as per standard Discom's specifications with two coats of Red oxide and two coats of Aluminium paint etc. as required. All as per pre approved by Engineer in-charge.For additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
68.3.1	LT cross arm 600 mm long with clamp	Each	472.00
68.3.2	LT cross arm 1200 mm long with clamp	Each	807.00
68.3.3	Suspension clamp with eye hook & Pole clamp	Each	540.00
68.3.4	Dead end clamp with eye hook & Pole clamp	Each	627.00
68.3.5	Type A LT connector for Aerial bunched cable	Each	73.00
68.3.6	Type B LT connector for Aerial bunched cable	Each	56.00
68.4	Supply and fixing of LT porcelain pin insulator as per IS 1445-1997 and as per Discom's standard specifications,suitable for working voltage 1100 volts including all accessories like MS Forged GI LT Pin confirming to IS:7935/1975 (latest amended) Nut, Bolt etc. as		

Code No	Description	Unit	Rate Rs.
	required. All as per pre approved by Engineer in-charge.For additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
68.4.1	100 mm x 70 mm	Each	110.00
68.5	Supply and fixing of LT porcelain shackle insulator as per IS:1443 1979 and as per Discom's standard specifications, suitable for working voltage 1100 volts including all accessories like GI Hardware fittings confirming to IS:7935/1975 (latest amended) Nut, Bolt etc. as required. All as per pre approved by Engineer in-charge.For additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
68.5.1	75mm x 90mm	Each	112.00
68.5.2	100mm x 110mm	Each	122.00
68.6	Supplying and drawing overhead steel core Aluminium conductor (ACSR) ISI marked(IS 398 part II-1996) on existing cross arms through insulator with all necessary T&P required including binding and twisting etc. complete in all respect as required. All as per pre approved by Engineer in-charge.For additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
68.6.1	30 Sqmm of (6+1) 2.59mm (Weasel)	Mtr.	41.00
68.6.2	50 Sqmm of (6+1) 3.35 mm (Rabbit)	Mtr.	62.00
68.6.3	50 Sqmm of (6+1) 3.35 mm (Insulated Rabbit) for LT	Mtr.	94.00
68.6.4	80 Sqmm of (6+1) 4.09 mm (Raccon)	Mtr.	98.00
68.6.5	100 sqmm of (6/4.72 mm+1/1.57 mm) (Dog)	Mtr.	120.00
68.6.6	ACSR Panther Aluminium 30/3 MM	Mtr.	223.00
68.6.7	AAA Conductor (Equivelent size Weasel)	Mtr.	39.00
68.7	Supply and fixing of 'V' type cross arms with top hamper and clamps as per latest Discom specifications made of MS angle on the existing poles complete including all necessary nut and bolt, clamps with two coats of Red oxide and two coats of Aluminium paint etc. as required. All as per pre approved by Engineer in-charge.For additional technical parameters of product / work refer Annexure 'A' attached with this BSR		1,452.00
68.8	Supply and fixing of top hamper on the existing pole as per latest Discom specifications complete including nut bolts with two coats of Red oxide and two coats of Aluminium paint etc as required. All as per pre approved by Engineer in-charge.For additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
68.8.1	Vertical type		
68.8.1.1	11 kV (.7m long) (65 x 65 x6mm angle)	Each	282.00
68.8.1.2	11 kV(50 x 6 mm flat)	Each	199.00

Code No	Description	Unit	Rate Rs.
68.8.2	Horizontal type		
68.8.2.1	11 kV (65 x 65 x6mm angle)	Each	228.00
68.8.2.2	11 kV with double top hamper (65 x 65 x 6mm angle)	Each	292.00
68.9	Supply and fixing of MS. Channel Bracket with clamp as per Discom Specifications including Nut, Bolt with two coats of Red oxide and two coats of Aluminium paint etc. as Required. All as per pre approved by Engineer in-charge.For additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
68.9.1	1.8 Mtr. Long	Each	1,977.00
68.9.2	1.4 Mtr. Long	Each	1,718.00
68.10	Supply and fixing of 11 kV pin insulator confirming to IS:731:1971 with latest ammendment on existing bracket including all accessories like MS forged hot dipped GI Pin confirming to IS 2486(Part-I)/1993 & IS:2486 (Part-II)/1989 with latest amendment, and as per latest Discom specs. etc. as required. All as per pre approved by Engineer in-charge.For additional technical parameters of product / work refer Annexure 'A' attached with this BSR	Each	179.00
68.11	Supply and fixing of 11kV Disc insulator and Hot dipped galvanized Hardware confirming to IS:731:1971 with latest ammendment and as per latest Discom Specs. on existing bracket including all accessories etc. as required. All as per pre approved by Engineer in-charge.For additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
68.11.1	B & S type hardware 45 KN	Each	656.00
68.11.2	T & C type hardware 45 KN	Each	209.00
68.11.3	B & S disc insulator 45 KN	Each	383.00
68.11.4	T & C disc insulator 45 KN	Each	359.00
68.12	Supply and fixing of PG / T clamps on overhead lines/jumpers, made of aluminium alloy 4600 of IS 617-1994 (with latest amendment if any) with steel nut and bolts conforming to IS 1363-1992 & IS 1367/1979-80 (with latest amendments if any) all ferrous metal parts intended for outdoor use except those made of stainless steel shall be protected by hotdip galvanising in accordance with IS 2633-1986 complete in all respect as required. All as per pre approved by Engineer in-charge.For additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
68.12.1	PG Clamp for Panther Conductor	Each	383.00
68.12.2	PG Clamp for Dog Conductor Type - A	Each	302.00
68.12.3	PG Clamp for Weasel Conductor	Each	97.00
68.12.4	PG Clamp for Rabbit Conductor	Each	86.00
68.12.5	T Clamp for Panther Conductor	Each	431.00

Code No	Description	Unit	Rate Rs.
68.13	Supplying and laying of Hot dip galvanized steel stay wire of 550-900 N/mm Quality confirming to IS-2141/2000 in all respect Including chemical composition (Heavily coated Hard quality) of dia 7/3.15 mm(7/10 SWG) and as per latest Discom specs. etc. as required. All as per pre approved by Engineer in-charge.For additional technical parameters of product / work refer Annexure 'A' attached with this BSR	Mtr	118.00
68.14	Supply and fixing of 11 / 33. KV Stay insulator as per IS:5300/1969 and as per Discom's standard specifications etc. as required. All as per pre approved by Engineer in-charge.For additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
68.14.1	110 x 75 x 22mm 11 KV Stay Insulator	Set	46.00
68.14.2	140 x 85 x 25mm 33 KV Stay Insulator	Set	71.00
68.15	Supply and fixing of LT Distribution Kiosk confirming to IS:13947/1993/ IEC 60947 Pt.3 amended up-to-date and as per DISCOM specifications made of 2 mm thick powder coated CRCA sheet of 415 volts 3 phase 4 wire triple pole and neutral type, complete in all respect as required. Including Incoming Switch Disconnecter Fuse unit, Aluminium Busbar with copper one piece U contacts base, brass studs and nuts, copper busbar for main and interconnection, MS Channel frame of 75 mm x 40 mm grouted with C.C. of M-10 grade to achieve the height of 1.5 feet above the road level suitable for required no. outgoing. All as per pre approved by Engineer in-charge.For additional technical parameters of product / work refer Annexure 'A' attached with this BSR		
68.15.1	200 Amp. LT Distribution Kiosk for 63/100 KVA Transformer	Each	38,580.00
68.15.2	400 Amp. LT Distribution Kiosk for 250/315 KVA Transformer	Each	66,318.00
68.15.3	100 Amp. Distribution Kiosk suitable for Underground cable of Size 500mm x 550 mm x 700 mm	Each	23,975.00
68.16	Supply and fixing of 11 KV Outdoor 4 way feeder pillar Box confirming to Discom specifications and made of 3.15 mm thick powder coated CRCA sheet enclosure confirming to IS 14772/IEC 60670 (1989) of Size 1000 mm x 1000 mm x 1500 mm, Both front and rear doors should have 3 heavy duty M.S. hinges with Brass pin inserted inside and locking arrangements.The bottom foundation frame stand should be made from 65x65x6mm MS Angle with four legs of 200mm height provided with 150x150x6mm flats grouted with C.C. of M-10 grade to achieve the height of 2.0 feet above the road level suitable for four outgoing. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	61,600.00
68.17	Supply and fixing of 100 Amp, 11kV Horn gap fuse set IS 9385 on existing DP structure with 6 nos 24kV/22kV post insulator (IS:5350 part III), hot dipped hard ware,fuse wire of required size etc. complete in all respect as per Discom specification etc. as		

Code No	Description	Unit	Rate Rs.
	required.All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	9,298.00
68.18	Supply and fixing of 11kV, 400 Amp 3 pole, central pot rotating double break type isolator (IS:9921 part I toV) without earth blade operating mechanism with GI spring loaded reverse loop type fixed contact, solid hard drawn electrolytic copper tubular moving contact with silver/ nickel plated at end points, 9 nos post insulator of 12 kV (IS:2554 & IS 5350 part III), hot dipped galvanising hard ware, nut, bolts etc complete in all respect as per Discom specification etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	23,198.00
68.19	Supply and fixing of distribution type Lightening arrestor (Set of 3 Nos.) 9 kV, 10 kA (IS:3070) with mounting breaking to be installed on existing DP structure etc. as required.All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Set	5,723.00
19.20	Supply and fixing Substation structure for mounting 11/0.4 Kv Transformer on Double pole as per DISCOM specification complete in all respect as required including nuts and bolts etc (excluding the cost of poles) made of MS channel of 4 nos 100 x 50 x 6mm and 4 nos 75 x 40 x 6mm and MS flat 50 x 6mm etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	18,701.00
68.21	Supply and fixing of 1.6 mm thick MS 11 kV Danger plates as per IS :2551-1982 & specification of Discom on the existing poles complete in all respectas as required. All as per pre approved by Engineer in-charge.For additional technical parameters of product / work refer Annexure 'A' attached with this BSR	Each	316.00
68.22	Providing and fixing of single pole mounted substation structure set for isolator / single phase transformer as per DISCOM specification complete in all respect with nuts and bolts as required MS flat 50 x 6mm, MS angle 65 x 65 x6mm, MS channel 100 x 50 x 6mm. (Excluding cost of pole). Etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	3,627.00
68.23	Supply and erection of RS joist of 116 x 100 mm, 11 Meter long with the welded/ bolted top hamper 65 x 65 x 6mm (0.7 Mtr long) making necessary arrangement for fixing 11 kV 'V' cross arm, LT bracket and guard wire bracket, grouted in ground 1/6 th of its length and fixed with cement, coarse and grit in 1:3:6 ratio in 1/5th of its length (40cm dia) from the bottom including two coats of aluminium paint over the complete length of joist etc. as required. (Excavation of pit PCC and CC foundation as per Discom specs. to be Paid Extra) All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	25,038.00

Code No	Description	Unit	Rate Rs.
68.24	Supplying and drawing of XLPE insulated LT Aerial bunched Aluminium conductor cable confirming to IS 14255/1995 and IS 398 (Pt-4)/ 1994 and as per Discom Specs. on existing cross arms through I hook with all necessary T&P required including binding and twisting etc. complete in all respect as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
68.24.1	1 X 25 sq. mm. + 1X25 sq. mm. (Bared)	Mtr	59.00
68.24.2	1 X 25 sq. mm. + 1X25 sq. mm. (insulated)	Mtr	65.00
68.24.3	3 X 16 sq. mm. + 1X25 sq. mm. (Bared)	Mtr	84.00
68.24.4	3 X 16 sq. mm. + 1X25 sq. mm. (insulated)	Mtr	91.00
68.24.5	3 X 25 sq. mm. + 1X25 sq. mm. (Bared)	Mtr	116.00
68.24.6	3 X 25 sq. mm. + 1X25 sq. mm. (insulated)	Mtr	126.00
68.24.7	3 X 50 sq. mm. + 1X35 sq. mm. (Bared)	Mtr	195.00
68.25	Supply & Erection of M S lattice structure of height 12.8 mtr as per DISCOMs approved design & details in alignment, including painting of tower of approved make two coat of red oxide paint and one coat of aluminium paint before installation and one coat of Aluminium paint after erection work completed as per technical specifications & drawing of DISCOM. (Excavation of pit PCC and CC foundation as per Discom specs. to be Paid Extra). All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	59,079.00
68.26	Supply & Erection of M S lattice structure of height 11.0 mtr as per DISCOMs approved design & details in alignment, including painting of tower of approved make two coat of red oxide paint and one coat of aluminium paint before installation and one coat of Aluminium paint after erection work completed as per technical specifications & drawing of DISCOM. (Excavation of pit PCC and CC foundation as per Discom specs. to be Paid Extra) All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	47,724.00
68.27	Supply of Fabricated 33 KV of 'V' type cross arms as per Discom specifications made of MS channel 100x50 ISMC (9.5Kg. Per Mtr.) on the existing poles complete including all necessary nut and bolt etc with clamps including two coats of Red oxide and two coats of Aluminium paint etc. as Required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	2,399.00

Code No	Description	Unit	Rate Rs.
68.28	Supply and fixing of top hamper as per Discom specifications on the existing pole complete including nut bolts etc as required. Vertical type 33 kV. 0.75mtr. IS 75x75x6mm as per tech specs. Of DISCOM (Steel weight 6.5Kg. Approx. per top hamper). All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	415.00
68.29	Supply & Erection of special stud structure for 33KV lattice structure as per Discom specifications made of M.S. angle, channer, flats complete in all respects with bracings including painting of tower of approved make two coat of red oxide paint and one coat of aluminium paint before installation and one coat of Aluminium paint after erection work completed as per technical specifications & drawing of DISCOM. (Excavation of pit PCC and CC foundation as per Discom specs. to be Paid Extra). All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	26,070.00
68.30	Supply and fixing of 33 kV pin insulator confirming to IS:731:1971 with latest ammendment on existing bracket including all accessories like MS forged hot dipped GI Pin confirming to IS 2486(Part-I)/1993 & IS:2486 (Part-II)/1989 with latest amendment, and as per latest Discom specs. etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	523.00
68.31	Supply and fixing of 33kV Disc insulator and Hot dipped galvanized Hardware confirming to IS:731:1971 with latest ammendment and as per latest Discom Specs. on existing bracket including all accessories etc. as required.All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
68.31.1	B & S type hardware 120KN	Each	1,009.00
68.31.2	B & S disc insulator 120KN	Each	1,167.00
68.32	Supply and fixing of guard bracket 2.2 mtr. long made from (75x40) ISMC 7.14Kg. Per Mtr. M.S. channel including necessary clamp and botls etc. as per technical specification & drawing of DISCOM. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	1,492.00
68.33	Supply and fixing M.S. channel (cut point) 100x50mm ISMC (9.5Kg. Per Mtr.) 2x1.8mtr. long with pilot patti 50x6mm thick necessary nuts and bolts etc. as per technical specification & drawing of DISCOM. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	3,735.00

Code No	Description	Unit	Rate Rs.
68.34	Supply and installation of spike of M.S. rod 20mm dia 3.0mtr. long for earthing of (tower/pole) drive into earth by mechanical means sturcture connection the spike with cross arm top hamper PCC pole, lattics tower to earth etc. complete as per technical specification of DISCOM.	Each	1,864.00
68.35	Labour charges for Dismentling the structure with pole mounted transformer different capacity along with distribution boards and re-erecting the transformer in the structure to be newly erected along with distribution boards and erecting testing, testing and commissioning (as well as cabling)	Job	3,263.00
68.36	Labour charges for Dismantling of existing electric poles (PCC poles, MS channel, Lattic tower 12.6mtr. , 11 mtr. along with the ACSR Conductors, 11KV/33KV/LT line etc. 11KV insulator LT insulator guard wires, staywires and other electric items of the pole coming along the alignment of the road and removal and re- rolling PCC pole, MS channel different sizes as well as handing over the same to DISCOM store including transportation from site to store and stacking of dismantling material in store and as per the direction of Engineer Incharge and clean the site good as per the requirement and submit the receipt from DISCOM/ concering authority, including all complete works.	job	1,233.00
68.37	Labour charges for Dismantling of following existing street light electric poles with street light fixtures, underground cable, MS box and other electric items of the pole coming along the alignment of the road and removal and re- rolling MS poles/PCC poles of different sizes as well as handing over the same to DISCOM/UIT/MC store and as per the direction of Engineer Incharge and clean the site good as per the requirement and submit the receipt from concering authority, all complete works.	Job	541.00
68.38	Labour charges for Dismantling of service line connection of industrial/domestic connection, single phase supply/three phase supply system on existing cross arm PCC pole, MS channel different sizes of poles along with the ACSR conductor/service line weather proof cable/ Armoured cable, guard wire, stay wire and other electrical item of the pole comming along the alignment of the road and removal and re-rolling as well as handing over the same to DISCOM store including transportation from site to store and stacking of dismantling material in store and temporary supply electrical connection to domestic/industrial connection to consumer where supply disconnected and as per the direction of Engineer Incharge and clean the site good as per the requirement , all complete works.	Job	110.00
68.39	Labour charges for Trimming of tree branches/plants and prepairing route approaches for electric proposed line complete with prior permission of local authority in writing , taking proper shutdown from discom office and inform to DISCOM after complete the work.	Job	54.00

69.0 LOCAL AREA NETWORKING

Code No	Description	Unit	Rate Rs.
69.1	Supply, Drawing and Testing of 4 pair, 23 AWG Solid Bare Copper wire insulated with PVC, UTP (Unshielded Twisted Pair), Category 6, Class E, 100 Ohm Impedance, Indoor Cable as per latest ammendments of ANSI/TIA/EIA-568 , The copper conductors should be balanced twisted in pairs, seperated by a cross-member fluted pair divider & protected by PVC Jacket. Certified performance in a 4-connector configuration upto 100 Mtrs channel requirements & transmission frequencies up to 250 Mhz. in existing MS/PVC Conduits/casing capping including making connections to Information outlets and Patch Panels with jack & ferruling at both ends for identification with necessary tools for punching, stripping, crimping and testing etc as required complete in all respect. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Mtr.	50.00
69.2	Supply, Drawing and Testing of 4 pair, 23 AWG Solid Bare Copper wire insulated with HDPE, U/UTP (Unscreened/Unshielded Twisted Pair), Category 6, Class E, 100 Ohm Impedance, Outdoor Cable as per latest ammendments of ANSI/TIA/EIA-568 C.2 & ISO/IEC 11801 2nd Ed, The copper conductors should be balanced twisted in pairs, seperated by a cross divider & protected by LSZH PVC outer jacket of UV resistant. Certified performance in a 4-connector configuration upto 100 Mtrs channel requirements & transmission frequencies up to 250 Mhz. Should meet IEEE 802.3af & IEEE 802.3at for POE applications. Cable Should support Ethernet 10GBASE-T according to the standards. in existing MS/PVC Conduits/casing capping including making connections to Information outlets and Patch Panels with jack & ferruling at both ends for identification with necessary tools for punching, stripping, crimping and testing etc as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Mtr.	85.00
69.3	Supply, Drawing and Testing of 4 pair, 23 AWG Solid Bare Copper wire insulated with HDPE, Category 6A/Class Ea, U/FTP (Unscreened/Foiled Twisted Pair), 100 Ohm Impedance, Indoor Cable as per latest ammendments of ANSI/TIA/EIA-568 C.2 & ISO/IEC 11801 2nd Ed, The copper conductors should be balanced twisted in pairs, Unscreened and Aluminum Foil Sheilding of Individual pairs protected by a Low Smoke Zero Halogen (LSZH)(IEC 60332-1) Jacket. Certified performance in a 4-connector configuration upto 100 Mtrs channel requirements & transmission frequencies up to 500 Mhz. Should meet IEEE 802.3af & IEEE 802.3at for POE applications. Cable Should support Ethernet 10GBASE-T according to the standards. in existing MS/PVC Conduits/casing capping including making connections to		

Code No	Description	Unit	Rate Rs.
	Information outlets and Patch Panels with jack & ferruling at both ends for identification with necessary tools for punching, stripping, crimping and testing etc as required.All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Mtr.	97.00
69.4	Supply and Installation of unshielded/360 degree shielded Information outlets made of high impact plastic body with ABS, FR Grade halogen free material with provision for protection against dust in jack, suitable for Cat 6/6A application complying to latest ammendments, According. to Cat. 6/6A channel, It should support channel as well as components requirements of Cat.6/6A standards at frequencies of up to 250 to 500 Mhz. Cat 6/6A unshielded/shielded Jack should be suitable to terminate 4 pair, 23/24 AWG solid/stranded wire diameters, using 100 Ohm unshielded/shielded balance twisted pair cable, the jack should have toolless/impact termination on reliable copper tin plated Insulation displacement contact, with easy lock mechanism, It supports IEC 60603-7-4 and complied with ANSI/TIA/EIA 568 C.2 standard. jack should be RJ11,RJ12 & RJ45 compatible. Should support Ethernet 1.2 Gb/s ATM,Digital video and broadband/baseband analog video, Voice over internet protocol (VOIP) Specifications in existing modular/MS Boxes along with necessary connections as required.All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
69.4.1	Cat 6, Un-sheilded Information Outlet	Each	408.00
69.4.2	Cat 6A, Sheilded Information Outlet	Each	595.00
69.5	Supply & fixing of square Faceplate for Flush / Surface Mount Information Outlets Single/Dual or Quad Aperture , material should be PC+ABS body, Suitable for RJ45 unshielded/shielded connection modules. Should match with I. O. OEM. Dimensions should be 86mm X 86mm as required complete in all respect. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
69.5.1	Single Aperture	Each	83.00
69.5.2	Dual Aperture	Each	104.00
69.5.3	Quad Aperture	Each	124.00
69.6	Supply, Installation, Testing and Comissioning of Rack mounted 19" 1U, Cat6 24 Port loaded, 1.5-1.6 MM CRS chasis, powder coated, sheet steel, made of plastic (ABS), Modular Patch Panels with Rear Cable management system and mounting hardware to mount the patch panel. Should have port identification numbers printed/engraved on front of the panel. Etc. as required.All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with		

Code No	Description	Unit	Rate Rs.
	this BSR .		
69.6.1	Modular Patch Panel Loaded with Cat -6 I/O	Each	8,984.00
69.6.2	Modular Patch Panel Loaded with Cat -6A I/O	Each	13,137.00
69.7	Supply , Installation and Testing of 4 pair, 100 Ohm impedance, Cat 6/6A /Class E/Ea patch cords should be constructed of minimum 23/24 AWG, stranded bare Copper cable with FRPVC/LSZH Jacket, with an enhanced performance by factory moulded RJ45 connectors with strain relief boots as per ANSI/TIA/EIA 568-C.2 suitable for Cat 6/6A application complying to latest ammendments Category 6/6A Standards, According. to TIA568C.2, ISO/IEC 11801, EN 50173, IEC 60603-7-51, EN 60603-7, IEEE 802.3an minimum requirement for 1G BASE-T to 10G BASE-T performance. Patch cords shall be straight thru cable compatible with both T568-A and T568-B wiring schemes, should support IEEE 802.3af / IEEE 802.3at for POE applications, Minimum 750 to 1000 mating cycles in plug contacts for long durability, Should support Ethernet 10GBASE-T, 1.2 Gb/s ATM, Token ring 4/16, Digital video and broadband/baseband analog video, Voice over internet protocol (VOIP).All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
69.7.1	Cat 6, U/UTP (Unscreened/Un-sheilded Twisted Pair) Patch Cord		
69.7.1.1	0.50 Mtr	Each	152.00
69.7.1.2	1 Mtr	Each	229.00
69.7.1.3	2 Mtr	Each	297.00
69.7.1.4	3 Mtr	Each	367.00
69.7.2	Cat 6A, U/FTP (Unscreened/Foiled Twisted Pair) Patch Cord		
69.7.2.1	0.50 Mtr	Each	290.00
69.7.2.2	1 Mtr	Each	436.00
69.7.2.3	2 Mtr	Each	574.00
69.7.2.4	3 Mtr	Each	712.00
69.8	Supply, Drawing and Testing, of stranded Multi mode (50/125 µm) glass optic fiber cable, as per latest ammendments of TIA/EIA 568/ISO/IEC 11801:2011/ IEC 60794-1-2 E1, E3,E11, F1/ EN 50173-1/ EN 187 000/ IEC 60974-2, 2-20, 2-21/ ITU G.652D, construction of LSZH outer sheath cable, cable should be used for LAN and WAN back bones, . With its LSZH sheathing these cables should be ideal for indoor/outdoor installations in existing MS/PVC /HDPE Conduits/ slotted channels with ferruling at both ends for identification complete in all respect. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
69.8.1	6 fiber	mtr	146.00

Code No	Description	Unit	Rate Rs.
69.8.2	12 Fiber	mtr	187.00
69.8.3	24 Fiber	mtr	242.00
69.9	Supply, Installation, OTDR Testing & Fusion Splicing of Fiber Multimode Pigtail (50/125 μ m) made of glass fiber optic, should be fitted at one end with any one type of single ST/E-2000/SC/LC/MT-RJ/PC type connector in acc., as per latest ammendments of TIA/EIA 569 Standard Specification as per requirments complete in all respect. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	1,242.00
69.10	Supply, Installation, & Testing of Indoor duplex Multimode patch cord (50/125 μ m made of glass fiber optic with LSZH jacket, F8 2.0x4.1 mm, Multimode G652.D Mounted on both sides with ST/E-2000/SC/LC/MT-RJ/PC type Duplex connectors in acc. with IEC 61754-20. Zirconia (ceramic) ferrule with a PC polished endface geometry, connectors should be tuned in accordance with IEC 61755-3-1 and qualified in acc. with IEC 61753-1 for category U (uncontrolled environment, duplex clip and white plastic dust cover, should comply to delta IL < 0.2 dB after 500 mating cycles, there should be an optional Visual coding, mechanical coding and lock protection on the patch cords which can be added on later stage. patch cords's performance should be acc. to IEC 61753-1 (Table A.12) as per latest ammendments of TIA/EIA 569B.3, as per requirements.All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
69.10.1	1 Mtr	Each	1,730.00
69.10.2	2 Mtr	Each	2,007.00
69.10.3	3 Mtr	Each	2,284.00
69.10.4	5 Mtr	Each	2,560.00
69.11	Supply, Installation, & Testing of 19" 1U Rack Mounted/ surface mounted aluminum/ CRCA 1.2mm powder coated, multimode glass Fiber Optic Cable Patch panel/LIU loaded with flangless/screwable adapters for ST/E-2000/SC/LC/MT-RJ/PC type, It should have easy removable Top plate with push buttons, there should be a splice tray installed in the Patch panel/LIU which can handle the fiber cores, splice tray should be PC+ABS material, it should include accessories like mounting hardware, gormetts, heat shrink tubes/sleeves, screws, nuts to install the panel for rack/wallmount applications as per requirement complete in all respect. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
69.11.1	Multi Mode LIU 6 Ports	Each	6,562.00
69.11.2	Multi Mode LIU 12 Ports	Each	8,908.00

Code No	Description	Unit	Rate Rs.
69.11.3	Multi Mode LIU 24 Ports	Each	11,739.00
69.12	Supply, Drawing and Testing, of stranded Single mode (9/125 μ m) glass optic fiber cable, as per latest ammendments of TIA/EIA 568/ISO/IEC, construction of LSZH outer sheath cable, cable should be used for LAN and WAN back bones, . With its LSZH sheathing these cables should be ideal for indoor/outdoor installations in existing MS/PVC /HDPE Conduits/ slotted channels with ferruling at both ends for identification complete in all respect.All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
69.12.1	6 fiber	Mtr	96.00
69.12.2	12 Fiber	Mtr	124.00
69.12.3	24 Fiber	Mtr	166.00
69.13	Supply, Installation, OTDR Testing & Fusion Splicing of Fiber Singlemode Pigtail (9/125 μ m (OS1/OS2) made of glass fiber optic, with semi-tight buffer PA/PBT, Ø 0.9 mm, yellow, singlemode G652.D (9/125 μ m (OS1, OS2), should have length of min 1.5m, should be fitted at one end with any one type of single ST/E-2000/SC/LC/MT-RJ/PC type connector in acc. with IEC 61754-20, Should be delta IL < 0.2 dB after 500 mating cycles, It should be Zirconia (ceramic) ferrule with a PC polished endface geometry connector qualified in acc. with IEC 61753-1 for category U (uncontrolled environment). and qualified in acc. with IEC 61753-1, Performance acc. to IEC 61753-1 (Table A.12) as per latest ammendments of TIA/EIA 569B.3, Standard Specification as per requirments.All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	1,242.00
69.14	Supply, Installation, & Testing of Indoor duplex Singlemode patch cord (9/125 μ m (OS1/OS2) made of glass fiber optic with LSZH jacket, F8 2.0x4.1 mm, yellow, singlemode G652.D (9/125 μ m (OS1, OS2) Mounted on both sides with ST/E-2000/SC/LC/MT-RJ/PC type Duplex connectors in acc. with IEC 61754-20. Zirconia (ceramic) ferrule with a PC polished endface geometry, connectors should be tuned in accordance with IEC 61755-3-1 and qualified in acc. with IEC 61753-1 for category U (uncontrolled environment, duplex clip and white plastic dust cover, should comply to delta IL < 0.2 dB after 500 mating cycles, there should be an optional Visual coding, mechanical coding and lock protection on the patch cords which can be added on later stage. patch cords's performance should be acc. to IEC 61753-1 (Table A.12) as per latest ammendments of TIA/EIA 569B.3, as per requirements.All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
69.14.1	Single Mode Patch Cord 1 Mtr.	Each	1,452.00

Code No	Description	Unit	Rate Rs.
69.14.2	Single Mode Patch Cord 2 Mtr.	Each	1,730.00
69.14.3	Single Mode Patch Cord 3 Mtr.	Each	1,869.00
69.14.4	Single Mode Patch Cord 5 Mtr.	Each	2,090.00
69.15	Supply, Installation, & Testing of 19" 1U Rack Mounted/ surface mounted aluminum/ CRCA 1.2mm powder coated, Singlemode glass Fiber Optic Cable Patch panel/LIU loaded with flangless/screwable duplex adapters for ST/E-2000/SC/LC/MT-RJ/PC type, It should have easy removable Top plate with push buttons, there should be a splice tray installed in the Patch panel/LIU which can handle the fiber cores, splice tray should be PC+ABS material, it should include accessories like mounting hardware, gormetts, heat shrink tubes/sleeves, screws, nuts to install the panel for rack/wallmount applications as per requirment complete in all respect. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
69.15.1	6 Ports	Each	6,907.00
69.15.2	12 Ports	Each	8,978.00
69.15.3	24 Ports	Each	11,047.00
69.16	Supply & Installation of IP-20 & IK-08 , UL Listed Wall mounted Double Section Communication enclosure (Rack) made from powder coated (60 to 80 Micron) CRCA sheet, front sturdy sheet steel frame folded from one piece and welded with minimum 5mm toughened glass door,Vertical Mounting Rail 1.6 MM with 'U'Marking , with All round protective channel on the door aperture, lock integrated on front door, top and bottom cover with cable entry provision with gland plates, integrated side walls, 2 pair of 19" angles with wall mounting provision on wall. Accessories like: 1 No of 19" 1U Horizontal Cable manager, 1 No of 90 cfm 230V AC Fan with 1 mts long cable, mounting hardware , 1 No of 19" 1U, mountable socket strips with 5 nos of 5A universal sockets with 2 mts long power chord for supplying power to switches, fans etc along with earth continuity kit, indicator, moulded power supply cable. fixing on wall with Suitable Anchor fastner etc as required.All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
69.16.1	6 U Rack with Width 600 mm & Depth 400 mm + 100 mm	Each	9,402.00
69.16.2	9 U Rack with Width 600 mm & Depth 400 mm + 100 mm	Each	12,446.00
69.16.3	12 U Rack with Width 600 mm & Depth 400 mm + 100 mm	Each	15,625.00
69.16.4	15 U Rack with Width 600 mm & Depth 400 mm + 100 mm	Each	18,668.00
69.17	Supply & Installation of IP-20 & IK-08 , UL Listed Communication enclosure (Rack) made from powder coated (60 to 80 Micron) CRCA sheet,Vertical Mounting Rail 1.6 MM with 'U'Marking, front sturdy sheet steel frame folded from one piece and welded with 5mm		

Code No	Description	Unit	Rate Rs.
	toughened glass door, with All round protective channel on the door aperture, lock integrated on front door, top and bottom cover with cable entry provision with gland plates, integrated side walls, Set of 75 mm height 4 castors, 2 of which have brakes, Accessories like: 5 Nos of 19" 1U Horizontal Cable manager, 2 Nos of vertical cable managers, 1 no. Keyboard Tray, 4 Nos of 90 cfm 230V AC Fan with 1 mts long cable, mounting hardware , 2 No of 19" 1U, mountable socket strips with 6 nos of 5A universal sockets with 2 mts long power chord for supplying power to switches, fans etc along with earth continuity kit, indicator, moulded power supply cable complete in all respect. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
69.17.1	17 U Rack with Width 600 mm & Depth 800 mm	Each	29,331.00
69.17.2	22 U Rack with Width 600 mm & Depth 800 mm	Each	33,896.00
69.17.3	27 U Rack with Width 600 mm & Depth 800 mm	Each	42,887.00
69.17.4	36 U Rack with Width 600 mm & Depth 800 mm	Each	47,383.00
69.17.5	42 U Rack with Width 600 mm & Depth 800 mm	Each	60,184.00
69.17.6	42 U Rack with Width 800 mm & Depth 1000 mm with 3 no. Heavy Duty Sliduing Drawer	Each	95,464.00
69.18	Supply , Installation, Testing and Comissioning of Unmanaged Switch Plug-and-play - easy setup with no configuration or no software needed, following Port fast ethernet - 8 port 10/100 MBPS auto-negotiation RJ45 ports, IEEE 802.3x flow control ,supports auto-MDI/MDIX, eliminating the need for crossover cables including making connection etc as required complete in all respect. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
69.18.1	8 Port	Each	3,043.00
69.18.2	24 Port	Each	7,012.00
69.19	Supply , Installation, Testing and Comissioning of Managed Layer-2 Intelligent 10/100 Ethernet Switch providing 24 x 10/100/1000 MBPS Giga Ethernet ports / with min 2 SFP Giga Ports (provision for Fiber Giga connectivity) with related LAN Base Software including making connections etc as required.All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	37,703.00
69.20	Supply , Installation, Testing and Comissioning of Managed Layer-2 Intelligent Giga Ethernet Switch providing 24 x 10/100/1000 MBPS Giga Ethernet ports and with min 4 SFP Giga Ports (provision for Fiber Giga connectivity) all switches & related Fiber modules should be of same make & category for seamless integration with each other of Enterprise class Catalyst Series including making connections etc as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	1,03,790.00

Code No	Description	Unit	Rate Rs.
69.21	Supply , Installation, Testing and Comissioning of Managed Layer-2 Intelligent PoE Giga Ethernet Switch providing 24 x 10/100/1000 MBPS PoE Giga Ethernet ports and with min 4 SFP Giga Ports (provision for Fiber Giga connectivity) with provision of minimum Stacking of 06 Switches with minimum 370 Watt PoE Power Budget with related LAN Base Software including making connections etc as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	1,53,164.00
69.22	Supply , Installation, Testing and Comissioning of Hot pluggable Small Form Factor Pluggable (SFP Module), 1000BASE-SX, 1.25/2.125G Fiber Channel, LC Type Duplex Connector, 850nm laser transmitter, Should support distance upto 500m on 50/125um of data rate upto 2.125 Gb/s on bi-directional data links. Should also support industrial temperature, should have metal enclosure for lower EMI. The transceiver should be ROHS Compliant. (For Each MM Fiber) all switches & related Fiber modules should be of same make & category for seamless integration with each other of Enterprise class, complete in all respect.All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	14,196.00
69.23	Supply , Installation, Testing and Comissioning of Hot pluggable Small Form Factor Pluggable (SFP Module), 1000BASE-LX, 1G Fiber Channel, LC Type Duplex Connector, 1310 nm laser transmitter, Should support distance upto 10 km on 9/125 um of data rate upto 1.25 Gb/s on bi-directional data links. Should also support industrial temperature, should have metal enclosure for lower EMI. The transceiver should be ROHS Compliant. (For Each SM Fiber) all switches & related Fiber modules should be of same make & category for seamless integration with each other of Enterprise class. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	26,136.00
69.24	Supply, installation, Testing and Commissioning of 1000 base-LX/LH single mode/Multi mode fibre to 1000 base-T copper giga bit , Media Convertor complete as required complete in all respect. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	9,683.00
69.25	Fiber Fusion Splicing with OTDR Testing of Fiber Single/ Multi mode (per splice) of glass Fiber Optic Cable including cleaning the cable and making splice as per standard practice complete in all respect. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	822.00
69.26	System Certification & Documentation by OEM for 20 Years as required	Per Node	158.00

70.0 ELECTRICAL DRIVEN PUMPSETS

Code No	Description	Unit	Rate Rs.
70.1	Labour charges for installation of submersible motor pump set including lowering/ delowering of pipes, cables, accessories etc. in tube-well/ open well complete including T&P, transportation of tripod, chain pulley block & any other material required for this purpose complete in all respect.		
70.1.1	Lowering only	Each	4,112.00
70.1.2	Delowering only	Each	3,427.00
70.1.3	Delowering and Lowering	Each	6,853.00
70.2	Supply & fixing of PVC threaded casing pipes for Tube well (IS 12818:1992) of 3mtr. Each for depth up to 1200 ft. Plain and strainer Casing CS for Depth upto 400ft. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
70.2.1	Up to 400 ft Depth		
70.2.1.1	150 mm dia	Mtr.	686.00
70.2.1.2	175mm dia	Mtr.	883.00
70.2.1.3	200 mm dia	Mtr.	1,192.00
70.2.1.4	250 mm dia	Mtr.	1,773.00
70.2.2	more than 400 ft to 1200 ft. Depth		
70.2.2.1	40mm dia	Mtr.	144.00
70.2.2.2	50 mm dia	Mtr.	202.00
70.2.2.3	80mm dia	Mtr.	280.00
70.2.2.4	100 mm dia	Mtr.	363.00
70.2.2.5	125 mm dia	Mtr.	566.00
70.2.2.6	150 mm dia	Mtr.	774.00
70.2.2.7	175 mm dia	Mtr.	997.00
70.2.2.8	200 mm dia	Mtr.	1,347.00
70.2.2.9	250 mm dia	Mtr.	2,010.00
70.3	Providing & Laying of Polypropylene rope Confirming to IS:5175 for submersible pump of following sizes. complete in all respect. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
70.3.1	12mm (suitable up to 50 mm OD pipe)	Mtr.	44.00
70.3.2	16mm (suitable above 50mm & up to 75mm OD pipe)	Mtr.	55.00

Code No	Description	Unit	Rate Rs.
70.3.3	20mm (suitable for 90 mm OD pipe)	Mtr.	63.00
70.4	Providing & Fixing of HDPE pipe Confirming to IS:4984:2021 for water supply suitable for submersible & jet pump with required fittings ie socket, elbows, tee etc. complete in all respect. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
70.4.1	for vertical installation		
70.4.1.1	40 mm OD 6 kg / cm ²	Mtr.	96.00
70.4.1.2	50 mm OD 6 kg / cm ²	Mtr.	118.00
70.4.1.3	63 mm OD 6 kg / cm ²	Mtr.	152.00
70.4.1.4	75 mm OD 6 kg / cm ²	Mtr.	201.00
70.4.1.5	90 mm OD 10 kg / cm ²	Mtr.	345.00
70.4.2	for Horizontal installation		
70.4.2.1	40 mm OD 4kg/ cm ²	Mtr.	83.00
70.4.2.2	50 mm OD 4 kg/ cm ²	Mtr.	104.00
70.4.2.3	63 mm OD 4 kg/ cm ²	Mtr.	146.00
70.4.2.4	75 mm OD 4 kg/ cm ²	Mtr.	187.00
70.4.2.5	90 mm OD 6 kg/ cm ²	Mtr.	290.00
70.5	SITC of Single Stage, water cooled, High Speed (2880 RPM), Horizontal, Centrifugal, Openwell Submersible pumps set pre filled with coolant water and fitted with mechanical seal - T/C Vs T/C, Thrust bearing shall be of carbon + S.S.The stator body of single phase pump shall be of SS and rest of all shall be of cast iron. All casting parts should be cathod electro deposition (CED) coated and other construction material should be confirming to IS : 14220: 2018 . The overall performance of pump shall confirm to BEE energy efficiency level of 3 star. Valid BEE certificate from OEM must be submitted for the same. Motor should be IE2 class as per IEC 60034-2-1: 2007, IEC 60034-30: 2008, & IS12615:2011, including making connection etc as required complete in all respect. OEM shall have submit NABL / CPRI / ERDA accredited lab type test certificate before execution. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
70.5.1	0.5 HP, 1-Ø, (7 -15) Mtr, (130 - 72) LPM	Each	12,840.00
70.5.2	1.0 HP, 1-Ø, (7 -12) Mtr, (405- 240) LPM	Each	16,453.00
70.5.3	1.5 HP, 1-Ø, (18 -26) Mtr, (126 - 78) LPM	Each	21,780.00
70.5.4	2.0 HP, 1-Ø, (12 -25) Mtr, (350 - 115) LPM	Each	23,510.00
70.5.5	3.0 HP, 3-Ø, (17 -27) Mtr, (680 - 300) LPM	Each	26,570.00
70.5.6	5.0 HP, 3-Ø, (14 -28) Mtr, (995-500) LPM	Each	29,099.00

Code No	Description	Unit	Rate Rs.
70.5.7	7.5 HP, 3-Ø, (12 -32) Mtr, (1240-475) LPM	Each	37,924.00
70.5.8	10.0 HP, 3-Ø, (22 -36) Mtr, (1860 - 1020) LPM	Each	49,145.00
70.5.9	12.5 HP, 3-Ø, (19.5 -33) Mtr, (2150-1300) LPM	Each	68,075.00
70.5.10	15.0 HP, 3-Ø, (16 -32) Mtr, (2300-1250) LPM	Each	77,689.00
70.6	SITC of Radial / mixed flow ISI marked water and anti-corrosive liquid filled submersible motor pump sets suitable for 100/150mm dia borewell. The size of adopter fixed on top of the motor should exceed the top of coupler , for safegaurd the coupler. The construction material of motor and pump should match IS: 8034 : 2018 and IS: 9283 guideline. The radial flow pumpset should operate at 5 star energy efficiency level of BEE and mixed flow pump set should operate at 3 star energy level of BEE, accompanied by valid BEE certificate. Motor should be IE2 class as per IEC 60034-2-1: 2007, IEC 60034-30: 2008, & IS12615:2011 with required accessories including making connection suitable for Bore well. The job includes labour part of lowering of riser pipe G.I./ H.D.P.E. with rope, cables & pump, installation of complete fitting and accessories, jointing of electrical cables up to Starter. All labour for testing of submersible pumps set and supply of water to water mains, complete in all respect. OEM shall have submit NABL / CPRI / ERDA accredited lab type test certificate before execution. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
70.6.1	100 mm diameter Submersible pump shall have following HP Rating, phase, Head range, Discharge range respectively.		
70.6.1.1	1.0 HP, 1-Ø, (10 - 83)Mtr, (40- 10) LPM	Each	22,413.00
70.6.1.2	1.5HP, 1-Ø, (11 - 94)Mtr, (40 - 10) LPM	Each	24,088.00
70.6.1.3	2.0 HP, 1-Ø, (7- 95)Mtr, (55-22) LPM	Each	25,832.00
70.6.1.4	3.0 HP, 1-Ø, (40 -170)Mtr, (60- 20) LPM Copper Wound	Each	43,531.00
70.6.1.5	5.0 HP, 1-Ø, (56 - 236)Mtr, (90 - 25) LPM Copper wound	Each	50,681.00
70.6.2	150 mm diameter Submersible pump shall have following HP Rating, phase, Head range, Discharge range respectively.		
70.6.2.1	3.0 HP, 3-Ø, (54 -95)Mtr, (250-50) LPM	Each	46,535.00
70.6.2.2	5.0 HP, 3-Ø, (68 - 102)Mtr, (225-85) LPM	Each	54,350.00
70.6.2.3	7.5 HP, 3-Ø, (76 - 96)Mtr, (285-180) LPM	Each	57,998.00
70.6.2.4	10.0 HP, 3-Ø, (91 - 115)Mtr, (285-180) LPM	Each	73,758.00
70.6.2.5	12.5 HP, 3-Ø, (78 - 126)Mtr, (395-245) LPM	Each	80,949.00
70.6.2.6	15.0 HP, 3-Ø, (80 - 123)Mtr, (465-305) LPM	Each	88,502.00
70.7	SITC of Monoblock motor pump set ISI marked (IS:9079-2002) with TEFC motor, motor should be IE2 class as per IEC 60034-2-1: 2007, IEC 60034-30: 2008, & IS12615:2011. with Stainless steel Impellor,		

Code No	Description	Unit	Rate Rs.
	Stainless steel shaft, Mechanical seal, Single/Three phase (240 - 440 V) permanent split capacitor type (PSC), fitted with thermal overload protection, Including cost of hardware etc on existing platform complete. Pump shall have following HP Rating, phase, Head, minimum Discharge respectively complete in all respect. OEM shall have submit NABL / CPRI / ERDA accredited lab type test certificate before execution. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
70.7.1	0.5 HP, 1-Ø, (3 - 18)Mtr, (100-26) LPM	Each	10,998.00
70.7.2	1.0 HP, 1-Ø, (10-120)Mtr, (30-12) LPM	Each	14,224.00
70.7.3	1.5 HP, 1-Ø, (6-24)Mtr, (400-80) LPM	Each	17,723.00
70.7.4	2.0 HP, 3-Ø, (6-27)Mtr, (425-100) LPM	Each	28,642.00
70.7.5	3.0 HP, 3-Ø, (14 - 26)Mtr, (760-600) LPM	Each	36,169.00
70.7.6	5.0 HP, 3-Ø, (24-44)Mtr, (680-370) LPM	Each	42,977.00
70.7.7	7.5 HP, 3-Ø, (20-32)Mtr, (1060-900) LPM	Each	51,778.00
70.7.8	10.0 HP, 3-Ø, 32- 48)Mtr, (830-450) LPM	Each	65,562.00
70.8	SITC of Dewatering Submersible Motor Pump set, motor should be IE2 class as per IEC 60034-2-1: 2007, IEC 60034-30: 2008, & IS12615:2011. with SS Impellor, body, shaft, mechanical seal etc. as required. Pump shall have following HP Rating, phase, Head, minimum Discharge respectively complete in all respect. OEM shall have submit NABL / CPRI / ERDA accredited lab type test certificate before execution. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
70.8.1	1.0 HP, 3-Ø, (5 - 12)Mtr, (333 - 95) LPM	each	28,593.00
70.8.2	2.0 HP, 3-Ø, (5 - 18)Mtr, (480 - 66) LPM	each	44,109.00
70.8.3	3.0 HP, 3-Ø, (5 - 20)Mtr, (810 - 126) LPM	each	47,303.00
70.8.4	5.0 HP, 3-Ø, (5 - 24)Mtr, (1170 - 174) LPM	each	87,456.00
70.9	SITC of Drain Sewage pump Non-clog fully floodable submersible pump suitable to handle raw sewage suitable for up to 40 mm solid with Cast iron CED coated Impellor, CI body & housing, SS shaft, Mechanical seal etc. as required. Pump shall have following HP Rating, phase, Head, minimum Discharge respectively complete in all respect. Appropriate type test certificate / OEM test report shall be submitted.All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
70.9.1	1.0 HP, 3-Ø, (6 - 12)Mtr, (333 - 45) LPM	Each	25,561.00
70.9.2	2.0 HP, 3-Ø, (8 - 16)Mtr, (375 - 120) LPM	Each	49,133.00
70.9.3	3.0 HP, 3-Ø, (8 - 20)Mtr, (590 - 220) LPM	Each	52,605.00

Code No	Description	Unit	Rate Rs.
70.10	SITC of Pressure boosting pump with 24 Ltr. MS Tank, pressure switch, pressure gauge, and all standard fittings fully automatic ON / OFF system, 2900 RPM with stainless steel casing, & impellor suitable for following capacity complete in all respect. Appropriate type test certificate / OEM shall have submit NABL / CPRI / ERDA accredited lab type test certificate before execution. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
70.10.1	0.5 HP (15 - 10) Mtr, (24 - 40) LPM	Each	26,295.00
70.10.2	0.75 HP (30 - 10) Mtr, (09 - 40) LPM	Each	28,410.00
70.10.3	1.0 HP (25 - 15) Mtr, (30 - 48) LPM	Each	36,616.00
70.10.4	1.5 HP (37 - 20) Mtr, (24 - 48) LPM	Each	46,704.00
70.11	Providing & Fixing of CI foot valve complete in all respect. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
70.11.1	Rocket type (for bore well) 50/ 60 mm	Each	1,354.00
70.11.2	Handi type (for open well) 80/ 100 mm	Each	2,140.00
70.12	Supply & fixing of GI pipes confirming to IS : 1239 P - 1 (2004) with flanges duly screwed & welded including rubber washer, nuts & bolts of 8mm dia complete in all respect.All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
70.12.1	B class 32mm dia	P mtr	526.00
70.12.2	B class 40mm dia	P mtr	623.00
70.12.3	B class 50mm dia	P mtr	869.00
70.12.4	B class 65mm dia	P mtr	1,107.00
70.12.5	B class 80mm dia	P mtr	1,374.00
70.12.6	B class 100mm dia	P mtr	1,894.00
70.13	SITC of Contactor OEM Fabricated DOL/Star-Delta Starter panel with switchgear selection as per Type-2 Cordinatiom Chart and made out from 1.6 mm thick powder coated CRCA sheet, enclosure comprising of over load protection relay, short circuit & single phasing protection, Illuminated ON / OFF push buttons, ammeter, voltmeter, indicating lamps etc. suitable for following rating motors complete in all respect. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
70.13.1	For single phase Submersible / Monoblock pump		
70.13.1.1	0.5 HP to 1.5 HP (DOL starter)	Each	5,046.00
70.13.1.2	2.0 HP to 3.0 HP (DOL starter)	Each	5,541.00

Code No	Description	Unit	Rate Rs.
70.13.2	For Three phase Submersible / Mono block pump		
70.13.2.1	Upto 3.0 HP (DOL starter)	Each	7,427.00
70.13.2.2	3.0 HP to 5.0 HP (DOL starter)	Each	10,427.00
70.13.2.3	7.5 HP to 10.0 HP (DOL starter)	Each	13,651.00
70.13.2.4	3.0 HP to 5.0 HP (Star / Delta starter)	Each	14,729.00
70.13.2.5	7.5 HP to 10.0 HP (Star / Delta starter)	Each	19,405.00
70.13.2.6	12.5 HP to 15.0 HP (Star / Delta starter)	Each	22,254.00

71.0 AIR COOLING & AIRCONDITIONING

Code No	Description	Unit	Rate Rs.
71.1	Supply, Installation, Testing and Commissioning of factory assembled double skin central evaporative cooling plant having specifications as per A, B, C, D, E A. Air washer comprising of 2nos Pre-Filters. First filter shall be 50mm thick Aluminium wiremesh filter & second filter shall be 50 mm thick MERV-8 synthetic media filter with efficiency 90 % down to 10 microns. Both filters to be placed over the common frame. B. Humidification section comprising of Wet pads 200 mm thick impregnated cellulose paper media (Celdec pads) with 2 bend PVC eliminator. The End plates of Pad & Eliminator shall be in SS 304 construction. Also, the inner blank offs of Wet section shall be in SS304 construction. C. Fan Section comprising of belt driven, DIDW Backward curved AMCA certified centrifugal fan with maximum air outlet velocity of 10m/s suitable for required cfm at 50 mm static pressure (Total static of the unit shall be verified by the OEM before the design & supply of the units). Fan & Motor should be mounted over Aluminium channel of suitable thickness and should be isolated from the unit's bottom panel by means of Spring isolators. D. TEFC High efficiency IE-3 class motors as required with pulley, belt , Guard E. The unit shall be fabricated with frame work hollow extruded aluminium profile with 0.80 mm preplasticised GSS on outside and 0.80mm 275gsm plain GSS on inside complete with 25 mm thick CFC free PUF insulation of minimum 40 kg/cum density sandwiched in between inner and outer skins. Unit should have MS powder coated legs to give height to unit's base channel from the floor surface. SS-304 (18 g) Sump, UPVC Internal piping, make up, drain & quick fill and drain connection, Butterfly/Gate valves for pumps, make up, drain & quick fill and drain connections of sump, 2 no. Vertical Pumps of suitable capacity to be placed inside the unit's housing (external pumps are not acceptable) ,Y strainers and necessary fittings, Concrete Blocks / M S stand, anti vibration pads etc.as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
71.1.1	Upto 7500 cfm	per cfm	29.00
71.1.2	more than 7500 cfm to 15000 cfm	per cfm	27.00
71.1.3	more than 15000 cfm to 25000 cfm	per cfm	24.00
71.1.4	more than 25000 cfm to 35000 cfm	per cfm	21.00
71.2	SITC of Wall mounting cubical type Starter panel made out of 1.6		

Code No	Description	Unit	Rate Rs.
	mm thick sheet steel powder coated enclosure designed as per Switchgear OEM type -2 coordination chart and suitable for operation of following cfm range Air Washer's Blower motor, pump comprising of over load protection relay, short circuit & single phasing protection, ON / OFF push buttons, ammeter, voltmeter, indicating lamps, MCB etc. complete in all respect. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
71.2.1	Upto 7500 cfm	Set	15,214.00
71.2.2	more than 7500 cfm to 15000 cfm	Set	23,863.00
71.2.3	more than 15000 cfm to 25000 cfm	Set	33,204.00
71.2.4	more than 25000 cfm to 35000 cfm	Set	40,264.00
71.3	Supply , Installation, Testing and Comissioning of wall mounted remote ON/OFF Push Button station for AHU/Air washers made out from powder quoted CRCA sheet of 16 SWG , illuminated ON/OFF push button including making connections etc as required complete in all respect. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Set	6,572.00
71.4	P & F of Fire retardent flexible canvass connection made of fibreglass weave having silver grey silicon rubber coating, of height 200 mm with sufficient fold to avoid transmission of vibration with GI frame ,Gasket Nut Bolts for air cooling Plants/AHU/FCU etc as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Sq Mtr	2,074.00
71.5	SITC of VFD OEM fabricated VFD cum Bypass starter panel Confirming to IEC60721-3-3, IEC60068-2-60 & IEC60068-2 for variable torque applications, 3C3 avg., 200% torque producing capability at min freq of 0.5 Hz, integrated with 3 to 5% of input reactor or built in DC reactor, Max output frequency 400Hz, built in braking chopper till 30KW, built in RS485 Modbus RTU, Min 7DI, 2DO, 2AI, 1AO, onboard control supply of 24V -150 mA for external operations, RJ45 port, Monitoring parameters – V, I, Torque, Freq, RPM, Watt Hour, DC bus voltage, Analog input V or mA, I/O Status, PID loop monitoring, Torque speed, speed limit, Cooling fan, Protection functions – Ground fault, Over current, Overload, UV/OV, Under/over torque, I/P & O/P phase loss, DBR O/L, inverter over hit alarm, DC bus charge LED indication, heatsink thermistor open detection, stall prevention, fault history of min 4 last faults. Bypass starter shall be provided as per type 2 coordination etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
71.5.1	1.5 KW	Each	72,529.00

Code No	Description	Unit	Rate Rs.
71.5.2	2.2 KW	Each	75,144.00
71.5.3	3.7 KW	Each	81,300.00
71.5.4	5.5 KW	Each	95,278.00
71.5.5	7.5 KW	Each	1,03,483.00
71.5.6	11.0 KW	Each	1,08,647.00
71.5.7	15.0 KW	Each	1,25,669.00
71.5.8	18.5 KW	Each	1,44,269.00
71.6	Supply , Installation, Testing and Comissioning of site fabricated ducting made from GI sheet metal conforming to IS:277 with a zinc coating grade not less than 120 GSM (both side inclusive) & fabricated as per IS:655 and as per approved drawings & designs including the cost of hangers, supports, angle, expansion fasteners , closed cell neoprene gasket T&P etc. as required of following thickness. Test Certificate for Galavanizing with lot no. to be submitted. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
71.6.1	0.60 mm	Sqm	994.00
71.6.2	0.80mm	Sqm	1,184.00
71.6.3	1.00mm	Sqm.	1,421.00
71.6.4	1.25mm	Sqm.	1,705.00
71.7	Supply , Installation, Testing and Comissioning of site fabricated ducting made from aluminium sheet conforming to IS:737, Grade 31000 fabricated as per IS:655 and as per approved drawings & designs including the cost of hangers, supports , angle , expansion fasteners , closed cell neoprene gasket T&P etc. as required of following thickness. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
71.7.1	0.60 mm	Sq Mtr	1,267.00
71.7.2	0.80mm	Sq Mtr	1,579.00
71.7.3	1.00mm	Sq Mtr	1,919.00
71.7.4	1.20mm	Sq Mtr	2,244.00
71.8	Supply , Installation, Testing and Comissioning of factory fabricated SMACNA standard ducting made from GI sheet metal conforming to IS:277 with a zinc coating grade of 120GSM (both side inclusive) & fabricated as per IS:655 and as per approved drawings & designs including the cost of hangers, supports, angle, expansion fasteners , closed cell neoprene gasket T&P etc. as required of following thickness. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		

Code No	Description	Unit	Rate Rs.
71.8.1	0.60mm	Sqm	1,327.00
71.8.2	0.80mm	Sqm	1,591.00
71.8.3	1.00mm	Sqm.	1,951.00
71.8.4	1.25mm	Sqm.	2,359.00
71.9	Supplying, installing, testing and balancing of extruded Aluminium Powder coated supply/return Grilles with fixed bars at front having 0 / 15 / 30 / 45 degrees deflection as required. with Flange size 20 mm with rounded edges including fixing with steel screws etc. complete in all respect. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Sq.m	6,504.00
71.10	Supplying, installing, testing and balancing of double louvered of extruded Aluminium Powder coated supply/return air grills of various sizes, Each grill shall be with fixed aerofoil shaped horizontal front bar at 0 deflection and back adjustable vertical louvers, air distribution grid for straightening the air flow through the collar and register including fixing with steel screws etc. complete in all respect. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
71.10.1	Supply air grill with key operated volume control damper	Sqm.	10,793.00
71.10.2	Return air grill without volume control damper	Sqm.	8,649.00
71.11	Supplying, installing, testing and balancing of extruded Aluminium powder coated Air Diffuser and complete with Flush, 20mm flanges with PVC/neoprene gasket, anti – smudge frame and removable inner core to facilitate the adjustable of air control damper, square/round/ rectangular as required.including fixing with steel screws etc. complete in all respect. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
71.11.1	Supply Air Diffuser with Volume Control damper	Sqm.	12,524.00
71.11.2	Return Air Diffuser without Volume Control damper	Sqm.	10,101.00
71.12	Supplying, installing and balancing of extruded Aluminium powder coated fresh air inlet louvers with bird screen & volume control damper fixing with steel screws etc. complete in all respect. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Sqm.	8,580.00
71.13	Supply , installation, testing & balancing of 20 Gauge G I Damper with brass bushes and 6" pitch multiblade box type galvanised sheet steel construction volume control damper for Ducting and air washers to be provided with suitable links and quadrants for control of volume of air as per specifications complete as required. All as per pre approved by Engineer in-charge. For additional technical	Sq Mtr	5,256.00

Code No	Description	Unit	Rate Rs.
	parameters of products/ work , refer Annexure "A" attached with this BSR .		
71.14	Supply and fixing of acoustic lining of ducts with chemically cross link Oxide acetate foam open cell structure Acoustic Insulation with density 30 Kg / Sqm, UV protected and Class O Fire property Water Vapour absorption 0.002 gm / Sqcm, including cost of adhesive etc. complete in all respect. All as per pre approved by Engineer in-charge. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
71.14.1	10 mm thick	Sqm	774.00
71.14.2	15 mm thick	Sqm.	1,002.00
71.14.3	25 mm thick	Sqm.	1,459.00
71.15	Supply and fixing duct insulation with 50 mm thick Expanded Polystyrene Thermocol (ESP) sheet of density 24 kg/cu.m after applying two coats of cold setting adhesive (CPRX Compound) and binding sheet with chicken wire mesh and applying cement mortar plaster (1:4) including primer & painting (suitable for outdoor application) matching with building colour or as per direction of Engineer incharge as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Sqm.	1,010.00
71.16	Supply and fixing aluminium foil faced 50 mm thick Rock wool insulation of density 36 kg/cu.m after applying two coats of cold setting adhesive (CPRX Compound) sealing all joints with self adhesive tape & finished with 26 G Aluminium cladding. complete in all respect. (For Outdoor applications-air conditioning ducts) All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Sqm.	1,154.00
71.17	Supply & fixing of external thermal closed-cell Nitrile rubber Insulation material FM/UL approved with high water vapor diffusion resistance and low thermal conductivity should be certified 'Class O' in Fire Propagation as per BS 476 Part 6 in form of sheet on duct including cost of adhesive (CPRX Compound) complete as required. All as per pre approved by Engineer in-charge.		
71.17.1	9mm thick for indoor Application	Sqm	736.00
71.17.2	13mm thick for indoor Application	Sqm	949.00
71.17.3	13mm thick for Outdoor Application with 26 SWG Aluminium Cladding	Sqm	1,177.00
71.17.4	19mm thick for Outdoor Application with 26 SWG Aluminium Cladding	Sqm	1,497.00
71.18	Supplying, installing of external thermal closed cell cross linked Polyethylene (XLPE) foam insulation made out from non-fibrous, fire retardant (FR), closed cell, tri-dimensional chemically crosslinked		

Code No	Description	Unit	Rate Rs.
	polyethylene foam. should be certified 'Class O' in Fire Propagation and 'Class 1' in Surface Spread of Flame as per BS 476 Part 6 & Part 7 respectively in the form of sheet on ducts including cost of adhesive, tape complete as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
71.18.1	9mm thick	Sqm	697.00
71.18.2	13mm thick	Sqm	834.00
71.18.3	25 mm thick		1,123.00
71.19	Supply and fixing duct insulation with 50 mm thick Expanded Polystyrene Thermocol (ESP) sheet of density 24 kg/cu.m after applying two coats of cold setting adhesive (CPRX Compound) and binding sheet with chicken wire mesh and applying 26 G aluminium cladding complete as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Sq Mtr	1,113.00
71.20	Supply , Installation, Testing and Comissioning of expanded polysterene over deck insulation having thickness of 50 mm and density of 36 Kg / m3 including binding of fibre cloth and applying of two coats of UV paint suitable for exposed atmosphere complete as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Sq Mtr	1,227.00
71.21	Supplying and fixing of thermal insulation on exposed roof (underdeck) with 25 mm thick Cross Linked Closed Cell Polyethylene FR-XPE insulation of density 33 Kg/m ³ with adhesive etc. as required & finally fixed with the help of rawl plug, dash fasteners & adhesive in ceiling of pieces in size of 900x900 mm or 1200x1200 mm. etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Sq Mtr	1,200.00
71.22	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. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Sq Mtr	1,119.00
71.23	Supply, Installation, Testing and Comissioning of Window type Air conditioners as per BEE star rating complete with copper power cable upto 3 Mtr, wireless Remote, suitable for working between 230 V +/- 10% with low & high voltage cutoff and 50 Hz ,1 phase AC supply capable of performing, cooling, dehumidification, air circulation R-32/R-410 Green Refrigerant with Scroll / rotary compressor complete with fixing including T&P & labour etc as		

Code No	Description	Unit	Rate Rs.
	required complete in all respect as specified of following capacity. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
71.23.1	1.5 TR ISEER not less then 3.0	Each	33,149.00
71.23.2	1.8 TR	Each	36,221.00
71.24	Supply, Installation, Testing and Comissioning of Inverter type Air Cooled Hi Wall split type Air conditioners with latest star rating system as per BEE amended upto date complete with Indoor unit(IDU), Out door unit (ODU), surface / concealed copper Refrigerant piping with insulation (closed cell elastomeric nitrile rubber tubular pipe section) upto 3 Mtr (IDU to ODU), copper power cable upto 3.5 Mtr (IDU to ODU), R-32/R-410 Green Refrigerant, wireless Remote control, suitable for working between 230V +/- 10% with low & high voltage cutoff and 50 hz , single phase AC supply capable of performing cooling, dehumidification, air circulation of following capacity with Scroll / rotary compressor. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
71.24.1	1.0 TR ISEER not less then 3.8	Each	41,098.00
71.24.2	1.0 TR ISEER not less then 4.6	Each	51,481.00
71.24.3	1.5 TR ISEER not less then 3.8	Each	50,097.00
71.24.4	1.5 TR ISEER not less then 4.6	Each	59,787.00
71.24.5	1.8 TR ISEER not less then 3.8	Each	63,940.00
71.24.6	1.8 TR ISEER not less then 4.6	Each	68,093.00
71.24.7	2.0 TR ISEER not less then 3.8	Each	65,324.00
71.24.8	2.0 TR ISEER not less then 4.6	Each	69,478.00
71.25	Supply, Installation, Testing and Comissioning of Air Cooled Floor standing Tower type split Air conditioners complete with Indoor unit(IDU), Out door unit (ODU), surface / concealed copper Refrigerant piping with insulation (closed cell elastomeric nitrile rubber tubular pipe section) upto 3 Mtr (IDU to ODU), copper power cable upto 3.5 Mtr (IDU to ODU), R-32/R-410 Green Refrigerant, wireless Remote control, suitable for working between 415 V +/- 10% ,3 phase 50 Hz AC Supply with low & high voltage cutoff and capable of performing cooling, dehumidification, air circulation of following capacity with Scroll / rotary compressor. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
71.25.1	3.0/3.3 TR	Each	1,36,310.00
71.25.2	3.6 TR	Each	1,50,152.00
71.25.3	4.0 TR	Each	1,57,074.00

Code No	Description	Unit	Rate Rs.
71.25.4	4.6 TR	Each	1,63,996.00
71.26	SITC of air cooled ducted split type air conditioning machine with each having a capacity and details as mentioned below suitable for operation on factory charged R-32/R-410A Green refrigerant comprising of Scroll /rotary type compressor hermetically sealed complete with automatic capacity, safety switches, lubrication system, Suitable capacity squirrel cage induction motor with class 'B' insulation suitable for operation on single / three phase supply, 50 Hz, A.C. supply for Blower motor, Necessary drive arrangement for blower motor, Matching Air cooled condenser with necessary fittings for refrigerant piping connections, necessary structural support for mounting condensers, Microprocessor based control panel complete with accessories, machine isolation / disconnect switch, valves and accessories to inter connect compressor and condenser including pressure testing, vacuum. Necessary starters suitable for Indoor & outdoor unit complete with O/L , U/V, phase reversal protection, single phase preventors etc complete as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
71.26.1	3.0 TR	Each	80,936.00
71.26.2	4 TR	Each	1,04,456.00
71.26.3	5.5 TR	Each	1,66,052.00
71.26.4	8.5 TR	Each	2,32,459.00
71.26.5	11 TR	Each	2,96,810.00
71.26.6	16.5 TR	Each	4,56,625.00
71.27	Supply , Installation, Testing and Commissioning of Air Cooled Cassette type Air conditioners complete with Indoor unit(IDU), Outdoor unit (ODU), R-32/R410A Green Refrigerant, wireless Remote, inbuilt drain pump, suitable for 400/230V, +/- 10% 50 Hz ,1 /3 phase AC supply, capable of performing cooling, dehumidification, Air circulation, filtration & ventilation of following capacity with Scroll /rotary/twin rotary compressor. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
71.27.1	Inverter Type		
71.27.1.1	1.5 TR with ISEER not less than 3.5 (compact 2x2)	Each	94,793.00
71.27.1.2	1.8 ISEER not less than 3.5 (compact 2x2)	Each	1,10,020.00
71.27.1.3	1.5 TR ISEER not less than 3.5	Each	93,408.00
71.27.1.4	1.8 TR ISEER not less than 3.5	Each	1,07,252.00
71.27.1.5	2.0 TR ISEER not less than 3.5	Each	1,09,329.00
71.27.1.6	3.0 TR	Each	1,14,174.00
71.27.1.7	3.8 / 4.0 TR	Each	1,28,016.00

Code No	Description	Unit	Rate Rs.
71.27.2	Non Inverter		
71.27.2.1	1.5 TR with ISEER not less than 3.0 (compact 2x2)	Each	86,486.00
71.27.2.2	1.8 ISEER not less than 3.0 (compact 2x2)	Each	94,793.00
71.27.2.3	1.5 TR ISEER not less than 3.0	Each	93,408.00
71.27.2.4	1.8 TR ISEER not less than 3.0	Each	1,03,099.00
71.27.2.5	2.0 TR ISEER not less than 3.0	Each	1,05,867.00
71.27.2.6	3.0 TR	Each	1,11,405.00
71.27.2.7	3.8 / 4.0 TR	Each	1,23,864.00
71.28	Supply, Installation, Testing & Commissioning of modular type Variable Refrigerant Flow/Variable Refrigerant Volume air cooled Outdoor units suitable for cooling and heating, having 100% hermetically sealed inverter type Scroll Compressor(s) with and minimum two compressors along with two Condensing fan, above 14/18 HP modules, microprocessor based Controller, Side / top discharge type condensing unit(s), with R-410 A Refrigerant, vibration isolators, with suitable foundation etc. complete as required. The unit shall deliver the rated capacity at AHRI Conditions and work even at 50°C ambient temperature without tripping. The unit shall be suitable to work on 400V +/- 10%, 3 Phase, 50Hz AC power supply. The unit shall be filled with first charge of the refrigerant and ready for use as required. The EER at 100% load with AHRI conditions shall not be less than 3.5 and Including OEM supplied Piping connection Kit etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	per HP	24,877.00
71.29	Supply, installation, testing and commissioning of following minimum capacity 4-way flow VRV/VRF Cassette Type Indoor ceiling mounted unit equipped with synthetic washable media pre-filter, fan section with low noise fan/dynamically balanced blower, multispeed motor, coil section with DX Copper coil, electronic expansion valve, outer cabinet, drain pump, grill, necessary supports, vibration isolation, Corded remote control etc., suitable for operation on single phase 230 V ± 10%, 50Hz AC supply, complete, as required. The unit shall have automatic force shut down valve in case of fire on receiving signal from BMS System. The cooling capacity of indoor unit will be at air inlet conditions of 27 Degree C DB and 19 Degree C WB temperature. (Make will be same as of Outdoor). All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
71.29.1	0.8 TR	Each	52,515.00
71.29.2	1 TR	Each	54,038.00
71.29.3	1.2 TR	Each	57,083.00

Code No	Description	Unit	Rate Rs.
71.29.4	1.6 TR	Each	58,205.00
71.29.5	2 TR	Each	59,686.00
71.29.6	2.4 TR	Each	66,567.00
71.29.7	3.2 TR	Each	67,826.00
71.29.8	4 TR	Each	71,010.00
71.29.9	4.6 TR	Each	73,378.00
71.30	Supply, installation, testing and commissioning of following minimum capacity 4-way flow compact VRV/VRF Cassette (2' x 2') Type Indoor ceiling mounted unit equipped with synthetic washable media pre-filter, fan section with low noise fan/dynamically balanced blower, multispeed motor, coil section with DX Copper coil, electronic expansion valve, outer cabinet, drain pump, grill, necessary supports, vibration isolation, Corded remote control etc., suitable for operation on single phase 230 V $\pm$ 10%, 50Hz AC supply, complete, as required. The unit shall have automatic force shut down valve in case of fire on receiving signal from BMS System. The cooling capacity of indoor unit will be at air inlet conditions of 27 Degree C DB and 19 Degree C WB temperature. (Make will be same as of Outdoor) All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
71.30.1	0.6 TR	Each	59,326.00
71.30.2	0.8 TR	Each	62,953.00
71.30.3	1 TR	Each	63,645.00
71.30.4	1.2 TR	Each	68,214.00
71.30.5	1.6 TR	Each	69,182.00
71.31	Add Extra for OEM make Wireless remote in place of Wired remote including receiver as required.	Each	5,531.00
71.32	Supply, installation, testing and commissioning of following minimum capacity VRV/VRF High wall type Indoor unit equipped with and comfort washable synthetic media pre-filter, fan section with low noise fan/dynamically balanced blower, multispeed motor, coil section with DX copper coil, electronic expansion valve, outer cabinet, cord less remote control, drain pan, necessary accessories etc., suitable for operation on 230 V $\pm$ 10%, 50 Hz, single phase AC supply, complete as required. The unit shall have automatic force shut down valve in case of fire on receiving signal from BMS System. The cooling capacity of indoor unit will be at air inlet conditions of 27 Degree C DB and 19 Degree C WB temperature. (Make will be same as of Outdoor) All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		

Code No	Description	Unit	Rate Rs.
71.32.1	0.6 TR	Each	35,340.00
71.32.2	0.8 TR	Each	35,768.00
71.32.3	1.0 TR	Each	36,461.00
71.32.4	1.2 TR	Each	37,707.00
71.32.5	1.65 TR	Each	38,814.00
71.32.6	2 TR	Each	39,922.00
71.33	Supply, installation, testing and commissioning of following minimum capacity and external static pressure VRF/VRV ceiling mounted ductable type Indoor unit equipped with washable synthetic media pre-filter, fan section with low noise fan/dynamically balanced blower, multispeed motor, coil section with DX copper coil, electronic expansion valve, corded remote control, outer cabinet, vibration isolators, drain pan, drain pump, other necessary supports etc., suitable for operation on single phase AC supply 230 V $\pm$ 10%, 50 Hz complete as required. The unit shall have automatic force shut down valve in case of fire on receiveing signal from BMS System. The cooling capacity of indoor unit will be at air inlet conditions of 27 Degree C DB and 19 Degree C WB temperature. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
71.33.1	Low static ductable units (19 to 30 pascal external static pressure)		
71.33.1.1	0.8 TR	Each	47,573.00
71.33.1.2	1 TR	Each	48,071.00
71.33.1.3	1.2 TR	Each	49,387.00
71.33.1.4	1.6 TR	Each	51,048.00
71.33.1.5	2 TR	Each	54,232.00
71.33.1.6	2.4 TR	Each	59,907.00
71.33.2	Mid Static Ductable units (35 to 77 pascal external static pressure)		
71.33.2.1	3.2 TR	Each	69,584.00
71.33.2.2	4 TR	Each	78,430.00
71.33.2.3	4.6 TR	Each	90,889.00
71.33.3	High Static Ductable units (78 pascal or above external static pressure)		
71.33.3.1	5.5 TR		1,31,997.00
71.33.3.2	6.6 TR	Each	1,41,812.00
71.33.3.3	8.0 TR	Each	1,52,188.00

Code No	Description	Unit	Rate Rs.
71.33.3.4	13.0 TR	Each	2,10,988.00
71.33.3.5	16.0 TR	Each	2,45,555.00
71.34	Supply, installation, testing & commissioning of Group controller for monitoring the status and working condition of all indoor and outdoor units, The controller shall act as an advanced air conditioning management system to given complete control of VRV/VRF air conditioning equipment with Starting/stopping of air-conditioning as a zone or group of individual units. Temperature setting for each Indoor units of zone, Switching between temperature control modes, switching of the fan speed and direction of airflow, enabling/disabling of individual remote controller operation, Alarm code display in case of any problem. It shall be able to control up to 64 (max. 512 if required) number of Indoor units. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	44,272.00
71.34.1	Add Extra for extenders/adaptors compatible with central controller to enable the controller to work with 128 IDU's	Each	17,955.00
71.34.2	Add Extra for extenders/adaptors compatible with central controller to enable the controller to work with 256 IDU's	Each	33,169.00
71.34.3	Add Extra for extenders/adaptors compatible with central controller to enable the controller to work with 512 IDU's	Each	81,552.00
71.35	Supply, installation, Testing & commissioning of VRV/VRF compatible OEM make AHU KIT' including expansion valve and controller for connecting AHU with VRF.	Each	60,842.00
71.36	Supplying and installation of high-pressure grade required size OEM make copper connection Y or T Joints / refnet for liquid and suction line complete erected on wall/ceiling with supports/raceways, Nitrile rubber insulation, painting etc. with brazing and testing for leakages confirming the normal operation of the VRV / VRF air conditioning system. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	7,053.00
71.37	Gas charging of VRF/VRV system with R410A refrigerant gas. Before gas charging system shall be flushed with high purity Nitrogen Gas to remove carbon content, dirt particles to make sure that there is no chance of mixing any impurity with Refrigerant Gas. Thereafter System shall be tested with Nitrogen Gas at 1.5 Times of working pressure of R410 Refrigerant Gas to ensure leakproof system. Whole system shall be Vacuumed up to 500-micron level which ensures the zero-moisture content level in piping to ensure better cooling efficiency and long life of the system. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Kg	1,867.00
71.38	Supplying and drawing flexible / stranded bare copper conductor, PVC / XLPE insulated, overall aluminium mylar tape shielded ATC		

Code No	Description	Unit	Rate Rs.
	drain wire and outer PVC sheathed industrial Instrumentation (shielded)cables voltage grade 300/500 V as per BS /EN 50288-7 in existing surface or recessed PVC/ MS conduit/casing capping / Cable tray / Open Duct making connections, testing etc. as required. OEM Must have its own in house NABL lab setup for all testing facilities for cables. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
71.38.1	Un Armoured		
71.38.1.1	2 core x 1.0 Sq.mm	Mtr.	77.00
71.38.1.2	2 core x 1.5 Sq.mm	Mtr.	96.00
71.38.1.3	2 core x 2.5 Sq.mm	Mtr.	138.00
71.38.1.4	4 core x 2.5 Sq.mm	Mtr.	238.00
71.38.2	Armoured		
71.38.2.1	2 core x 1.0 Sq.mm	Mtr.	138.00
71.38.2.2	2 core x 1.5 Sq.mm	Mtr.	162.00
71.38.2.3	2 core x 2.5 Sq.mm	Mtr.	209.00
71.38.2.4	4 core x 2.5 Sq.mm	Mtr.	337.00
71.39	Supply, installation, testing and comissioning of interconnecting copper refrigerant piping of DHE Grade C12200- ASTM B68, B75, chemical composition of copper %- 99.0 Min and Phosphorus %- 0.015 to 0.040 . For Annealed copper tube :- Tensile strength = 210 Mpa wih elongation % = 40 Min . Ink Mark Brand Printing on Hard Tubes should be present. duly insulated with tubular elastomeric nitrile rubber FM/UL approved with high water vapor diffusion resistance and low thermal conductivity should be certified 'Class O' in Fire Propagation as per BS 476 Part 6 including chase cutting andfilling with mortar, Slotted channel supports mounted on 10 mm threaded rod at suitable spacing the exposed piping shall be wrapped with glass woven cloth and lag coating for vapour barrier and weather protection. Joints shall be covered with nitrile rubber tape of 3 mm thick complete as required of following sizes. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
71.39.1	41.1 mm O.D., wall thinkness ≥ 1.4 mm (insulation – 19 mm thick)	Mtr.	4,424.00
71.39.2	38 mm O.D., wall thinkness ≥ 1.4 mm (insulation – 19 mm thick)	Mtr.	4,119.00
71.39.3	34.9 mm O.D., wall thinkness ≥ 1.4 mm (insulation – 19 mm thick)	Mtr.	3,484.00
71.39.4	28.6 mm O.D., wall thinkness ≥ 1.2 mm (insulation – 19 mm thick)	Mtr.	2,627.00
71.39.5	25 mm O.D., wall thinkness ≥ 1.2 mm (insulation – 19 mm thick)	Mtr.	2,177.00
71.39.6	22.2 mm O.D., wall thinkness ≥ 1.0 mm (insulation – 19 mm thick)	Mtr.	1,867.00
71.39.7	19.1 mm O.D., wall thinkness ≥ 1.0 mm (insulation – 13 mm thick)	Mtr.	1,327.00

Code No	Description	Unit	Rate Rs.
71.39.8	15.9 mm O.D., wall thickness ≥ 0.8 mm (insulation – 13 mm thick)	Mtr.	1,093.00
71.39.9	12.7 mm O.D., wall thickness ≥ 0.8 mm (insulation – 13 mm thick)	Mtr.	746.00
71.39.10	9.5 mm O.D., wall thickness ≥ 0.8 mm (insulation – 13 mm thick)	Mtr.	567.00
71.39.11	6.4 mm O.D., wall thickness ≥ 0.8 mm (insulation – 13 mm thick)	Mtr.	393.00
71.40	Providing & Fixing of IS : 4985 - 2000 Class -4 (10 Kgf / Sqcm) UPVC drain water piping with fittings (IS:7834 & 10Kgf/sqcm) like elbow, socket, Tee, solvent cement jointing, support with MS hanger on ceiling or recessed in wall with chasing & plastering with 6 mm thick closed cell elastomeric nitrile rubber insulation including leakage testing etc. as required of following Nominal sizes. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
71.40.1	20 mm	Mtr.	194.00
71.40.2	25 mm	Mtr.	235.00
71.40.3	32 mm	Mtr.	303.00
71.40.4	40 mm	Mtr.	359.00
71.40.5	50 mm	Mtr.	442.00
71.40.6	63 mm	Mtr.	539.00
71.41	Supply, Fixing and testing of following capacity ISO certified company made wall mounted stabilizer having output voltage variation from 200 V to 250 V(+/-5%) with input voltage variation from 170 V to 260 V, time delay facility from 2 to 4 minute and high cutoff at 270 V with providing of 16 Amp /20 Amp Industrial plug top making connection etc complete in all respect. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
71.41.1	3 kVA	Each	3,044.00
71.41.2	4 kVA	Each	3,459.00
71.41.3	5 kVA	Each	4,290.00
71.42	Making hole in stone masonry/ RCC wall/ RCC slab with core cutter for accomodating refrigerant pipe/ drain pipe/ MS pipe/ cables etc of following dia		
71.42.1	50 mm dia per running inch length	per inch	82.00
71.42.2	100 mm dia per running inch length	per inch	164.00
71.42.3	150 mm dia per running inch length	per inch	247.00
71.42.4	200 mm dia per running inch length	per inch	342.00
71.43	Providing and making wall openings in existing stone / Brick masonry partition wall complete with all requited T & P , Scaffolding and providing lintel of required size and strength, repairing ,plastering and cleaning the site debris as required.	Cu. Ft.	756.00

Code No	Description	Unit	Rate Rs.
71.44	Supply & fixing MS powder coated stand suitable for 1.0/1.5/ 2.0 Tr outdoor type of Split AC. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	595.00
71.45	Supply & fixing MS powder coated stand suitable for 2.5/3.0/4.0 Tr outdoor type of Split/Ductable/Tower AC. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	1,383.00
71.46	P & F of trap door for AHU / FCU's in existing false ceiling duly made from 12 mm thick laminated board, hinged with wooden frame of cheed wood size 50mm x 80mm, Frame suspended with MS strip 25 x 3 mm with ancor fastner min 8 supports from ceiling, Hinges, Locking arrangement etc as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Sq Mtr	5,181.00
71.47	SITC of Condensate water Drain pump suitable to Install with Existing Split type AC Indoor unit , single phase, 230V, including all acessories of pump like discharge tube, filter, reservoir etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	6,915.00
71.48	SITC of VRF OEM manufactured treated fresh air unit (TFA) equipped with pre-filter, fan section with low noise fan, multispeed motor, coil section with DX coil, outer cabinet, insulated drain pan, pipe connections etc. of following Nominal capacities with Tolerance +/- 5%. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
71.48.1	4.12 TR/635 CFM	Each	71,930.00
71.48.2	6.6 TR/988 CFM	Each	1,10,651.00
71.48.3	8.25 TR/1230 CFM	Each	1,30,004.00
71.48.4	10 TR/1750 CFM	Each	1,96,412.00
71.48.5	13.2 TR/2050 CFM	Each	2,69,740.00
71.48.6	16.5 TR/2150 CFM	Each	3,38,889.00
71.49	Supply, Installation, Testing and Comissioning of IS:1475 marked self contained drinking water cooler with hermetically sealed compressor,non CFC refrigerent suitable for operation on 230V/1pH/50Hz AC supply,Full stainless steel (SS304) body (0.8 mm thick) and tank (0.5 mm thick) , stainless steel water tray,minimum two nos Brass Chrome plated faucets and suitable drainage system complete in all respect with required height MS fabricated and Painted Angle iron frame (Cost of frame to be paid Extra) complete in all respect of the following capacity. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work, refer Annexure "A" attached with this BSR .		

Code No	Description	Unit	Rate Rs.
71.49.1	cooling capacity 150 Ltr./Hr. and storage capacity 150 Ltrs	Each	77,775.00
71.49.2	cooling capacity 60 Ltr./Hr. and storage capacity 120 Ltrs	Each	66,039.00
71.49.3	cooling capacity 40 Ltr./Hr. and storage capacity 80 Ltrs	Each	59,305.00
71.50	Supply and Installation of Box type EU13 Hepa Filter of 99.997% efficiency down to 0.3 micron particle size installed in zero leakage Aluminium frame as per ISO 14644-1 clean room including sealing and packing material cost like silicon and hardware cost and Labour cost for the dismantling of existing worn out filters & shifting the same to the store as required as under. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
71.50.1	305 mm Thick	Sq Mtr	41,265.00
71.50.2	150 mm thick	Sq Mtr	29,805.00
71.51	Supply and Installation of Box type EU13 Hepa Filter of 99.997% efficiency down to 0.3 micron particle size installed in zero leakage Aluminium frame as per ISO 14644-1 clean room including sealing and packing material cost like silicon and hardware cost and Labour cost. NABL accredited / appropriated lab testing reports with OEM certificate must submitted to engineer in-charge. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
71.51.1	305 mm Thick	Sq Mtr	38,804.00
71.51.2	150 mm thick	Sq Mtr	27,368.00
71.52	Providing & Fixing of ISO certified company made submersible pump of rating 18 W to 24 Watts ,minimum water discharge capacity 2800 LPH and suitable for central/large size desert cooler complete with making connections, testing etc as required. NABL accredited / appropriated lab testing reports with OEM certificate must submitted to engineer in-charge. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	each	1,167.00
71.53	Dismantling of split air conditioner of any capacity/any type including existing indoor unit & outdoor unit , refrigerant piping , connecting cables , drain pipe etc. including shifting of dismantled material to store complete as required	Job	959.00
71.54	Providing & Fixing of 26 SWG thick Aluminium sheet cladding on existing refrigerant copper pipe /insulated chiller pipe or any other surface with nut & bolts complete as required. All as per pre approved by Engineer in-charge. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Sq Mtr	632.00
71.55	Providing & Fixing of BIS certified Oil filled radiator having following fins with temperature control setting sound free operation with		

Code No	Description	Unit	Rate Rs.
	minimum 1 year warranty & temperature setting, Rated Voltage:-230 V, Rated Wattage:-2400 W made out from CRCA sheet with powder coating, tubular type element castor wheel, 1.5 mtr PVC power cord along with 16 Amp plug top. net weight should not be less then 12 Kg and minimum dimensions are 520 X 165 X 710mm complete in all respect. NABL accredate / appropriated lab testing reports with OEM certificate must submitted to engineer in-charge. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
71.55.1	9 Fins	Each	16,194.00
71.55.2	11 Fins	Each	18,824.00
71.55.3	13 Fins	Each	20,624.00
71.56	Supply & fixing of evaporative cooling Celdec pads of 200mm Thick made out from impregnated cellulose paper media of imported origin including fixing in Air washer complete in all respect. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Sq.ft	761.00
71.57	SITC of Interconnecting refrigerant copper pipe for split/Ductable/ Casseette AC of DHE Grade C12200- ASTM B68, B75, chemical composition of copper %- 99.0 Min and Phosphorus %- 0.015 to 0.040 . For Annealed copper tube :- Tensile strength = 210 Mpa wih elongation % = 40 Min . Ink Mark Brand Printing on Hard Tubes should be present. Piping between each set of indoor & outdoor units of different sizes as per OEM requirement & specifications including class 'O' Nitrile rubber sleeves, chase cutting, supports, making good the same with sand cement plaster etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Kg	2,037.00

72.0 SUBSTATION EQUIPMENTS

Code No	Description	Unit	Rate Rs.
72.1	Supply, installation, testing & Commissioning of Copper wound distribution Transformer of following rating and % Impedance, 11/0.433KV Delta-Star Connected, Vector Group Dyn 11, ONAN Cooled losses as per IS 1180 part I 2014 (Fourth Revision) Level-1, with boltless core design including standard accessories like conservator with prismatic oil level gauge, silica gel breather, Bucholz relay, pressed steel radiator fins, Radiator Valve(above 800 Kva) Suitable size HT cable box, LT cable box with Busbar connection for outgoing cables, Off -LTC (+/- 2.5%, +/- 5% to - 7.5%), temperature rise of 40 degree C in oil / 45 degree C in winding, drain valve, Air release device, Dial type Oil & Winding Temperature gauge with alarm & trip contacts, first filling of transformer oil as per IS :335-1953, Epoxy primer and PU based paint as Top coat, Unidirectional rollers for rating upto 800 kva & bi-directional above 800 Kva rollers with locking arrangement etc. as required. The Transformer shall be subjected to routine factory tests (as per IS:2026 and IS:1180) including Temperature rise test in OEM's own lab shall be witnessed by Department engineer Physically. Transformer shall be tested from CTL of discom before charging of transformer & complete installation must be certified from Electrical Inspectorate office as per Indian Electricity rule, (CTL testing charges and Electrical Inspection charges shall be reimbursed by the department to the contractor) Following tests shall be carried out on each transformer at site by OEM engineer in presence of department authorised representative:- a) Ratio test on each tapping. b) Resistance of windings at principal and all tapings. c) Insulation resistance of the winding between HV to earth / HV to LV / LV to earth. d) Vector group test. e) Magnetic Balance test. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work, refer Annexure "A" attached with this BSR.		
72.1.1	500 KVA with % Impedance 4.5	Each	17,07,220.00
72.1.2	630 KVA with % Impedance 4.5	Each	19,66,939.00
72.1.3	800 KVA with % Impedance 4.5	Each	22,23,501.00
72.1.4	1000 KVA with % Impedance 5.0	Each	26,47,833.00
72.1.5	1250 KVA with % Impedance 5.0	Each	29,82,987.00
72.1.6	1600 KVA with % Impedance 6.25	Each	32,40,357.00
72.1.7	2000 KVA with % Impedance 6.25	Each	37,09,489.00
72.1.8	2500 KVA with % Impedance 6.25	Each	42,19,346.00
72.2	SITC of star rated Aluminium wound distribution Transformer of following rating 11/0.433KV Delta-Star Connected, Vector Group		

Code No	Description	Unit	Rate Rs.
	Dyn 11,ONAN Cooled & as per BEE star - 1 & BIS approved as per IS 2026- 1977 & losses as defined as per 2014 (Fourth Revision) Level-1 . including standard accessories like conservator, silica gel breather, radiator, fins, HT cable box & LT cable boxes, temperature rise in winding/oil 35-40 degree C upto 200 KVA & 40-45 degree C for above 200 KVA, ISI marked drain valve, Dial type Temperature gauge, first filling of transformer oil as per IS :335-1953, Epoxy based paint, including carrying of pre-commission Testing & Charging of Transformer complete in all respect . The Transformer shall be subjected to routine factory tests (as per IS:2026 and IS:1180) including testing from CTL of discom before charging of transformer & complete installaion must be certified from Electrical Inspectorate office as per Indian Electricity rule, (CTL testing charges and Electrical Inspection charges shall be reimbursed by the department to the contractor). All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
72.2.1	63 KVA	Each	2,02,675.00
72.2.2	100 KVA	Each	2,61,516.00
72.2.3	160KVA	Each	3,26,895.00
72.2.4	200 KVA	Each	4,11,888.00
72.2.5	250 KVA with Off -LTC (+5% to - 10% @ 2.5%)	Each	4,38,040.00
72.2.6	315 KVA with Off -LTC (+5% to - 10% @ 2.5%)	Each	6,35,040.00
72.2.7	400 KVA with Off -LTC (+5% to - 10% @ 2.5%)	Each	7,63,331.00
72.2.8	500 KVA with Off -LTC (+5% to - 10% @ 2.5%)	Each	8,94,472.00
72.3	SITC of Marshalling box fabricated out of 2.0 mm thick sheet steel, provided with water tight hinged doors with padlock arrangement, neoprene gasket all around door to make enclosure water and dust proof (IP-55). Space Heater, Illumination lamp, 5A switch & Socket, MCB, Viewing window, detachable gland plate completely wired, ready for external connections at the terminal blocks. All wirings shall be carried out with 1100 V grade PVC insulated stranded conductors. Power circuits if any shall be wired with stranded copper conductors of adequate sizes to suit the rated current. The minimum size shall be 2.5 sq.mm. Control, alarm and indication circuits, shall be wired with stranded copper conductor of sizes not smaller than 1.5 sq. mm. CT circuits shall be wired with stranded copper conductor of size not smaller than 4 sq.mm. including 150 mm dia. Winding temperature indicator with A&T contacts, 150 mm dia. Oil temperature indicator with A&T contacts , 150 mm dia. Magnetic Oil level Gauge (MOG) with alarm contact, double float type Buchholz relay with isolating valves on both sides and as per IS: 3637 with A&T Contacts etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	1,09,837.00

Code No	Description	Unit	Rate Rs.
72.4	Supply & Installation of D.P. Structure With AIR BREAK SWITCH having following specifications A, B, C, D, E. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR . A) Double pole structure on 2 no ISMB (I beam) of size 150 x 75 mm, 10 mtr length using 7 no MS channel each of size 100 mm x 50 mm x 2500 mm complete in all respect with nuts, springs washers, clamps as required. B) Off load type gang operated 3-pole vertical flute type switch suitable for 11KV ; 400A ,3-Ø, central post rotating double break isolator complete with MS hardware , copper moving & fixed contact ,assembly of 9 nos pin insulator ,GI pipe of suitable length for operation. C) 3nos Vertical / Horizontal mounted 11kv horn gap fuse set /drop out 11kv barrel fuses mounted on 6no pin insulators D) 3 piece non linear resistor type. lighting arrestor of approved make suitable for 3 wire, 11kv Overhead line with rated voltage of 9kv rms & nominal discharge current rating of 5 ka & complete with galvanized clamping arrangement GI bolts, nuts, washer etc as required. E) 3 no 11kv ACSR conductors mounted on pin type insularors as required. 6.GENERAL:The go shall be operated by hand operated liver properly earthed with provision for locking mounted at 3'	Set	1,04,718.00
72.5	SITC of 11kV 630 Amps 21KA for 3 Sec. SF6 insulated, outdoor duty (IP54) , Extensible / Non extensible type Ring main unit (RMU) manually operated in combination of VCB modules and Load Break switch consisting of Copper busbar in SF6 insulated 304 (Non-Ferrite Non-Magnetic Grade) stainless steel enclosure of thickness 2.5mm with manometer. The HV switchgear and control gear should be confirming to IEC-62271-100, IEC-62271-200-2003 & IEC-60694-1996. The RMU should be internal arc tested for 21KA for 1Second with IAC-AFL classification for gas tank. Vacum Interrupter of VCB should be RMU Manufacturer's own make. Each feeder of RMU should have voltage presence indicator. . and comping of followings:- 1 no. microprocessor based Self powered numerical relay with over Current/ earth fault & short circuit protection with each VCB feeder. - 3 Nos. Protection CT shall be of Burden 2.5VA, ratio 50/1A, Class of Accuracy class 5P10 for O/C and E/F protection for each VCB.- 1 No. Manometer for each tank,- 1 nos. Fault Passage indicator,-Right angle boots for all the feeder Modules All the type test certificates as per IEC from Third party NABL / CPRI / ERDA accredited lab to be submitted. (Cost of RCC Foundation / Steel Structure to be paid Extra) All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR		
72.5.1	Non Extensible 3 way RMU with 1 no. VCB & 2 No. Load Break Switch	Each	4,49,019.00

Code No	Description	Unit	Rate Rs.
72.5.2	Extensible 3 way RMU with 1 no. VCB & 2 No. Load Break Switch	Each	4,77,527.00
72.5.3	Extensible 2 way RMU with 1 no. VCB & 1 No. Load Break Switch	Each	3,92,000.00
72.5.4	Non Extensible 1 way RMU with 1 no. VCB & Direct Cable Entry	Each	3,49,236.00
72.6	SITC of Indoor Type Floor mounted metal clad 11 KV, 630 Amps 3 phase, 50 Hz Vacuum Circuit Breaker (VCB) Panel Fabricated in VCB Manufacturer's own Factory as per IEC 62271-1,100,200 Standard made from Powder painted pre-fabricated, CRCA sheet steel /High quality Aluminium-Zinc (Aluzinc) coated sheet steel. Fabrication shall be done through CNC turret press and CNC bending machine having a rupturing capacity of 500 MVA, 26.3 KA breaking capacity for 3 sec, Internal arc type tested for 26.3KA for 1 sec with AFLR clasification totally enclosed with Aluminium bus bar of 630 Amps for each phase, flush front, Horizontal isolation, Horizontal drawout type with Electrical and Mechanical interlock and automatic safety shutter gear including padlocking arrangement, isolation plugs, assambly of 3 vaccum interrupters (VCB manufacturer's own make) , with each pole individually encapsulated by epoxy insulations to make it dust proof and self - aligning finger type isolating contacts, truck having integral racking with necessary interlocks (for insertion and removing of VCB), manual and automatic motor charged independent closing/ tripping spring , trip free operating mechanism with closing and tripping push buttons and mechanical breaker. interconnected with HT sleeve bus bar of 630 Amps , Basic Insulation level (BIL) : 28KV (RMS) / 75KV (Peak) and Altiude less than 1000 meters, including all protection, indication, Operation, monitoring and control and accessories etc. as required. .Factory Tests of VCB panel as per OEM's QAP in it's own Manufacturing facility shall be witnessed by department Engineer virtually / Physically. (Cost of RCC Foundation / Steel Structure to be paid Extra) All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
72.6.1	Incoming Cum Outgoing Panel comprising of Side cable box & Transformer Auxiliary protection and comprising of following. - VCB 630 Amps . VI of VCB should be sealed for 30000 operation. VCB operationg mechanism should be of M2 duty for minimum 10000 mechanical operation. - Closing & tripping coil of VCB should be of continious rating to achive minimal failure. - Resin Cast type CT having Ratio : 400-200A/ 1-1 A, Core1: 5P20, 5 VA; Core 2: 0.5, 5 VA (How ever CT Ratio shall be decided as per load requirement) - VT Ratio: 11KV/1.732/110V/1.732/110V/1.732, -Core 1: 0.5, 20VA should be floor mounted and to be connected from the back side of the panel. - Numerical relay (should be VCB manufacturer's own make) having protections of 50,51, 50N,51N,TCS. The relay shall have	Each	8,90,910.00

Code No	Description	Unit	Rate Rs.
	programable 4 digital Input , programable 6 Digital Output and programable 4 nos. LED at HMI. - Ammeter with Selectorswitch and Volt meter with Selector switch - Multifunction Meter of Acc Class 0.5, having facility to monitor KW, KVA, KVAR, PF, KWH, KVARH, KVAH, A,V etc. - Trip circuit supervision relay (feature of numerical relay) - LR, TNC switch, indication lamp - CB ON/OFF, spring charge, Auto trip, TCS healthy etc., Space heaters - Power Pack (230V AC- 110V DC) and 8/12 window Annunciator.		
72.6.2	Incoming Panel comprising of following: - VCB 630 Amps . VI of VCB should be sealed for 30000 operation. VCB operationg mechanism should be of M2 duty for minimum 10000 mechanical operation. - Closing & tripping coil of VCB should be of continious rating to achive minimal failure. - Resin Cast type CT having Ratio : 400-200A/ 1-1 A, Core1: 5P20, 5 VA; Core 2: 0.5, 5 VA (How ever CT Ratio shall be decided as per load requirement) - VT Ratio: 11KV/1.732/110V/1.732/110V/1.732, -Core 1: 0.5, 20VA should be floor mounted and to be connected from the back side of the panel. - Numerical relay (should be VCB manufacturer's own make) having protections of 50,51, 50N,51N,TCS. The relay shall have programable 4 digital Input , programable 6 Digital Output and programable 4 nos. LED at HMI. - Ammeter with Selectorswitch and Volt meter with Selector switch - Multifunction Meter of Acc Class 0.5, having facility to monitor KW, KVA, KVAR, PF, KWH, KVARH, KVAH, A,V etc. - Trip circuit supervision relay (feature of numerical relay) - LR, TNC switch, indication lamp - CB ON/OFF, spring charge, Auto trip, TCS healthy etc., Space heaters - Power Pack (230V AC- 110V DC) and 8/12 window Annunciator.	Each	8,69,527.00
72.6.3	Outgoing Panel comprising of following: - VCB 630 Amps . VI of VCB should be sealed for 30000 operation. VCB operationg mechanism should be of M2 duty for minimum 10000 mechanical operation. - Closing & tripping coil of VCB should be of continious rating to achive minimal failure. - Resin Cast type CT having Ratio : 400-200A/ 1-1 A, Core1: 5P20, 5 VA; Core 2: 0.5, 5 VA (How ever CT Ratio shall be decided as per load requirement) - Numerical relay (should be VCB manufacturer's own make) having protections of 50,51, 50N,51N,TCS. The relay shall have programable 4 digital Input , programable 6 Digital Output and programable 4 nos. LED at HMI. - Ammeter with Selectorswitch and Volt meter with Selector switch - Multifunction Meter of Acc Class 0.5, having facility to monitor KW, KVA, KVAR, PF, KWH, KVARH, KVAH, A,V etc. - Trip circuit supervision relay (feature of numerical relay) - LR, TNC switch, indication lamp - CB ON/OFF, spring charge,	Each	8,33,891.00

Code No	Description	Unit	Rate Rs.
	Auto trip, TCS healthy etc., Space heaters - Power Pack (230V AC- 110V DC)		
72.6.4	Bus Coupler Panel comprising of following: -VCB 630 Amps . VI of VCB should be sealed for 30000 operation. VCB operating mechanism should be of M2 duty for minimum 10000 mechanical operation. - Closing & tripping coil of VCB should be of continuous rating to achieve minimal failure. - LR, TNC switch, indication lamp - CB ON/OFF, spring charge, Space heaters - Power Pack (230V AC- 110V DC)	Each	7,84,000.00
72.7	SITC of Indoor Type Floor mounted metal clad 11 KV, 630 Amps 3 phase, 50 Hz Vacuum Circuit Breaker (VCB) Panel Fabricated by System Integrator of VCB Manufacturer as per IEC 62271-1,100,200 Standard made from Powder painted pre-fabricated, CRCA sheet steel /High quality Aluminium-Zinc (Aluzinc) coated sheet steel. Fabrication shall be done through CNC turret press and CNC bending machine having a rupturing capacity of 500 MVA, 26.3 KA breaking capacity for 3 sec, Internal arc type tested for 26.3KA for 1 sec with AFLR classification totally enclosed with Aluminium bus bar of 630 Amps for each phase, flush front, Horizontal isolation, Horizontal drawout type with Electrical and Mechanical interlock and automatic safety shutter gear including padlocking arrangement, isolation plugs, assembly of 3 vacuum interrupters (VCB manufacturer's own make) , with each pole individually encapsulated by epoxy insulations to make it dust proof and self-aligning finger type isolating contacts, truck having integral racking with necessary interlocks (for insertion and removing of VCB), manual and automatic motor charged independent closing/ tripping spring , trip free operating mechanism with closing and tripping push buttons and mechanical breaker. interconnected with HT sleeve bus bar of 630 Amps , Basic Insulation level (BIL) : 28KV (RMS) / 75KV (Peak) and Altitude less than 1000 meters, including all protection, indication, Operation, monitoring and control and accessories etc. as required. Factory Tests of VCB panel as per System Integrator's QAP in its own Manufacturing facility shall be witnessed by department Engineer virtually / Physically. (Cost of RCC Foundation / Steel Structure to be paid Extra). All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
72.7.1	Incoming Cum Outgoing Panel comprising of Side cable box & Transformer Auxiliary protection and comprising of following. - VCB 630 Amps . VI of VCB should be sealed for 30000 operation. VCB operating mechanism should be of M2 duty for minimum 10000 mechanical operation. - Closing & tripping coil of VCB should be of continuous rating to achieve minimal failure. - Resin Cast type CT having Ratio : 400-200A/ 1-1 A, Core1: 5P20,	Each	6,41,454.00

Code No	Description	Unit	Rate Rs.
	5 VA; Core 2: 0.5, 5 VA (How ever CT Ratio shall be decided as per load requirement) - VT Ratio: 11KV/1.732/110V/1.732/110V/1.732, -Core 1: 0.5, 20VA should be floor mounted and to be connected from the back side of the panel. - Numerical relay (should be VCB manufacturer's own make) having protections of 50,51, 50N,51N,TCS. The relay shall have programable 4 digital Input , programable 6 Digital Output and programable 4 nos. LED at HMI. - Ammeter with Selectorswitch and Volt meter with Selector switch - Multifunction Meter of Acc Class 0.5, having facility to monitor KW, KVA, KVAR, PF, KWH, KVARH, KVAH, A,V etc. - Trip circuit supervision relay (feature of numerical relay) - LR, TNC switch, indication lamp - CB ON/OFF, spring charge, Auto trip, TCS healthy etc., Space heaters - Power Pack (230V AC- 110V DC) and 8/12 window Annunciator.		
72.7.2	Incoming Panel comprising of following: - VCB 630 Amps . VI of VCB should be sealed for 30000 operation. VCB operationg mechanism should be of M2 duty for minimum 10000 mechanical operation. - Closing & tripping coil of VCB should be of continious rating to achive minimal failure. - Resin Cast type CT having Ratio : 400-200A/ 1-1 A, Core1: 5P20, 5 VA; Core 2: 0.5, 5 VA (How ever CT Ratio shall be decided as per load requirement) - VT Ratio: 11KV/1.732/110V/1.732/110V/1.732, -Core 1: 0.5, 20VA should be floor mounted and to be connected from the back side of the panel. - Numerical relay (should be VCB manufacturer's own make) having protections of 50,51, 50N,51N,TCS. The relay shall have programable 4 digital Input , programable 6 Digital Output and programable 4 nos. LED at HMI. - Ammeter with Selectorswitch and Volt meter with Selector switch - Multifunction Meter of Acc Class 0.5, having facility to monitor KW, KVA, KVAR, PF, KWH, KVARH, KVAH, A,V etc. - Trip circuit supervision relay (feature of numerical relay) - LR, TNC switch, indication lamp - CB ON/OFF, spring charge, Auto trip, TCS healthy etc., Space heaters - Power Pack (230V AC- 110V DC) and 8/12 window Annunciator.	Each	6,20,073.00
72.7.3	Outgoing Panel comprising of following: - VCB 630 Amps . VI of VCB should be sealed for 30000 operation. VCB operationg mechanism should be of M2 duty for minimum 10000 mechanical operation. - Closing & tripping coil of VCB should be of continious rating to achive minimal failure. - Resin Cast type CT having Ratio : 400-200A/ 1-1 A, Core1: 5P20, 5 VA; Core 2: 0.5, 5 VA (How ever CT Ratio shall be decided as per load requirement) - Numerical relay (should be VCB manufacturer's own make) having protections of 50,51, 50N,51N,TCS. The relay shall have	Each	5,98,691.00

Code No	Description	Unit	Rate Rs.
	programable 4 digital Input , programable 6 Digital Output and programable 4 nos. LED at HMI. - Ammeter with Selectorswitch and Volt meter with Selector switch - Multifunction Meter of Acc Class 0.5, having facility to monitor KW, KVA, KVAR, PF, KWH, KVARH, KVAH, A,V etc. - Trip circuit supervision relay (feature of numerical relay) - LR, TNC switch, indication lamp - CB ON/OFF, spring charge, Auto trip, TCS healthy etc., Space heaters - Power Pack (230V AC- 110V DC)		
72.7.4	Bus Coupler Panel comprising of following: - VCB 630 Amps . VI of VCB should be sealed for 30000 operation. VCB operationg mechanism should be of M2 duty for minimum 10000 mechanical operation. - Closing & tripping coil of VCB should be of continious rating to achive minimal failure. - LR, TNC switch, indication lamp - CB ON/OFF, spring charge, Space heaters - Power Pack (230V AC- 110V DC)	Each	5,63,055.00
72.8	SITC of 11 kV Outdoor Package Sub-Station Factory Assembled and Factory fitted by RMU & LT Switchgear OEM of Following Transformer & ACB Rating and consisting of A, B, C, D & E (Cost of RCC Foundation / Steel Structure to be paid Extra). All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR . A) HT Compartment: Ring Main Unit 11kV 630 Amps 21KA for 3 Sec. SF6 insulated, non-extensible, Ring main unit consisting of 2 nos. manually operated Load Break Switch and 1 Nos. 630 Amp Vacuum Circuit Breaker (manually operated) with Copper busbar in SF6 insulated stainless steel enclosure of thickness 2.5mm Non ferrite nonmagnetic type 304 grade. Interconnection between HT switchgear and transformer by Suitable Sized Aluminium un-armoured HT XLPE Cable. The HV switchgear and control gear should be confirming to IEC-62271-100, IEC-62271-200-2003 & IEC-60694-1996. The Gas tank of the RMU should be internal arc tested for 20KA for 1Second. VI should be RMU Manufacturer's own make. - 1 no. microprocessor based Self powered numerical relay with over Current/ earth fault & short circuit protection with each VCB feeder. - 3 Nos. Protection CT shall be of Burden 2.5VA, ratio 50/1A, Class of Accuracy class 5P10 for O/C and E/F protection for each VCB feeder - 1 No. Manometer - 1 No. Fault Passage Indicator for each Load Break switch. B) Transformer: 11kV/433V, 3phase,50 HZ, Copper wound Dry Type outdoor type step down transformer having delta connection on primary side and star connection on secondary side complete with all modern fitting as given in the specification , off load tap changer		

Code No	Description	Unit	Rate Rs.
	(-10% +5% in the step of 2.5%) etc. as required as per compete with losses as latest ECBC Standards , Class H with 115 Deg temperature rise allowed - One No. Winding Temperature Indicator with Alarm and trip Contc C) LV Compartment: Incoming cum Outgoing with One number Fixed type 4 pole 415V ACB with molded case construction having breaking capacity 50KA with Ics = Icu = Icw (1 sec) = 50KA with microprocessor release for over current, earth fault & short circuit protections. Interconnection between Transformer & LT switchgear using Aluminum Bus bars of ACB Current rating with heat shrinkable colored sleeves. D) The Outdoor enclosure shall be made of 1.5 mm mm thickness Galvanized Sheet Steel tropicalised to meet Indian weather conditions including all the partition Sheets & doors. The enclosure base shall be of 4.0 mm thickness Hot Dip Galvanized Sheet Steel. The entire Package Substation shall be Factory Assemble & Factory Fitted. The enclosure shall have IP54 degree of protection for HT & LT switchgear compartment IP-23 degree of protection for Transformer compartment. The Enclosure should be type tested for Internal Arc fault test to the tune of at least 21 KA for 1 second adhering to as per latest IEC 62271- 202. The offered enclosure should be type tested for K10 class temparature raise. TTR to be submitted. The enclosure exterior shall be powder coated. The compartment illumination lamp with door operated switch shall be provided for MV & LV compartment. Internal earthing connections by using 50x6mm GI Strips. Vacuum Interrupter, RMU, Transformer, LV switchgear, Outdoor enclosure should be of same make for better life cycle optimization. E) All the Type test certificates of RMU, Transformer & LT Switchgear will be provided by Manufacturer and factory Tests of Package Substation as per OEM's QAP in it's own Manufacturing facility shall be witnessed by department Engineer virtually / Physically		
72.8.1	Transformer Capacity 250 KVA, ACB Rating 630 Amps.	Each	33,49,819.00
72.8.2	Transformer Capacity 500 KVA, ACB Rating 1000 Amps.	Each	41,83,710.00
72.8.3	Transformer Capacity 630 KVA, ACB Rating 1250 Amps.	Each	47,18,255.00
72.8.4	Transformer Capacity 750 KVA, ACB Rating 1600 Amps.	Each	51,67,273.00
72.8.5	Transformer Capacity 1000 KVA, ACB Rating 2000 Amps.	Each	57,73,092.00
72.9	SITC of battery bank of min 150 AH capacity comprising SMF/VRLA batteries, FCBC (Float cum boost charger)suitable for 415V +/-10%, 50 Hz , 1-ϕ / 3 -ϕ Input & 24/ 48 /110 V DC Output Natural Cooled, free standing in Sheet Steel enclosure,SCR controlled , regulation +/-1% , Efficiency > 75% on FLAC/ DC Instruments, Selector Switch ,Built in DC Distribution Board (6 No MCB), indication , control as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	1,38,022.00

Code No	Description	Unit	Rate Rs.
72.10	SITC of following capacity IK10 Sandwich Type Rising Mains / Bus Duct Confirming to IEC 61439 part 1 & part 6 standard & IS 8623 P-II and Manufactured in India for use on 3 phase 4 wire , 50% internal earth , 415 volts, 50Hz A.C. supply , class F insulation, rated insulation voltage 1000V, impulse withstand voltage 12 KV, min. seismic zone 4 as per IS1892, with IP-54 / IP-66 (With Canopy) enclosure made of 1.6mm thick sheet steel duly powder coated in convenient sections complete with 4 Nos aluminium (with 6101 or 63401 grade) bus bars, 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 including making opening in RCC / Brick Masonary and repairing the same etc. as required. Type Tests reports like (i) Short Circuit Test (ii) Degree of Protection (iii) Temperature rise test of Rising main in CPRI / UL / ASTA accredited lab will be submitted by OEM. Routine test as per OEM's QAP in It's own Manufacturing facility in India shall be witnessed by department Engineer virtually / Physically. Complete Installation of Rising Mains shall be Vetted by Manufacturer before Comissioning. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
72.10.1	Sandwich Type Bus Rising Main		
72.10.1.1	400 amps 25 KA SC for 1 sec	Mtr	18,125.00
72.10.1.2	500 amps 30 KA SC for 1 sec	Mtr	19,874.00
72.10.1.3	630 amps 40 KA SC for 1 sec	Mtr	21,671.00
72.10.1.4	800 amps 50 KA SC for 1 sec	Mtr	25,201.00
72.10.1.5	1000 amps 50 KA SC for 1 sec	Mtr	28,141.00
72.10.1.6	1250 amps 50 KA SC for 1 sec	Mtr	32,116.00
72.10.1.7	1600 amps 50 KA SC for 1 sec	Mtr	38,635.00
72.10.1.8	2000 amps 65 KA SC for 1 sec	Mtr	48,016.00
72.10.2	Sandwich Type Bus Duct		
72.10.2.1	1000 Amps 50kA SC for 1 sec	Mtr	21,782.00
72.10.2.2	1250 Amps 65kA SC for 1 sec	Mtr	24,644.00
72.10.2.3	1600 Amps 80kA SC for 1 sec	Mtr	30,527.00
72.10.2.4	2000 Amps 80kA SC for 1 sec	Mtr	39,271.00
72.10.2.5	2500 Amps 120kA SC for 1 sec	Mtr	52,309.00
72.10.2.6	3200 Amps 120kA SC for 1 sec	Mtr	58,828.00
72.10.2.7	4000 Amps 120kA SC for 1 sec	Mtr	74,727.00
72.10.2.8	5000 Amps 120kA SC for 1 sec	Mtr	96,191.00

Code No	Description	Unit	Rate Rs.
72.10.3	Out Door Bus Duct IP66 with Canopy		
72.10.3.1	1000 Amps 50kA SC for 1 sec	Mtr	25,438.00
72.10.3.2	1250 Amps 65kA SC for 1 sec	Mtr	28,619.00
72.10.3.3	1600 Amps 80kA SC for 1 sec	Mtr	36,091.00
72.10.3.4	2000 Amps 80kA SC for 1 sec	Mtr	44,359.00
72.10.3.5	2500 Amps 120kA SC for 1 sec	Mtr	60,418.00
72.10.3.6	3200 Amps 120kA SC for 1 sec	Mtr	68,368.00
72.10.3.7	4000 Amps 120kA SC for 1 sec	Mtr	85,991.00
72.10.3.8	5000 Amps 120kA SC for 1 sec	Mtr	1,08,434.00
72.11	SITC of Bus Rising Main OEM manufactured following capacity End Feed Unit Confirming to ANSI C37.23 standard & IS 8623 P-II suitable for Sandwich / Compact Air Insulated type for use on 3 phase 4 wire 415 volts, 50Hz A.C. supply made with 1.6mm thick steel sheet enclosure duly powder coated with provision of MCCB/ACB (but without MCCB/ACB), Interlocking feature complete with necessary joints including clamping brackets, angle iron bracket, steel fasteners, connecting to earthing system etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
72.11.1	For 200 Amp. (Without MCCB)	Each	11,925.00
72.11.2	For 250 Amp. (Without MCCB)	Each	12,401.00
72.11.3	For 325 Amp. (Without MCCB)	Each	13,037.00
72.11.4	For 400 Amp. (Without MCCB)	Each	19,076.00
72.11.5	For 500 Amp. (Without MCCB)	Each	20,646.00
72.11.6	For 630 Amp. (Without MCCB)	Each	23,310.00
72.11.7	For 800 Amp. (Without MCCB)	Each	26,969.00
72.11.8	For 1000/1250 Amp. (Without ACB)	Each	1,09,546.00
72.11.9	For 1600 Amp. (Without ACB)	Each	1,27,512.00
72.11.10	For 2000 Amp. (Without ACB)	Each	1,56,926.00
72.12	SITC of following capacity IK10 Compact Air Insulated Rising Mains / Bus Bar trunking Confirming to IEC 61439 part 1 & part 6 standard & IS 8623 P-II and Manufactured in India for use on 3 phase 4 wire , 50% internal earth , 415 volts, 50Hz A.C. supply , The busbars shall be supported through class "F" Insulator at interval not exceeding 250mm. impulse withstand voltage 12 KV, min. seismic zone 4 as per IS1892, with IP-54 enclosure made of 1.6mm thick sheet steel duly powder coated in convenient sections complete with 4 Nos aluminium (with 6101 or 63401 grade) bus bars, necessary joints & expansion joints, fire barrier at each floor, provision of tapping at every metre, continuous earthing with 2 Nos aluminium		

Code No	Description	Unit	Rate Rs.
	strip of suitable size (one on each side) including, G.I. clamping brackets, angle iron bracket, steel fasteners, connecting to earthing system including making opening in RCC / Brick Masonary and repairing the same etc. as required.		
	Type Tests reports like (i) Short Circuit Test (ii) Degree of Protection (iii) Temperature rise test of Rising main in CPRI / UL / ASTA accredited lab will be submitted by OEM & Routine test as per OEM's QAP in It's own Manufacturing facility in India shall be witnessed by department Engineer virtually / Physically. Complete Installation of Rising Mains shall be Vetted by Manufacturer before Comissioning. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
72.12.1	200 amps 10 KA SC for 1 sec	Mtr	11,288.00
72.12.2	250 amps 15 KA SC for 1 sec	Mtr	11,766.00
72.12.3	315 amps 25 KA SC for 1 sec	Mtr	12,958.00
72.12.4	400 amps 30 KA SC for 1 sec	Mtr	14,468.00
72.12.5	500 amps 35 KA SC for 1 sec	Mtr	16,376.00
72.12.6	630 amps 50 KA SC for 1 sec	Mtr	19,397.00
72.12.7	800 amps 50 KA SC for 1 sec	Mtr	25,089.00
72.12.8	1000 amps 50 KA SC for 1 sec	Mtr	27,983.00
72.13	SITC of Bus Rising Main OEM manufactured following capacity Plug in / Tap off Box suitable for Sandwich / Compact Air Insulated type bus bar trunking Confirming to ANSI C37.23 standard & IS 8623 P-II & IEC-60947-2-2000 for use on 3 phase 4 wire 415 volts, 50Hz A.C. supply made with 1.6mm thick steel sheet enclosure duly powder coated with provision of MCB/MCCB / ACB (but without MCB/MCCB/ACB) with Interlocking complete with necessary joints including clamping brackets, angle iron bracket, steel fasteners, connecting to earthing system etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
72.13.1	Plug in Box suitable for Sandwich Type Bus rising Main		
72.13.1.1	up to 32 amps (Suitable for MCB) without MCB Without Interlocking	Each	7,632.00
72.13.1.2	63 amps (Suitable for MCCB) without MCCB	Each	9,699.00
72.13.1.3	100/125 amps (Suitable for MCCB) without MCCB	Each	10,016.00
72.13.1.4	160/200/250 amps (Suitable for MCCB) without MCCB	Each	11,925.00
72.13.1.5	400 amps (Suitable for MCCB) without MCCB	Each	15,740.00
72.13.1.6	500 / 630 amps (Suitable for MCCB) without MCCB	Each	22,100.00
72.13.2	Plug in Box suitable for Compact Air Insulated Type Bus rising Main		

Code No	Description	Unit	Rate Rs.
72.13.2.1	up to 32 amps (Suitable for MCB) without MCB Without Interlocking	Each	6,519.00
72.13.2.2	63 amps (Suitable for MCCB) without MCCB	Each	8,506.00
72.13.2.3	100/125 amps (Suitable for MCCB) without MCCB	Each	8,744.00
72.13.2.4	160/200/250 amps (Suitable for MCCB) without MCCB	Each	10,812.00
72.13.2.5	400 amps (Suitable for MCCB) without MCCB	Each	14,150.00
72.13.2.6	630 amps (Suitable for MCCB) without MCCB	Each	18,920.00
72.14	SITC of Bus Rising Main OEM manufactured Tinned copper flexible joint with enclosure of following capacity with Transformer / DG / Panel as required complete in all respect. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
72.14.1	1000 Amp. Rating	Each	49,288.00
72.14.2	1250 Amp.	Each	71,547.00
72.14.3	1600 Amp.	Each	87,446.00
72.14.4	2000 Amp.	Each	1,35,144.00
72.14.5	2500 Amp.	Each	1,66,943.00
72.14.6	3200 Amp.	Each	2,09,871.00
72.14.7	4000 Amp.	Each	2,73,468.00
72.14.8	5000 Amp.	Each	3,41,835.00
72.15	SITC of following capacity bus trunking with aluminium bus bars, The busbars shall be supported through class "F" Insulator, Enclosure made of 1.6mm thick sheet steel duly powder coated 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. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
72.15.1	800 Amp.	Mtr	13,069.00
72.15.2	1000 Amp.	Mtr	16,218.00
72.15.3	1250 Amp.	Mtr	19,238.00
72.15.4	1600 Amp.	Mtr	23,531.00
72.15.5	2000 Amp.	Mtr	28,619.00
72.16	SITC of HT metering cubical panel as approved By DISCOMs fabricated out of 18 SWG CRCA sheet steel in two compartment & MS angle of size 60mmX 6mm having provision for Following: (i)Provision for fixing Trivector / Import - Export Meter (To be supplied by DISCOMs) (ii)Provision for fixing of combined CT PT Set		

Code No	Description	Unit	Rate Rs.
	with Copper strip for Connection (To be supplied by DISCOMS), (iii)Test terminal Block, (iv) 6mm thick Bakelite sheet on all sides, (V) 3/6 corex 1.5 / 2.5 Sq.mm copper cable for interconnections, etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	32,852.00
72.17	SITC of Radiator Cooled and Turbo charged Silent DG Set (As per latest CPCB emission norms) having specifications as per A, B, C, D, E, F,G,H & I A) 1500 RPM Diesel Engine conforming to BS:649/5514 of suitable BHP (up to 82.5 kVA 6 cylinder or Below required, 125 kVA & Above ratings 6 cylinder or above required) capable of taking 10% over loading for one hour after 12 hours of continuous operation., Dry exhaust manifold with Hospital grade silencer and catalytic convertor(isolated from main DG chamber), up to 3 M exhaust piping (with LRB insulation & Alum. cladding) as required . B) AC Brush less SPDP Alternator conform to BS 5000 (part 99) or IS/IEC 60034-1. . Alternator shall be self regulated with standard Alternator Protection(Over voltage , over speed & under voltage, under speed warning & shutdown).Engine & Alternator mounted on a common base Frame & coupled through a flexible coupling or close coupled C) CPCB / ARAI approved Standard canopy with Weatherproof, powdercoated Accoustic enclosure for DG set for sound attenuation fabricated from 1.6 mm CRCA sheet steel (structure) with sidewall fabricated from 1.6 mm CRCA sheet & filled with glasswool (96Kg/m3) / Foam. as per IS8183 the doors of 28/40/50/85mm thick as perrating and fabricated from 1.6mm CRCA sheet packed with accoustic material, All doors/opening are sealed with neoprene /EPDNgaskets. The DG Set has Inbuilt / External in fuel tank to run 6 to 8 Hrs as per OEM standard, with protection and tripping of DG set against temperature of more than 50 degree centigrade. D) Electronic / Mechanical governor, Manual & electric Start ,Batteries with battry charger, Engine instruments panel,AVM pads All controls for operation of DG set are from outside the enclosure with DG control panel having Microprocessor based Genset monitoring like Running Hour, RPM, Low Lube Oil tripping & control system, Panel mounted MCCB/ACB of suitable rating, Ammeter, Voltmeter, PF meter, frequency meter, KWH meter,digital fuel display meter, Ind.lamps etc. mounted inside enclosure , visible and accessible from outside. The enclosure should be suitable for following capacity DG sets and alternator. Noise level shall be less than 75 dB at a distance of 1 Mtrs. duly certified by authorised agency etc. complete in all respect of following capacity : E) (i) Accoustic glass wool wall thickness should not be less then 40mm and not less then 20mm PU foam upto rating 100 KVA. (ii).Accoustic glass wool wall thickness should not be less then		

Code No	Description	Unit	Rate Rs.
	65mm and not less than 50mm PU foam upto rating 250 KVA. (iii) Accoustic glass wool wall thickness should not be less than 100mm for rating above 250 KVA.		
	F) First filling of the fuel tank shall be done by contractor and the prevailing fuel cost at that time shall be reimbursed to the contractor by department.		
	G) Servicing Contract of DG Set from OEM's Authorised Service Dealer as per OEM guidelines during the DLP period shall be done by contractor including all consumables, actual charges shall be reimbursed to the contractor by End User Department.		
	H) Manufacturer / OEM must have its authorized service dealer in Rajasthan. Which can provide service within 6 Hours of complaint registration.		
	I) DG set will be offered for Inspection and Testing at Manufacturer's Works in presence of Departmental Engineers. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work, refer Annexure "A" attached with this BSR.		
72.17.1	20 KVA at 0.8 pf 415V 50Hz 3-Ø	Set	5,11,344.00
72.17.2	25 KVA at 0.8 pf 415V 50Hz 3-Ø	Set	4,90,510.00
72.17.3	30 KVA at 0.8 pf 415V 50Hz 3-Ø	Set	5,22,193.00
72.17.4	40 KVA at 0.8 pf 415V 50Hz 3-Ø	Set	6,32,868.00
72.17.5	50 KVA at 0.8 pf 415V 50Hz 3-Ø	Set	7,20,710.00
72.17.6	62.5 KVA at 0.8 pf 415V 50Hz 3-Ø	Set	7,51,578.00
72.17.7	82.5 KVA at 0.8 pf 415V 50Hz 3-Ø	Set	9,08,237.00
72.17.8	100 KVA at 0.8 pf 415V 50Hz 3-Ø	Set	10,75,898.00
72.17.9	125 KVA at 0.8 pf 415V 50Hz 3-Ø	Set	10,99,579.00
72.17.10	140 KVA at 0.8 pf 415V 50Hz 3-Ø	Set	14,08,141.00
72.17.11	160 KVA at 0.8 pf 415V 50Hz 3-Ø	Set	15,18,211.00
72.17.12	180 KVA at 0.8 pf 415V 50Hz 3-Ø	Set	16,61,191.00
72.17.13	200 KVA at 0.8 pf 415V 50Hz 3-Ø	Set	18,03,142.00
72.17.14	250 KVA at 0.8 pf 415V 50Hz 3-Ø	Set	21,90,932.00
72.17.15	320 KVA at 0.8 pf 415V 50Hz 3-Ø	Set	27,60,786.00
72.17.16	400 KVA at 0.8 pf 415V 50Hz 3-Ø	Set	34,01,615.00
72.17.17	500 KVA at 0.8 pf 415V 50Hz 3-Ø	Set	40,51,527.00
72.17.18	625 KVA at 0.8 pf 415V 50Hz 3-Ø	Set	49,65,106.00
72.17.19	750 KVA at 0.8 pf 415V 50Hz 3-Ø	Set	63,83,707.00
72.18	Providing, Fixing, Jointing, Testing & Commissioning of Medium duty MS B class pipes conforming to IS 3589 / 1239 part-I for DG		

Code No	Description	Unit	Rate Rs.
	Exhaust applications (beyond 1.5 Mtr. length) including cutting, welding etc & fittings like elbows, flanges, tapers, reducer, gaskets etc. fixing the pipe on the wall/ceiling with suitable clamps, hanger and nuts bolts . including the cost of thermal insulation with 50 mm thick layers of LRB rock wool as per IS : 8183-1993 (64 kg/m3 density) & 26 SWG aluminium sheet claddings etc complete as required complete in all respect. (Cost of Steel Structure for Exhaust pipe will be paid Extra). All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
72.18.1	80 mm dia	Mtr.	2,514.00
72.18.2	100 mm dia	Mtr.	3,527.00
72.18.3	125 mm dia	Mtr.	4,574.00
72.18.4	150 mm dia	Mtr.	5,402.00
72.18.5	200 mm dia	Mtr.	8,379.00
72.18.6	250 mm Dia.	Mtr.	11,080.00
72.19	Supply, installation and testing of metal flexible coupling (below) of following dia required for horizontal length more than 3 mtr.as per standard of guide line of D.G. set company complete in all respect. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
72.19.1	80 mm dia	Each	14,405.00
72.19.2	100 mm dia	Each	16,697.00
72.19.3	125 mm dia	Each	18,989.00
72.19.4	150 mm dia	Each	23,792.00
72.19.5	200 mm dia	Each	27,230.00
72.19.6	250 mm Dia.	Each	36,453.00
72.20	Supply & fabrication steel structure with MS channel / angle / joist / ISMB / sheet etc. including welding, rivetting, cutting, nut & bolt , one coat of primer & two coat of enamel paint etc. as required complete in all respect. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Kg	138.00
72.21	Earth work in excavation/ by mechanical means (Hydraulic Excavator) / Manual means over areas (exceeding 30 cm in depth, 1.5m in width as well as 10 sum on plan) including disposal of excavated earth, lead upto 50 m and lift upto 1.5 m, disposed earth to be levelled and neatly dressed:	Cum	218.00
72.22	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 Cement Mortar 1:6 (1-Cement : 6-Sand).	Cum.	6,866.00

Code No	Description	Unit	Rate Rs.
72.23	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level.	Kg	104.00
72.24	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		
72.24.1	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.	5,101.00
72.24.2	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.	4,825.00
72.24.3	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.	4,548.00
72.25	Plaster on new surface on wall in cement sand mortar 1:4 including racking of joints etc. complete fine finish :		
72.25.1	20mm thick	Sqm	483.00
72.25.2	12mm thick	Sqm	385.00
72.26	Finishing wall with water proofing cement paint of approved brand and manufacture and or required shade to give an even shade including all scaffolding:		
72.26.1	New work (Two or more coats applied @ 3.84 kg/10 sqm).	Sqm	124.00
72.27	Providing and fixing welded mesh/expanded metal mesh 25 mmx 25 mm x 3mm in frame work, flat iron beading 20x3mm including top cross laps inside and out sides welding, iron bolts, crews, clips etc. including two coat of red oxide and two coat of enamel paint or more required complete with frame work with 50 X 50 X 6mm angle iron post 30 cm in ground embeded in cement concrete 1:3:6 (30X30X45cm) at corner and every three mtr including painting with one coat of primer and two coat of enamel paint work will be done as per direction of engineer incharge of size complete in all respect. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Sqm	1,657.00
72.28	Gravelling of Transformer / RMU Yard with 100 mm Height Gravels of Size 20 to 25 mm including levelling, Dressing etc. as Required.	Sqm	1,381.00
72.29	SITC of PLC Based Auto main failure (AMF) Panel fabricated from CRCA sheet steel 2 mmThick , Powder coated finish , Engine Start & Stop commands, control Relays , Ammeter & Voltmeter with selector switches, Control & 2 nos 4 pole Power Contactors with 2 no. of required size 4 pole MCCB, Timers, Electronic Hooter ,Visual & Alarm indication for faults, UPS, operator interface panel complete in all respect suitable for following capacity DG sets: Appropriate		

Code No	Description	Unit	Rate Rs.
	Test Certificate/ report of product/accessories from OEM/Panel Manufacturer shall be submitted. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
72.29.1	20 to 40 KVA	Set	72,910.00
72.29.2	50 to 82.5 KVA	Set	87,590.00
72.29.3	100 to 140 KVA	Set	1,09,609.00
72.29.4	160 to 200 KVA	Set	1,49,734.00
72.29.5	250 KVA	Set	1,93,773.00
72.29.6	320 KVA	Set	2,15,792.00
72.29.7	380 KVA	Set	2,37,811.00
72.29.8	500 KVA	Set	2,85,276.00
72.30	SITC of HT 33KV, 3Phase, 50Hz, totally enclosed metal clad SF6 switchgear having rupturing capacity upto 630 Amps, Outdoor Non Extensible Fixed Type (IP54), RMU (Ring main unit) comprising of manually operated Load Break Switch and manual charging fixed-type Vacuum Circuit Breaker as per requirement, inside robotically welded stainless steel grade 304 (Non Ferrite Non Magnetic Grade) tank having of minimum thickness 2 mm with IP67 Degree of Protection and enhanced BIL of 170kVp internally to manage voltage surges. RMU should be provided with internal bus bars, as well as earthing bus bars of electrolytic grade copper, padlock provisions & complete with all accessories. The RMU shall be type tested for Internal arc test of AFLR 25kA/1 sec for tank and cable chamber as per IEC62271-200. RMU shall have on-site-repair ability features such as site replaceable bushing/ coupling/ mechanism and gas refilling at site. The earthing bus bar shall be provided inside each cable compartment for solid earthing of cable sheilds. The outer hinged main door should cover entire front of switchgear including cable doors for providing better ingress protection. The unit shall include the following with all necessary standard fittings as required at site. Load Break Switch module consisting of following accessories : 33kV, 630 Amp Load Break Switch module and integrated earthing switch, both with full making capacity. Short Circuit withstand capacity - 25kA/3-sec, Making Capacity – 62.5 kAp, Auxiliary contacts - 1NO + 1NC Fault Pass Indicator - 1 Nos, touch-proof screen separable termination kit (push on type) VCB Breaker module consisting of following accessories : 33 kV, 630 Amp fixed-type Vacuum Circuit Breaker module for making and breaking of fault current along with disconnecter + Earth Switch of full making capacity.		

Code No	Description	Unit	Rate Rs.
	Short time current breaking capacity - 25KA/ 3 sec, Making Capacity – 62.5kAp, Auxiliary contacts - 1NO + 1NC		
	VCB operating sequence must be O-0.3Sec-CO-3Min-CO and mechanical endurance confirms for minimum 10000 operations.		
	touch-proof screen separable termination kit (push on type)		
	Numerical based self-powered OC+EF Protection Relay, providing Over Current (min. setting 20%), Earth-Fault (min. setting : 10%)		
	03 Nos 50-100/1, 2.5VA epoxy insulated, Ring Core CTs for protection (Acc. CL5P10), installed away from bushings to prevent saturation of core. (CT Ratio may change according to change in Load)		
	All modules should have Suitable site replaceable cable bushings situated not beyond 300mm from cable-cover to allow ease of access for installation/ testing/ replacement purposes.		
	Cable covers with self-Interlocking mechanism between doors, earth switch, disconnecter & VCB		
	Capacitive voltage indication fixed type system		
	(i) Capacitive voltage indication fixed type VPIS 28-45 kV		
	(ii) One No. Operating Handle for Manual Operation and one no. manometer		
	(iii) Safety Interlocks Shall be provided as per relevant IEC/IS Standards and Manufacturer's directions		
	(iv) Above switchgear shall conform to all relevant IEC/IS Standards.		
	(v) Vacuum interrupter should be of same make as RMU		
	(vi) Cable bushing should be replaceable at site.		
	(vii) Minimum 4 module should accommodate in one tank to avoid multiple coupling at site.		
72.30.1	Non-Extensible Type 3 way RMU with 2 no. VCB & 1 No. Load Break Switch	Each	59,52,913.00
72.30.2	Non-Extensible Type 4 way RMU with 2 no. VCB & 2 No. Load Break Switch	Each	70,55,484.00
72.30.3	Non-Extensible Type 6 way RMU with 4 no. VCB & 2 No. Load Break Switch	Each	1,06,44,544.00
72.30.4	Non Extensible 1 way RMU with 1 no. VCB & Direct Cable Entry	Each	28,54,086.00
72.31	CPCB-IV complianced DG Sets		
72.31.1	CPCB-IV complianced 15 kVA DG Set	Nos.	5,00,016.00
72.31.2	CPCB-IV complianced 20 kVA DG Set	Nos.	5,95,607.00
72.31.3	CPCB-IV complianced 25 kVA DG Set	Nos.	7,79,436.00
72.31.4	CPCB-IV complianced 30 kVA DG Set	Nos.	8,08,849.00

Code No	Description	Unit	Rate Rs.
72.31.5	CPCB-IV complianced 40 kVA DG Set	Nos.	9,70,618.00
72.31.6	CPCB-IV complianced 57 kVA DG Set	Nos.	11,32,388.00
72.31.7	CPCB-IV complianced 82.5 kVA DG Set	Nos.	15,07,400.00
72.31.8	CPCB-IV complianced 100 kVA DG Set	Nos.	17,27,995.00
72.31.9	CPCB-IV complianced 125 kVA DG Set	Nos.	17,50,054.00
72.31.10	CPCB-IV complianced 160 kVA DG Set	Nos.	25,07,431.00
72.31.11	CPCB-IV complianced 200 kVA DG Set	Nos.	30,29,506.00
72.31.12	CPCB-IV complianced 250 kVA DG Set	Nos.	34,55,990.00
72.31.13	CPCB-IV complianced 320 kVA DG Set	Nos.	42,28,073.00
72.31.14	CPCB-IV complianced 500 kVA DG Set	Nos.	69,85,512.00
72.31.15	CPCB-IV complianced 625 kVA DG Set	Nos.	83,67,907.00
72.31.16	CPCB-IV complianced 750 kVA DG Set	Nos.	88,97,336.00

73.0 FIRE PROTECTION WORK

Code No	Description	Unit	Rate Rs.
73.1	Supplying, Installation, Testing & Commissioning of Electrical Driven fire fighting duty pump as per TAC and IS 12469-1988., Factory assembled in Pump make OEM for Sprinkler / Hydrant applications suitable for automatic operation and consisting of following details given as A, B, C, D, E, F, G and H. (A) End Suction / Horizontal Axially split casing volute type Single / Multi stage Centrifugal pump complete for delivery of below mentioned discharge and Head (B) Material of construction : Pump Casing - Cast Iron, Impellor - Bronze, Shaft - SS 410, Packing - Mechanical Seal (C) Pump shall be capable of furnishing not less than 150 % of rated capacity at a head not less than 65 % of the rated head. The shut off head shall not exceed 120 % of rated head (D) Squirrel cage induction motor (IE-3 Class) suitable for 3 phase, 415 V, 50 HZ, Ac supply , Class -F Insulation, Synchronous speed 2900 / 1500 RPM, T.E.F.C confirming to IP:55 , of required HP suitable for the above pump ,along with flexible (Love Joy type) coupling , coupling guard complete in all respect . (E) Common bed plate fabricated from mild steel channel for installation of pump and Motor including anti vibration pads. (F) The Hydrostatic tests (2 times of design operating head or 1.5 times the shut off head whichever is higher) and performance tests (to determine developed head, Pump BHP and efficiency v/s Flow) of pumps along with trip test shall be carried out at manufacturer's works in Physical presence of Department's representatives. (G) Physical & Chemical Test reports of i) Pump casing (ii) Impeller (iii) Shaft (iv) Shaft sleeve and Dynamic Balance certificate is to be submitted by OEM (H) Suitable size Reinforced cement concrete (M-30) foundation with foundation bolt, Nozing Angle of size 40mm x40mm x5 mm (Cost of RCC Foundation to be paid Extra). All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
73.1.1	1620 LPM suitable for 56 Mtr Head End Suction Back pull type Single Stage, 2900 RPM	Each	2,98,271.00
73.1.2	1620 LPM suitable for 70 Mtr Head End Suction Back pull type Single Stage, 2900 RPM	Each	3,02,544.00
73.1.3	1620 LPM suitable for 88 Mtr Head Horizontal Axially split casing volute type Two stage, 1500 RPM	Each	7,60,005.00
73.1.4	2280 LPM suitable for 56 Mtr Head End Suction Back pull type Single Stage, 2900 RPM	Each	4,10,227.00

Code No	Description	Unit	Rate Rs.
73.1.5	2280 LPM suitable for 70 Mtr Head End Suction Back pull type Single Stage, 2900 RPM	Each	4,29,081.00
73.1.6	2280 LPM suitable for 88 Mtr Head Horizontal Axially split casing volute type Two stage, 1500 RPM	Each	7,95,472.00
73.1.7	2850 LPM suitable for 56 Mtr Head End Suction Back pull type Single Stage, 2900 RPM	Each	4,39,402.00
73.1.8	2850 LPM suitable for 70 Mtr Head Horizontal Axially split casing volute type Two stage, 1500 RPM	Each	7,59,013.00
73.1.9	2850 LPM suitable for 88 Mtr Head Horizontal Axially split casing volute type Two stage, 1500 RPM	Each	8,94,829.00
73.2	Supplying, Installation, Testing & Commissioning of Diesel Engine Driven fire fighting duty pump as per TAC and IS 12469-1988., Factory assembled in Pump make OEM for Sprinkler / Hydrant applications suitable for automatic operation and consisting of following details given as A, B, C, D, E, F, G and H. (A) End Suction / Horizontal Axially split casing volute type Single / Multi stage Centrifugal pump complete for delivery of below mentioned discharge and Head (B) Material of construction : Pump Casing - Cast Iron, Impellor - Bronze, Shaft - SS 410, Packing - Mechanical Seal (C) Pump shall be capable of furnishing not less than 150 % of rated capacity at a head not less than 65 % of the rated head. The shut off head shall not exceed 120 % of rated head (D) Heat Exchanger cooled Diesel Engine as per NFPA 20 developing suitable BHP for the below mentioned discharge at 1500 / 1800 RPM, flexible coupling and coupling guard with the Pump, common bed plate for mounting of the Engine and Pump, Antivibration damping arrangement by cushy foot, Diesel Engine starting Panel for starting of the engine automatically if the Normal electrical supply fails with a unit of battery bank of 12/24v, 180 Ah, Lead Acid Battery with Boost / Trickle charger as required for operation of Diesel engine, Exhaust Pipe of suitable diameter upto 10 M length (with LRB insulation & Alum. Cladding), with muffler, Diesel tank of 300 Lts capacity (made out from 2 mm thick MS sheet with filling Cap) with drain cock, Diesel level Indicator, Suitable MS angle iron stand for placing tank, first Filling of Diesel tank. (E) Diesel Engine Control 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 in Existing Fire Fighting Control panel		

Code No	Description	Unit	Rate Rs.
	(F) The Hydrostatic tests (2 times of design operating head or 1.5 times the shut off head whichever is higher) and performance tests (to determine developed head, Pump BHP and efficiency v/s Flow) of pumps along with trip test shall be carried out at manufacturer's works in Physical presence of Department's representatives.		
	(G) Physical & Chemical Test reports of i) Pump casing (ii) Impeller (iii) Shaft (iv) Shaft sleeve and Dynamic Balance certificate is to be submitted by OEM		
	(H) Pump to be placed on Suitable size Existing Reinforced cement concrete (M-30) foundation with foundation bolt, Nozing Angle of size 40mm x40mm x5 mm (Cost of RCC Foundation to be paid Extra). All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
73.2.1	1620 LPM suitable for 56 Mtr Head End Suction Back pull type Single Stage, 1800 / 2300 RPM	Each	6,39,144.00
73.2.2	1620 LPM suitable for 70 Mtr Head End Suction Back pull type Single Stage, 1800 / 2300 RPM	Each	6,89,277.00
73.2.3	1620 LPM suitable for 88 Mtr Head Horizontal Axially split casing volute type Two stage, 1500 RPM	Each	8,85,383.00
73.2.4	2280 LPM suitable for 56 Mtr Head End Suction Back pull type Single Stage, 1800 / 2300 RPM	Each	6,39,144.00
73.2.5	2280 LPM suitable for 70 Mtr Head End Suction Back pull type Single Stage, 1800 / 2300 RPM	Each	8,74,368.00
73.2.6	2280 LPM suitable for 88 Mtr Head Horizontal Axially split casing volute type Two stage, 1500 RPM	Each	11,38,422.00
73.2.7	2850 LPM suitable for 56 Mtr Head End Suction Back pull type Single Stage, 1800 / 2300 RPM	Each	6,25,493.00
73.2.8	2850 LPM suitable for 70 Mtr Head Horizontal Axially split casing volute type Two stage, 1500 RPM	Each	8,37,542.00
73.2.9	2850 LPM suitable for 88 Mtr Head Horizontal Axially split casing volute type Two stage, 1500 RPM	Each	11,71,610.00
73.3	Supplying, Installation, Testing & Commissioning of Electrical Driven fire fighting duty Jockey pump as per TAC and IS 12469-1988., Factory assembled in Pump make OEM suitable for automatic operation and consisting of following details given as A, B, C, D, E,F and G (A) Horizontal End suction Single / Multi Stage Centrifugal Back pull type pump complete for delivery of below mentioned discharge and Head (B) Material of construction : Pump Casing - Cast Iron, Impellor - Bronze, Shaft - SS 410, Packing - Mechanical Seal (C) Squirrel cage induction motor (IE-3 Class) suitable for 3 phase,		

Code No	Description	Unit	Rate Rs.
	415 V, 50 HZ, Ac supply , Class -F Insulation, Synchronous speed not Exceeding 2900 RPM, T.E.F.C confirming to IP:55 , of required HP suitable for the above pump ,along with flexible (Love Joy type) coupling , coupling guard complete in all respect . (D) Common bed plate fabricated from mild steel channel for installation of pump and Motor including anti vibration pads. (E) The Hydrostatic tests (2 times of design operating head or 1.5 times the shut off head whichever is higher) and performance tests (to determine developed head, Pump BHP and efficiency v/s Flow) of pumps along with trip test shall be carried out at manufacturer's works in Virtual / Physical presence of Department's representatives. (F) Physical & Chemical Test reports of i) Pump casing (ii) Impeller (iii) Shaft (iv) Shaft sleeve and Dynamic Balance certificate is to be submitted by OEM (G) Suitable size Reinforced cement concrete (M-30) foundation with foundation bolt, Nozing Angle of size 40mm x40mm x5 mm (Cost of RCC Foundation to be paid Extra) All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
73.3.1	180 LPM suitable for 88 Mtr Multi Stage	Each	1,90,706.00
73.3.2	180 LPM suitable for 70 Mtr Single Stage	Each	1,64,368.00
73.3.3	180 LPM suitable for 56 Mtr Single Stage	Each	1,55,822.00
73.4	Supplying, Installation, Testing & Commissioning of Electrical Driven fire fighting duty Terrace pump as per TAC and IS 12469-1988., Factory assembled in Pump make OEM suitable for automatic operation and consisting of following details given as A, B, C, D, E, F, G and H. (A) Horizontal End suction Centrifugal Back pull type pump complete for delivery of below mentioned discharge and Head (B) Material of construction : Pump Casing - Cast Iron, Impellor - Bronze, Shaft - SS 410, Packing - Mechanical Seal (C) Squirrel cage induction motor (IE-3 Class) suitable for 3 phase, 415 V, 50 HZ, Ac supply , Class -F Insulation, Synchronous speed not Exceeding 3000 RPM, T.E.F.C confirming to IP:55 , of required HP suitable for the above pump ,along with flexible (Love Joy type) coupling , coupling guard complete in all respect . (D) Common bed plate fabricated from mild steel channel for installation of pump and Motor including anti vibration pads. (E) The Hydrostatic tests (2 times of design operating head or 1.5 times the shut off head whichever is higher) and performance tests (to determine developed head, Pump BHP and efficiency v/s Flow) of pumps along with trip test shall be carried out at manufacturer's works in Virtual / Physical presence of Department's representatives.		

Code No	Description	Unit	Rate Rs.
	(F) Physical & Chemical Test reports of i) Pump casing (ii) Impeller (iii) Shaft (iv) Shaft sleeve and Dynamic Balance certificate is to be submitted by OEM		
	(G) Suitable size Reinforced cement concrete (M-30) foundation with foundation bolt, Nozing Angle of size 40mm x40mm x5 mm (Cost of RCC Foundation to be paid Extra)		
	(H) Weather proof hood fabricated from 5mm thick UV stabilised FRP sheet supported by 50 mm x 50 mm x 5 mm Angle Iron fram above pumpset to protect it from weather All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
73.4.1	450 LPM with 35 mtr head	Each	1,22,791.00
73.4.2	900 LPM with 35 mtr head	Each	1,61,552.00
73.5	Supplying, Installation, Testing & Commissioning submersible type dewatering pump of stainless steel casing and Noryl impellor of discharge and head given below complete with all accessories suitable for operation on 230 V, single phase/415 V /3 phase, 50 Hz. AC supply complete with starter for automatic operation including water level sensing device / float switch inter connection with submersible cable etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
73.5.1	180 LPM with 10 mtr head	Each	29,279.00
73.6	SITC of pressure switches of pressure range 3 to 15 Bar for Main, Jockey, Terrace pump and Diesel pumps, Etc. as Required (Control Cable from Pressure switch to Panel to be Paid Extra). All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	2,075.00
73.7	Providing and fixing 20/25 mm dia. (PN - 1.6, Type-S1, Flanged, ISI marked) air release valve confirming to IS - 14845 : 2000 with Double Flange isolating valve (pressure rating PN 1.6) complete with 1 no. Matching Flanges (Minimum 10 mm thick), nuts, bolts, washers, gaskets etc as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	7,187.00
73.8	SITC of UL listed and FM Approved Polyethylene vane type water flow switch with actuation & delay mechanism for sensitivity in the range of 4 to 10 GPM and suitable for installation in following sizes of Sprinkler pipe for a Static pressure rating up to 250 PSI including making connections, making hole in pipe for inserting the vane etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
73.8.1	80 mm Dia.	Each	6,226.00

Code No	Description	Unit	Rate Rs.
73.8.2	100 mm Dia.	Each	7,747.00
73.8.3	150 mm Dia.	Each	9,268.00
73.9	SITC of suitable Pressure release valve of 50 mm dia, of CI body, with pressure setting range 7-15 kg/sqcm, on discharge header / Air Vessel, complete in all respect etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	7,818.00
73.10	Providing & fixing pressure transducer in M.S. Pipe line (pressure range 0 to 10 kg/cm ²) suitable for 12 volts/24 volt DC. Including connection etc. as required. (Control Cable from Pressure Transducer to Panel to be Paid Extra). All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	9,618.00
73.11	SITC of UL listed / FM Approved Brass Test and drain valve assembly for sprinkler system comprising of 3-position (off, test and Drain) ball valves with drain orifice having K-factor 5.6 and maximum working pressure 300 PSI and Inbuilt sight glass etc. as required of following size. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
73.11.1	25 mm Dia.	Each	6,504.00
73.11.2	50 mm Dia.	Each	14,349.00
73.12	Providing, Fixing, Jointing, Testing & Commissioning of Heavy duty MS 'C ' class (Heavy) pipes conforming to IS 3589 / 1239 part-I for hydrant and sprinkler applications including cutting, screwing, welding etc. & forged steel fittings like elbows, tees, tapers, reducer, gaskets etc. fixing the pipe on the wall/ceiling with suitable clamps, hanger and nuts bolts including cutting hole and chase in brick or RCC walls/ slab and making good the same. complete with painting of one coats of Red Oxide and two or more coats of synthetic enamel paint of required shade complete as required. (Pipe to be tested @ 10Kg/Sqcm for 2 Hrs.). All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
73.12.1	25 mm dia	Mtr.	468.00
73.12.2	32 mm dia	Mtr.	602.00
73.12.3	40 mm dia	Mtr.	699.00
73.12.4	50 mm dia	Mtr.	978.00
73.12.5	65 mm dia	Mtr.	1,248.00
73.12.6	80 mm dia	Mtr.	1,546.00
73.12.7	100 mm dia	Mtr.	2,226.00

Code No	Description	Unit	Rate Rs.
73.12.8	150 mm dia	Mtr.	3,282.00
73.12.9	200 mm dia, 6.0 mm thick	Mtr.	4,973.00
73.12.10	250 mm dia, 6.35 mm thick	Mtr.	6,182.00
73.12.11	300 mm dia., 7.0 mm thick	Mtr.	8,203.00
73.13	Providing, Fixing, Jointing, Testing & Commissioning of Heavy duty MS 'C' class (Heavy) pipe conforming to IS 3589 / 1239 part-I for hydrant and sprinkler applications in Existing trench with cement concrete block as supports including cutting, welding etc & forged steel fittings like elbows, tees, tapers, reducer with cleaning, wrapping and coating of the pipe with 4 mm thick tar based polymeric corrosion protection tape including applying uniform coat of cold pipekot primer as per IS; 10221 for protection against corrosion complete in all respect. (Pipe to be tested @ 10Kgf/Sqcm for 2 Hrs. & Excavation of Trench and refilling of trench to be paid extra). All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
73.13.1	80 mm dia	Mtr.	1,639.00
73.13.2	100 mm dia	Mtr.	2,358.00
73.13.3	150 mm dia	Mtr.	3,477.00
73.13.4	200 mm dia, 6.0 mm thick	Mtr.	5,258.00
73.14	Providing, laying, testing & commissioning of 'C' class heavy duty G.I. pipe conforming to IS 1239 including welding, Forged GI fittings like elbows, tees, 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. (Pipe to be tested @ 10Kgf/Sqcm for 2 Hrs.). All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
73.14.1	25 mm dia	Mtr.	505.00
73.14.2	32 mm dia	Mtr.	650.00
73.14.3	40 mm dia	Mtr.	755.00
73.14.4	50 mm dia	Mtr.	1,060.00
73.14.5	65 mm dia	Mtr.	1,351.00
73.14.6	80 mm dia	Mtr.	1,673.00
73.14.7	100 mm dia	Mtr.	2,361.00
73.14.8	150 mm dia	Mtr.	3,429.00
73.15	Supplying and fixing cylindrical air vessel of continuous welded construction for pump room made of 450 mm dia, fabricated out of 10 mm thick dished ends and 8 mm thick MS sheet, 2000 mm in height with flanged connection, Provision for 25 mm dia drain valve, air		

Code No	Description	Unit	Rate Rs.
	release valve,safety valve pressure gauge as required accessories and painting with two coats of Red Oxide and two coat of post office red enamel paint including The tank shall be installed on suitable vertical legs. The legs shall be provided with M.S. Angle of size 75 mm x 75 mm x 5 mm at the bottom. The legs shall be grouted in cement concrete foundation. as required. (Air Release valve, Drain valve, PRV, Pressure Gauge shall be Paid Extra). All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	41,489.00
73.16	Supplying and fixing cylindrical air vessel of continuous welded construction fixed at riser top made of 250 mm dia, fabricated out of 8 mm thick MS sheet, 1200 mm in height with flanged connection, Provision for 25 mm dia drain valve,air release valve,safety valve pressure gauge as required accessories and painting with two coats of Red Oxide and two coat of post office red enamel paint including The tank shall be installed on suitable vertical legs. The legs shall be provided with M.S. Angle of size 75 mm x 75 mm x 5 mm at the bottom. The legs shall be grouted in cement concrete foundation. as required. (Air Release valve, Drain valve, PRV, Pressure Gauge shall be Paid Extra). All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	9,248.00
73.17	Supplying and Fixing of PN 16 Flanged Y strainer fabricated out of cast iron body, SS 304 strainer with perforated screen with 3 mm. dia holes in existing MS / GI pipe complete with 2 no. Matching Flanges (Minimum 16 mm thick), nuts, bolts, washers, gaskets etc as required of following sizes. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
73.17.1	80 mm dia	Each	8,852.00
73.17.2	100 mm dia	Each	12,124.00
73.17.3	150 mm dia	Each	24,574.00
73.17.4	200 mm dia	Each	43,015.00
73.17.5	250 mm dia	Each	65,264.00
73.18	Supplying and Fixing of PN 16 Flanged sluice valve with non rising spindle, bronze /gun metal seat confirming to IS:14846 complete with 2 no. Matching Flanges (Minimum 16 mm thick), nuts, bolts, washers, gaskets, etc as required of following sizes. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
73.18.1	80 mm dia	Each	12,757.00
73.18.2	100 mm dia	Each	18,072.00
73.18.3	150 mm dia	Each	27,754.00

Code No	Description	Unit	Rate Rs.
73.18.4	200 mm dia	Each	44,989.00
73.18.5	250 mm dia	Each	65,986.00
73.19	Providing and constructing masonry chamber 90 x 90 x 100 cms inside with brick work in cement mortar 1:5 (1cement : 5fine sand) for water meter ,M.S. cover (6mmthick sheet with locking arrangement, 600 x600 with M.S. frame etc. all epoxy coated and R.C.C. top slab 1:2:4 mix(1 Cement : 2 coarsesand : 4 graded stone aggregate 20mm nominalsize) including necessary excavation, back fillingfoundation concrete 1:5:10 mix (1 cement : 5 fine sand and 10 graded stone aggregate 20mmnominal size) leaving a pocket of 30x30 cmwith out concrete and filled with pebbles andinside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm thick finishedwith a floating coat of neat cement and outside plaster finished rough complete. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	24,157.00
73.20	Supplying and Fixing of PN 16 Cast Iron Dual Plate Wafer Type Check Valve / Non return valve with SS / Bronze flap complete with 2 no. Matching Flanges (Minimum 16 mm thick), nuts, bolts, washers, gaskets, etc as required of following sizes. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
73.20.1	65 mm dia	Each	5,559.00
73.20.2	80 mm dia	Each	6,336.00
73.20.3	100 mm dia	Each	7,999.00
73.20.4	150 mm dia	Each	10,805.00
73.20.5	200 mm dia	Each	22,945.00
73.21	Supplying and Fixing of PN 1.6 Butterfly Valve (Wafer Type) with S.G Iron Disc and confirming to IS:13095 complete with 2 no. Matching Flanges (Minimum 16 mm thick), nuts, bolts, washers, gaskets, etc as required of following sizes. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
73.21.1	50 mm dia	Each	3,261.00
73.21.2	65 mm dia	Each	3,538.00
73.21.3	80 mm dia	Each	3,850.00
73.21.4	100 mm dia	Each	5,013.00
73.21.5	150 mm dia	Each	7,839.00
73.21.6	200 mm dia Gear Operated	Each	17,753.00
73.21.7	250 mm dia Gear Operated	Each	28,483.00
73.22	Supplying and Fixing of PN 16 Brass/GM Ball valves with screwed		

Code No	Description	Unit	Rate Rs.
	end, SS Ball including teflon tape etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
73.22.1	20 mm dia.	Each	1,251.00
73.22.2	25 mm dia.	Each	1,526.00
73.22.3	32 mm dia	Each	2,912.00
73.22.4	40 mm dia	Each	4,042.00
73.22.5	50 mm dia	Each	6,318.00
73.23	Supplying and Fixing of Brass/GM gate valves with screwed end , Non rising stem and conforming to IS:778 Class-1 including teflon tape etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
73.23.1	20 mm dia.	Each	1,351.00
73.23.2	25 mm dia.	Each	2,026.00
73.23.3	32 mm dia	Each	2,853.00
73.23.4	40 mm dia	Each	3,781.00
73.23.5	50 mm dia	Each	5,512.00
73.24	SITC of installation control valve of cast iron body and brass/bronze working parts comprising of water motor alarm, bronze seat clapper, and clapper arm, hydraulically driven mechanical gong bell to sound continous 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, with 2 no. Matching Flanges (Minimum 16 mm thick), nuts, bolts, washers, gaskets, etc as required of following sizes. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
73.24.1	100 mm	Each	49,491.00
73.24.2	150 mm	Each	54,516.00
73.25	Supplying and fixing of SS 304 Single / Double headed oblique pattern hydrant landing valve (internal/external) with 75 / 100 mm dia flanged inlet & 63 mm dia instantaneous type female outlet coupling with cast iron wheel complete with ABS cap and chain and all accessories as per IS:5290-93 (Type-A) including matching flange (14 mm thick), nuts, bolts, washers, gaskets, etc as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
73.25.1	Single Headed with 75 mm Dia. Flanged Inlet	Each	8,223.00
73.25.2	Double Headed with 100 mm Dia. Flanged Inlet	Each	15,053.00

Code No	Description	Unit	Rate Rs.
73.26	Supplying and fixing orifice plate made of 6 mm thick stainless steel with orifice of required size in between flange & landing valve of external and internal hydrant to reduce pressure to working pressure of 3.5 kg/cm ² complete with rubber gasket, GI bolts, nuts, washers etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	1,493.00
73.27	Supplying and fixing of flexible hose made with 100% polyester, black EPDM internal rubber lining with External coat of synthetic elastomer (IS:636, type-A) 63 mm dia, 15 mtr. Long RRL hose pipe with instantaneous type 63 mm dia SS-304 male and female couplings (IS:903) duly bound and riveted to hose pipes with copper rivets and SS wire etc. as required. Appropriate Test Certificate/ report with liable warranty of product/accessories from OEM shall be submitted.	Each	7,786.00
73.28	Supplying & fixing SS-304 Short Branch Pipe conforming to IS: 903:93 fitted with 20mm (nominal internal diameter) bore nozzle, for projecting water in form of solid jet. The Branch shall have 63mm Male Instantaneous Inlet, suitable for use with 63 mm size Fire fighting hoses. H.P. tested to 21 kgf/cm ² for 2.5 minutes. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	2,629.00
73.29	Supplying and fixing first -Aid Fire hose reel Drum wall mounted swinging type with MS construction powder painted in post office Red, conforming to IS 884-1985 with upto date amendments, complete with the following as required. (A) Thermoplastic / Rubber Hose (B) 20 mm dia UL, FM Bronze / SS nozzle with 5mm orifice (C) Drum and brackets for fixing the equipments on wall. (D) Connections from riser with 20/25 mm dia Brass/GM gate valves with screwed end and conforming to IS:778 Class-1 through Forged steel Screwed Union & M.S. pipe. Etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
73.29.1	With 30 m x 20 mm Thermoplastic hose as per IS:12585 Type-2 and Bursting pressure 42 Kg/sqcm	Each	12,169.00
73.29.2	With 30 m x 20 mm High Pressure Braided Rubber Hose as per IS:5132 - 1969 and Bursting pressure 42 Kg/sqcm	Each	12,791.00
73.30	Supplying and fixing Inlet Breeching Connection of CI body with Gun Metal male instantaneous inlet couplings with Inbuilt NRV, Drainage Connection with 50 mm Brass gate valve complete with PVC blank cap and chain as required for 150mm dia Outlet with 1 no. Matching Flange (Minimum 16 mm thick), nuts, bolts, washers, gaskets, etc as required of following Ways. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		

Code No	Description	Unit	Rate Rs.
73.30.1	2 Way	Each	10,469.00
73.30.2	3 Way	Each	12,335.00
73.30.3	4 Way	Each	14,200.00
73.31	Providing and fixing of 100 mm Dia. Flanged Gun Metal Fire brigade Suction hose coupling (draw out connection) for female coupling as per IS:902-1974 complete with Matching Flange (Minimum 14 mm thick), nuts, bolts, washers, gaskets, etc as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	10,812.00
73.32	Supply and Fixing of Cast iron body one side Flanged and other side strainer ball type foot valve with Reinforced rubber Nitrile rubber coated Ball including Matching Flange (Minimum 16 mm thick), nuts, bolts, washers, gaskets, etc as required of following Sizes. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
73.32.1	80 mm Dia.	Each	7,407.00
73.32.2	100 mm Dia.	Each	11,576.00
73.32.3	150 mm Dia.	Each	23,311.00
73.32.4	200 mm Dia.	Each	46,266.00
73.33	Providing and Fixing of PN16 Resilient rubber lined single arch vibration eliminators suitable for raw water up to 45 deg. C temperature, working pressure 8.5 Kg/cm ² and test pressure 14 Kg/cm ² to provide relief from stresses at pipe including Matching Flange (Minimum 16 mm thick), nuts, bolts, washers, gaskets, etc as required of following Sizes. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
73.33.1	80 mm Dia. x 150 mm Oal	Each	8,566.00
73.33.2	100 mm Dia. x 150 mm Oal	Each	10,272.00
73.33.3	150 mm Dia. x 150 mm Oal	Each	13,159.00
73.34	Supplying and fixing of 750 mm x 600 mm x 250 mm Outdoor application Fire Hose Cabinet made of 1.6 mm thick MS sheet Duly powder coated in red color externally and white internally with 6 mm thick glazed doors with Expanded Metal 2 mm thick Jali including necessary locking arrangement suitable to accommodate 2 Nos 15 Mtr. Long RRL Hose and 1 No. branch pipe on Existing Wall / Angle Iron Frame as required. (Cost of MS structure for mounting Frame is to be Paid Extra) All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	5,741.00

Code No	Description	Unit	Rate Rs.
73.35	Supplying and fixing of 1000 mm x 600 mm x 500 mm Outdoor application Fire Hose Cabinet made of 1.6 mm thick MS sheet Duly powder coated in red color externally and white internally with 6 mm thick glazed doors with Expanded Metal 2 mm thick Jali including necessary locking arrangement suitable to accommodate External hydrant with butterfly valve, 2 Nos 15 Mtr. Long RRL Hose and 1 No. branch pipe on Existing Wall / Angle Iron Frame as required. (Cost of MS structure for mounting Frame is to be Paid Extra). All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	17,291.00
73.36	Providing and fixing of Fire / Electrical Shaft Door made from powder coated (50 Micron) aluminium partially glazed with 6 mm thick glass and Partialy / Fully Louvered with Outer frame of Aluminium Section of Size 100 mm x 45 mm x 1.5 mm and Shutter's Top, Middle & side Section of Size 82 mm x 45 mm x 1.5 mm, Bottom Section of Size 110 mm x 45 mm x 1.5 mm Complete with Hinges, Tower bolt, Handle, Aldrop, Locking Arrangement including dash fasteners of required dia and size, necessary filling up the gaps at junctions, i.e. at top, bottom and sides with required EPDM rubber/ neoprene gasket etc. as per drawings and the directions of Engineer-in-charge. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Sqm	10,098.00
73.37	Providing and Fixing of 15 mm dia Bronze quartzoid bulb type sprinkler heads with Maximum working pressure 11.6 Kg / Sqcm and suitable for 68 degree centigrade rating standard response (UL Listed) chrome plated complete in all respect of the following type. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
73.37.1	Pendant/ Upright type	Each	297.00
73.37.2	Sidewall Sprinklers (ordinary)	Each	311.00
73.37.3	Extended Throw Sidewall type .	Each	519.00
73.37.4	Concealed type with Tin alloy fusible metal plate for temperature 57 degree Centigrade	Each	1,072.00
73.38	Providing & fixing of UL listed 1.5 mm thick chrome plated Dual type MS Escutcheon plates fixed at junction of Sprinkler piping with the false ceiling. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	111.00
73.39	Supply & Fixing of Fire Man's Axe with carbon steel head & rubber moulde handel usable upto 20 KV and confirming to IS :926 with length approx 0.4 M & weight 3.0 Kg. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	1,966.00

Code No	Description	Unit	Rate Rs.
73.40	Providing & fixing 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. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
73.40.1	700 mm Long	Each	968.00
73.40.2	1000 mm Long	Each	1,134.00
73.40.3	1200 mm Long	Each	1,313.00
73.40.4	1500 mm Long	Each	1,486.00
73.41	Providing & fixing Stainless Steel pressure gauge with dial of 150 mm dia size and range 0 to 20 kg/sq.cm with 3 / 8 " BSP bottom entry , Ball valve , SS Syphon tube all fittings etc, duly calibrated before installation in MKS and FPS units, Accuracy Level +/- 1% including Making Drilling in Existing MS Pipe Etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	2,698.00
73.42	SITC of UL 10th edition / EN54 / VDS certified Automatic Floating Sensitivity type Analog addressable Multi criteria (two optical/Smoke sensor to reduce false alarm) detector with mounting base & LED etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	3,182.00
73.43	SITC of UL 10th edition / EN54 / VDS certified Rate of Rise Heat Detectors (Thermal Detectors):GRADE-I Analouge Addressable type Heat Detectors with solid state design with sensing element combination of fixed type and rate of rise of temperature mounting base & LED etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	3,043.00
73.44	SITC of UL 10th edition / EN54 / VDS certified Analouge Addressable type Multi criteria (Heat & smoke) Beam detector along with interface module having a coverage area with a distance of min. 10 m and max. 100 m ,Operating temperature range: -20 C to +55 C, Response sensitivity of 40% , shall UL/EN54 certification including transmitter and receiver unit with mounting base & LED etc including the cost of all accessories, mouting arrangement Etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Set	49,809.00

Code No	Description	Unit	Rate Rs.
73.45	SITC of UL 10th edition / EN54 / VDS certified Addressable type fault isolator with base for isolating shorted, dewired and loose circuits between two successive fault, isolators with automatic resetting arrangement etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	2,794.00
73.46	SITC of UL 10th edition / EN54 / VDS certified Addressable Manual Call point (MCP) with LED / FIRE Indication Etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR . All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	3,597.00
73.47	SITC of UL 10th edition / EN54 / VDS certified Addressable sounder with strobe light, Loop Powered / Direct powered from FACP with sound level 90 dB and programmable from the panel etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	8,331.00
73.48	SITC of UL 10th edition / EN54 / VDS certified addressable automatic fire detector for monitoring of ventilation ducts which can perform alarm pattern analysis, with even response sensitivity for all fires with smoke development with 1 no outlet tube & with 1 no. analogue addressable Photo Electric type Smoke Detector with mounting base , address switch etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	11,483.00
73.49	SITC of Response Indicator for indicating the activation of the Remotely located Detector for Addressable type Detectors Etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	276.00
73.50	SITC of UL 10th edition / EN54 / VDS certified Addressable control (input/output) modules/ Relay Module for shutting down lifts, Hooters, AHU's, Acknowledgement of Sprinkler system with potential free contact monitoring Etc. as Required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	5,134.00
73.51	SITC of UL 10th edition / EN54 / VDS certified Microprocessor based intelligent, Analogue addressable, modular, expandable networkable loop Fire Alarm Control Panel with each loop capacity of min 125 detectors per loop with total of 125 detectors & devices with Loop length up to 1 KM as per NFPA 72 approval. The Panel shall be able to give pin point location of addressable units via the address code for each unit. The Panel shall also be able to automatically switch off all control switches when-ever any Alarm is		

Code No	Description	Unit	Rate Rs.
	triggered. . The panel shall have 230 + 5 % volts power supply, Automatic battery charger 24V, sealed lead acid maintenance free batteries sufficient for 24 hours normal working and then be capable of operating the system for 30 minutes during emergency condition. Loop interface cards, communication module, LCD/LED unit to indicate Fire / Fault Signal of individual unit, inbuilt networking port(both RS485&Ethernet),Serial port for printer,two supervisory inputs,two position key switch and USB port for programming.including the cost of all accessories Etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
73.51.1	1 - Loop Panel	Each	2,28,210.00
73.51.2	2 - Loop Panel	Each	3,04,279.00
73.51.3	Add Extra for per Loop expansion beyond Two Loop	per Loop	69,149.00
73.51.4	Add Extra for Graphics User Interface (GUI) Software for programming the fire detection and voice alarm system through FACP / PC.	Each	1,24,522.00
73.51.5	Add Extra for Workstation latest Intel® i5 processor, Intel Chipset motherboard, 08 GB RAM, 1 TB SATA HDD at 7200 rpm, with 2 x 4GB GPU type higher end Graphic card for H.265 compression technique with dual display ports/DVI/ HDMI port, Giga LAN Card, wireless Keyboard, wireless optical Mouse. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	93,408.00
73.52	SITC of UL 10th edition / EN54 / VDS certified Active Repeater Panel for Fire Alarm System with inbuilt networking port (both RS485 & Ethernet),Serial port for printer,two supervisory inputs,two position key switch and USB port for programming. The Repeater Panel shall allow users to acknowledge, reset,silence, program, view history events.etc (All functions similar to main panel)The user interface of the repeater panel shall be same as the Main Controller with menu driven user interface with smart search.including the cost of all accessories Etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	82,991.00
73.53	SITC of UL 10th edition / EN54 / VDS certified 6 ZONE Digital Voice Command Center with FACP, it shall contain all equipment required for all audio control, signaling and supervisory functions. This shall include speaker zone indication and control, digital voice units, microphone etc. The Digital Voice Command Center shall have digital voice call station suitable for 6 zone, digital voice controller & router suitable for 6 zone, 4 nos 240 watt & 1no 480 watt amplifier & digital amplifier capable for 1440 watt load etc.including the cost of all accessories Etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	1,27,291.00

Code No	Description	Unit	Rate Rs.
73.54	SITC of EN / LPCB/ UL listed / approved conventional automatic fire Alarm Optical/Photoelectric type smoke detectors of photo-optic sensing chamber, 12 / 24 volt D.C., visual alarm indicator (LED's) "Blink - green" in stand by and "Steady - red" in alarm complete in all respects with base as required.including the cost of all accessories Etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	1,521.00
73.55	SITC of EN / LPCB/ UL listed / approved conventional automatic fire Alarm Rate of Rise cum fixed temperature thermister type Heat Detectors , 12 / 24 volt D.C., visual alarm indicator (LED's) "Blink - green" in stand by and "Steady - red" in alarm complete in all respects with base as required.including the cost of all accessories Etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	1,451.00
73.56	SITC of EN / LPCB/ UL listed / approved conventional type Manual call point resettable complete with Glass, hammer and chain etc.including the cost of all accessories Etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	621.00
73.57	SITC of EN / LPCB/ UL listed / approved conventional type Hooter cum strobe including the cost of all accessories,Etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	690.00
73.58	SITC of Response Indicator for indicating the activation of the Remotely located Detector for Conventional type detectors as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	276.00
73.59	SITC of wall type following zone (each zone accessing minimum 20 units (detectors/ devices)) Conventional Type microprocessor based with LCD display EN / LPCB/ UL listed / approved main control panel fabricated from 16 SWG CRCA sheet steel sealed maintenance free (SMF) batteries of min2X7AH of 12 V or as required.including the cost of all accessories, Etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
73.59.1	4 zone	Each	41,461.00
73.59.2	6 zone	Each	64,968.00
73.59.3	Add extra for every 2 Zone	Each	16,585.00

Code No	Description	Unit	Rate Rs.
73.60	SITC of 2 way communication Fire Fighter's Telephone Jack.Complete as required . All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	1,797.00
73.61	SITC of 2 way communication Fire Fighter's Telephone Handset to make a call to the Main FACP from Telephone Jack Location Complete as required . All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	12,528.00
73.62	Supplying and drawing Fire Resistant flexible / stranded bare copper conductor, PVC / XLPE insulated, overall aluminium mylar tape shielded ATC drain wire and outer PVC sheathed industrial Instrumentation (shielded)cables voltage grade 300/500 V as per BS /EN 50288-7 in existing surface or recessed PVC/ MS conduit/casing capping / Cable tray / Open Duct making connections, testing etc. as required. OEM Must have its own in house NABL lab setup for all testing facilities for cables. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
73.62.1	2 x 1.5 Sq.mm Unarmoured With Outer Sheath in Red Color	Mtr	96.00
73.62.2	2 x 1.5 Sq.mm Armoured With Outer Sheath in Red Color	Mtr	162.00
73.63	SITC of PA system Operator Console of following wattage to be installed with Conventional fire alarm system complete with following capacity , channel mixing amplifier , 1 no cardioids goose neck microphone , 1 no professional grade cassette deck/ CD Player , 16 zone floor selector console , equipment rack complete in all respects. PA system shall be coupled to the Fire Alarm System. Etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
73.63.1	1 x 120 Watt	Each	49,822.00
73.63.2	1x 240 Watt	Each	64,352.00
73.63.3	1x 350 Watt	Each	71,958.00
73.64	SITC 6 watt Speaker mounted in M S sheet box with perforated front mesh for PA and Emergency System. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	967.00
73.65	Supply & Fixing of Water + AFFF 6% Mechanical Foam type Fire Extinguisher (Stored Pressure type) conforming to IS:15683:2018 , Powder coated Internal & External Surface Deep drawn cylinder body of Mild Steel CR2 grade conforming to IS: 513, Squeeze grip Forged brass release valve with Inbuilt safety release device, Diaphragm Type, 0 to 25 bar range pressure gauge, 450 mm long EPDM discharge tube, QR code for Product Traceability including Fixing on wall with suitable Anchor Fasteners as required of		

Code No	Description	Unit	Rate Rs.
	following capacity. Test Certificates of all the Parameters along with Hydro test & Burst test (For Cylinder Body) Certificate from OEM / External NABL Accrediated Lab is to be submitted. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
73.65.1	Capacity - 6 Ltrs.	Each	3,666.00
73.65.2	Capacity - 9 Ltrs.	Each	4,635.00
73.66	Supply & Fixing of CO2 type Fire Extinguisher conforming to IS:15683:2018, charged with CO2 gas (purity 99.7% conforming to IS 15222), Powder coated Internal & External Surface Manganese steel ISI marked as per IS 7285 cylinder body , Wheel type Forged brass release valve ISI Marked as per IS 3224 with Inbuilt safety release device ((Fusible plug and Rupture Disc Type), 1.0 Mtr. Metal wire braided hose having minimum bursting pressure of 140 Kgf/cm2, Horn with metallic thread connection, QR code for Product Traceability, including Fixing on wall with suitable Anchor Fasteners as required of following capacity. Test Certificates of all the Parameters along with Hydro test & Burst test (For Cylinder Body) Certificate from OEM / External NABL Accrediated Lab is to be submitted. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
73.66.1	Capacity 3.0 Kg.	Each	7,515.00
73.66.2	Capacity 4.5 Kg.	Each	8,761.00
73.67	Supply & Fixing of Dry Powder Agent (as per IS 4308:2019), ABC type Fire Extinguisher (Stored Pressure type) conforming to IS:15683:2018 , Powder coated Internal & External Surface Deep drawn cylinder body of Mild Steel CR2 grade conforming to IS: 513, Squeeze grip Forged brass release valve with Inbuilt safety release device, Diaphragm Type, 0 to 28 bar range pressure gauge, 450 mm long EPDM discharge tube, QR code for Product Traceability including Fixing on wall with suitable Anchor Fasteners as required of following capacity. Test Certificates of all the Parameters along with Hydro test & Burst test (For Cylinder Body) Certificate from OEM / External NABL Accrediated Lab is to be submitted. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
73.67.1	2 kg	Each	2,836.00
73.67.2	4 kg	Each	4,207.00
73.67.3	6 kg	Each	4,690.00
73.67.4	9 kg	Each	6,103.00
73.68	Supply & Fixing of Trolley mounted 22.5 Kg CO2 type Fire Extinguisher conforming to IS: 16018:2012, charged with CO2 gas (purity 99.7% conforming to IS 15222), Powder coated Internal &.		

Code No	Description	Unit	Rate Rs.
	External Surface Manganese steel ISI marked as per IS 7285 cylinder body , Wheel type Forged brass release valve ISI Marked as per IS 3224 with Inbuilt safety release device ((Fusible plug and Rupture Disc Type), 1.5 Mtr. long Metal wire braided hose having minimum bursting pressure of 140 Kgf/cm2, Horn with metallic thread connection, QR code for Product Traceability, including Double mounted handle as required of following capacity. Test Certificates of all the Parameters along with Hydro test & Burst test (For Cylinder Body) Certificate from OEM / External NABL Accrediated Lab is to be submitted. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	27,103.00
73.69	Supply & Fixing of Ceiling mounted Dry Powder Agent (as per IS 4308:2019), Modular stored pressure type ABC Fire Extinguisher , Powder coated Internal & External Surface Deep drawn cylinder body of Mild Steel CR2 grade conforming to IS: 513, Fixed Bulb with Temperature 68 deg C, QR code for Product Traceability including Fixing on Ceiling with suitable Anchor Fasteners as required of following capacity. Test Certificates of all the Parameters along with Hydro test & Burst test (For Cylinder Body) Certificate from OEM / External NABL Accrediated Lab is to be submitted. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
73.69.1	5 Kg Capacity	Each	6,333.00
73.69.2	10 Kg Capacity	Each	9,583.00
73.70	Supply & Fixing of Ceiling mounted UL listed clean Agent (HFC-236fa), Modular type Fire Extinguisher , Powder coated Internal & External Surface Deep drawn cylinder body of Mild Steel CR2 grade conforming to IS: 513, Fixed Bulb with Temperature 68 deg C, QR code for Product Traceability including Fixing on Ceiling with suitable Anchor Fasteners as required of following capacity. Test Certificates of all the Parameters along with Hydro test & Burst test (For Cylinder Body) Certificate from OEM / External NABL Accrediated Lab is to be submitted. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
73.70.1	5 Kg Capacity	Each	24,912.00
73.70.2	10 Kg Capacity	Each	45,742.00
73.71	Supplying and Fixing of Galvanized Mild Steel fire bucket Confirming to IS: 2546 : 1974 with one coat of primer and two coat of enamel paint of approved shade on Angle Iron (50 x 50 x 5 mm) Stand of Size 800 x 1240 x 400 mm with MS 22 SWG Galvanized Canopy, 4 Hooks for Buckets including associated civil works etc. as required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Set	11,753.00

Code No	Description	Unit	Rate Rs.
73.72	Providing and fixing signages as per required content printed on photoluminescent U1000 aluminium sheet of 1.0 mm (+-10%) containing Lumigen II as base chemical, covered under UV stablized coating with suitable colour combination (Glow in dark) with high intensity properties for indoor surface glow visibility not less than 6 hrs. in total darkness and of appropriate size including fixing on wall, door, ceiling etc. with proper clamps, hangers, cleats, anchor fasteners etc. complete in all respects required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
73.72.1	Single sided signage board	Sq.Inch	9.00
73.72.2	Double sided signage board	Sq.Inch	14.00
73.73	Providing and fixing of Aluminium housing body self contained Rechargeable LED Emergency Light with required content and Size Approx. 300 mm x 180 mm, confirming to IS:9583 :1981with Ni-Mh / Ni - Cd Battery, 3 Hrs Back Up, Constant Current Charger, Input Voltage 230 V , 50 Hz including fixing on wall, door, ceiling etc. with proper clamps, hangers, cleats, anchor fasteners etc. complete in all respects required. All as per pre approved by Engineer in-charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
73.73.1	Single sided signage	Each	4,496.00
73.73.2	Double sided signage	Each	5,256.00

74.0 HIRE CHARGES FOR PA SYSTEM & TEMPORARY LIGHTING

Code No	Description	Unit	Rate Rs.
74.1	Hire charges for LED Flood light luminaire (white or warm white as required)for 90- 150 watt with the standard housing ,pole & mounting accessories with wiring, connection with skilled operator to operate system as and when etc as required. (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)		
74.1.1	With suitable pole	Each/Day	260.00
74.1.2	With out pole	Each/Day	174.00
74.2	Hire charges for LED Flood light luminaire (white or warm white as required) for 200- 250 watt with the standard housing ,pole & mounting accessories with wiring, connection with skilled operator to operate system as and when etc as required. (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)		
74.2.1	With suitable pole	Each/Day	347.00
74.2.2	With out pole	Each/Day	260.00
74.3	Hire charges for weather proof round LED Rope/neon flex LED / Flexible strip type LED having 2 to 5 watts/meter capacity and consisting suitable power adapter with mains , switchgear etc complete with connection with skilled operator to operate system as and when etc as required. (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)	Mtr/day	8.00
74.4	Hire charges for IP 66 protected programmable RGB LED flood light with alluminium alloy housing and having 180 degree bracket adjustment complete with driver switchgear , wiring, connection , testing etc. with skilled operator to operate system as and when etc as required. (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)		
74.4.1	100 watt	Each/Day	522.00
74.4.2	150 watt	Each/Day	590.00
74.4.3	180 watt	Each/Day	869.00
74.4.4	300 watt	Each/Day	1,217.00
74.5	Hire Charges for LED Screen Day light type of suitable size for Display complete with mounting arrangement/scaffolding, masking of mounting stand, signal booster, network switch /splitter, data and power cables and sound system arrangement etc. with skilled operator to operate system as and when etc as required. (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)	sq.ft/ day	271.00

Code No	Description	Unit	Rate Rs.
74.6	Hire Charges for HD Video camera suitable for HDMI output, recording in DVD/hard disk fuction complete with two operator as and when etc as required. (If work contineue for more then one day , rates for next subsequent days will be 50% of the original rates.)	Each/Day	5,666.00
74.7	Hire charges for video Projection Arrangement (excluding screens) with 3 Nos. Video Camera (PWM 120 sony NX 5Z7/Equivalent) including mixer (Pansnix MX70/Data Video MX500/ Equivalent) Complete with required HDMI/VGA etc. wiring VTR, switchers, with skilled operator to operate system as and when etc as required. (If work contineue for more then one day , rates for next subsequent days will be 50% of the original rates.)	Each/Day	36,267.00
74.8	Hire charges of Crane with operators for video camera for 360° movement complete arrangement with skilled operator to operate system as and when etc as required. (If work contineue for more then one day , rates for next subsequent days will be 50% of the original rates.)	Job / day	10,880.00
74.9	Providing experienced and Highly skilled/skilled/ semi-skilled/Un Skilled labour for electric repair/ maintenance / operation of Air conditioning/Air cooling/Fire fighting/Lift/DG set/CCTV/EPABX or any other electromechanical systems as per requirement (one shift of 8 Hrs per day for 26 Working Days in a month)		
74.9.1	Highly skilled Labour	Each Per Month	11,617.00
74.9.2	skilled Labour	Each Per Month	9,836.00
74.9.3	Semi skilled labour	Each Per Month	9,408.00
74.9.4	Un skilled labour	Each Per Month	8,980.00
74.10	Add for extra working on Holidays.		
74.10.1	Highly skilled Labour	Each Per Day	447.00
74.10.2	skilled Labour	Each Per Day	378.00
74.10.3	Semi skilled labour	Each Per Day	362.00
74.10.4	Un skilled labour	Each Per Day	345.00

NOTE: Over time rates shall be two times of that category.

NOTE: Part time rates up to 4 Hours shall be charged @ 50% of that category .

NOTE: Part time rates for more than 4 Hours but less than 8 Hours

Code No	Description	Unit	Rate Rs.
	shall be charged @ 100% of that category .		
74.11	Charges for Providing of experienced and Highly skilled/ skilled/semi-skilled/ Un skilled labour for electric repair/ maintenance/operation of Air conditioning /Air cooling / Fire fighting /Lift/D G set /CCTV/EPABX or any other electromechanical services/ systems as required.(One shift of 8 Hours per day)		
74.11.1	Highly Skilled Labour	shift / day	447.00
74.11.2	Skilled Labour	shift / day	378.00
74.11.3	Semi skilled labour	shift / day	362.00
74.11.4	Un skilled labour	shift / day	345.00
74.12	Hire charges for 42" HD LED/Plazma TV complete with mounting arrangement , connections, testing etc. with skilled operator to operate system as and when etc as required. (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)	Job / day	3,626.00
74.13	Hire charges for 50/55" HD LED/Plazma TV complete with mounting arrangement , connections, testing etc.with skilled operator to operate system as and when etc as required. (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)	Job / day	4,298.00
74.14	Hire charges for Equipments Required for Public Address & Sound System for a very important public function/ VVIP visits including transportation,T&P,Scaffolding, testing and connections with trial etc. with skilled operator to operate system as and when etc as required. (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)		
74.14.1	VERTEK / RCF TT+ (55/56) 3 way Speakers 3500 to 8000 watt JBL or Equivalent make	Each/Day	3,235.00
74.14.2	VERTEK / RCF TT+ (55/56) 3 way Speakers above 8000 watt JBL or Equivalent make.	Each/Day	4,609.00
74.14.3	VERTEK / RCF TT+ (55/56) sub Woofers sound output 4000 to 8000 watt JBL or Equivalent make.	Each/Day	3,235.00
74.14.4	VERTEK / RCF TT+ (55/56) sub Woofers sound output above 8000 watt JBL or Equivalent make.	Each/Day	4,609.00
74.14.5	Core i5/i7 Laptop with HDMI cable & Stereo sound output make- HP/Dell/Lenovo or Equivalent.	Each/Day	647.00
74.14.6	Digital CD consoles with built in CD players & DJ mixer make : pioneer or equivalent.	Each/Day	3,235.00
74.14.7	D.I. Boxes of Make DBX or equivalent .	Each/Day	1,294.00

Code No	Description	Unit	Rate Rs.
74.14.8	32 Channels Equilizers make-DBX or Equivalent.	Each/Day	5,175.00
74.14.9	Cross Overs for the speakers Distributions make- DBX or equivalent.	Each/Day	3,235.00
74.14.10	5000 watts Amplifiers for up to the 06 nos Vertek 3 way speakers make -crown or equivalent	Each/Day	3,235.00
74.14.11	6000 watts Amplifiers for up to the 04 nos Vertek sub woofers make-Crown or Equivalent.	Each/Day	3,235.00
74.14.12	Suspension kits with suitable stand for the High wattage speakers	Each/Day	1,294.00
74.14.13	Required necessary audio connection cables, speakers cables,electrical wiring, boards, connector etc for speakers/horns etc. as required	Job/Day	3,235.00
74.14.14	Flying Speakers 1200 watts RMS JBL/Yamaha/RCF/ Eq	Each/Day	2,588.00
74.14.15	Top Speakers 1200 watts RMS JBL/Yamaha/RCF/Eq	Each/Day	2,588.00
74.14.16	Monitor Speakers JBL/Yamaha/RCF/ Eq (For Stage)	Each/Day	1,940.00
74.14.17	Cordless Mike Make:-Shure/AKG or equivalent .	Each/Day	388.00
74.14.18	CD Player Make:-Pioneer /Philips or Equivalent.	Each/Day	647.00
74.14.19	Digital Mixer 32 Channel, 12 output Make:-Yamaha/Sound Craft or equivalent.	Each/Day	3,235.00
74.14.20	Analog Mixer 24 Channel, 7 output Make:- Yamaha/Sound Craft or equivalent.	Each/Day	2,588.00
74.14.21	Effect Processors. Make:-LSS/Behringer or equivalent.	Each/Day	647.00
74.14.22	Compressors. Make:-LSS/Behringer or equivalent.	Each/Day	647.00
74.14.23	Amplifiers 700 Watt RMS at 100 Ohm. Make:-Ahuja/QSC or equivalent.	Each/Day	647.00
74.14.24	Podium Microphones. Make:-Shure/AKG or equivalent.	Each/Day	647.00
74.14.25	Mikes with Big stand. Make:-Shure/AKG or equivalent.	Each/Day	647.00
74.14.26	Head Phone. Make:-Shure/AKG or equivalent.	Each/Day	971.00
74.14.27	Digital Audio recorder. Make:-Cinex or equivalent.	Each/Day	2,588.00
74.14.28	31 Band Equalizer. Make:-LSS/Behringer or equivalent.	Each/Day	2,588.00
74.14.29	Snake Cable 2 x 100 mtr as required.	Job/Day	518.00
74.14.30	Crossover Make:-LSS/Behringer or equivalent.	Job/Day	1,294.00
74.15	Hire charges for 500/1000 Watt halogen flood luminaire(with lamp) with skilled operator to operate system as and when etc as required. (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)		
74.15.1	With suitable pole	Each/Day	43.00
74.15.2	With out pole	Each/Day	26.00

Code No	Description	Unit	Rate Rs.
74.16	Hire charges for LED post top lantern upto 25-45 watt on suitable pole with skilled operator to operate system as and when etc as required. as required. (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)	Each/Day	95.00
74.17	Hire charges for light point complete with lamp,holder,wiring in casing or in PVC conduit , controlling switch and circuit protection MCB's with skilled operator to operate system as and when etc as required. for shops/ stalls etc. (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)	Each/Day	70.00
74.18	Hire charges for power/light plug on board incl. wiring in PVC casing or in PVC conduit , controlling switch and circuit protection MCB's with skilled operator to operate system as and when etc as required. for shops/ stalls etc. (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)	Each/Day	105.00
74.19	Hire charges for Jhalar bulb15/25 watt coloured/clear with skilled operator to operate system as and when etc as required. (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)	Each/Day	4.00
74.20	Hire charges for miniature bulb with skilled operator to operate system as and when etc as required. (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)		
74.20.1	for 60 nos. 6.2 v miniature bulb	Each/Day	12.00
74.20.2	for 50 nos. 0.25 v LED miniature bulb	Each/Day	14.00
74.21	Hire charges of niwar patti with skilled operator to operate system as and when etc as required. (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)		
74.21.1	niwar patti 60 no. 6.2 v miniature lamps.	Each/Day	15.00
74.21.2	niwar patti 50 no. 0.25 v LED miniature lamps.	Each/Day	21.00
74.22	Hire charges for LED tube light fixture with 18/20 watt with skilled operator to operate system as and when etc as required. (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)	Each/Day	35.00
74.23	Hire charges for Light fixture with CFL 9 / 11/ 13 / 15 watt with skilled operator to operate system as and when etc as required. (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)	Each/Day	17.00
74.24	Hire charges for LED bulb 6 watt to 13 watt of white/ warm white colour etc. mounted on wooden batten/niwar patti or in holder (with required CCT)as per choice of client or engineer in-charge complete with wiring etc with skilled operator to operate system as and when etc as required. (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)	Each/Day	10.00

Code No	Description	Unit	Rate Rs.
74.25	Hire charges for 250/400 watt metal halide luminaire with lamp and pole of required height with skilled operator to operate system as and when etc as required. (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)	Each/Day	130.00
74.26	Hire charges for 500/1000 watt appollo light for shops/ stalls with skilled operator to operate system as and when etc as required. (with lamp) (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)	Each/Day	70.00
74.27	Hire charges for Silent type D.G. Set, including change over switch. Control panel etc. and excluding POL with skilled operator to operate system as and when etc as required. of following capacity:		
74.27.1	15 to 25 KVA	Each/Day	3,128.00
74.27.2	40 KVA	Each/Day	3,996.00
74.27.3	62.5 KVA	Each/Day	5,213.00
74.27.4	82.5 KVA	Each/Day	6,256.00
74.27.5	125 KVA	Each/Day	8,689.00
74.27.6	180 KVA	Each/Day	11,296.00
74.27.7	250 KVA	Each/Day	15,640.00
74.27.8	500 KVA	Each/Day	21,723.00
74.28	Hire charges of Main service line for 3 phase connection upto 50 mtr. Length (without any joint) including meter board, panel/distribution Board and supports with skilled operator to operate system as and when etc as required. (If work continue for more then one week , rates for next subsequent weeks will be 50% of the original rates.)		
74.28.1	Upto 25.0 sq.mm size PVC insulated and Sheathed cable(Armoured or Un-armoured as required.)	Each / week	260.00
74.28.2	above 25.0 sq.mm & upto 95 Sq.mm PVC insulated and Sheathed cable(Armoured or Un-armoured as required.)	Each / week	391.00
74.28.3	above 95.0 sq.mm PVC insulated and Sheathed cable(Armoured or Un-armoured as required.)	Each / week	695.00
74.29	Hire charges of Sub service line for single/ three phase connection upto 30 mtr. Length including dist. Board and supports with skilled operator to operate system as and when etc as required. (If work continue for more then one week , rates for next subsequent weeks will be 50% of the original rates.)		
74.29.1	Single phase upto 6 Sqmm PVC insulated and Sheathed cable	Each / week	70.00
74.29.2	Three phase & neutral upto 10 SqmmPVC insulated and Sheathed cable	Each / week	139.00
74.30	Hire charges for Desert cooler of size 20" fan with stand, wiring including filling of water complete with skilled operator to operate system as and when etc as required.	Each / week	217.00

Code No	Description	Unit	Rate Rs.
74.31	Hire charges for pedestal fan of size 18" / ceiling fan of size 48"/56" sweep including connections etc.with skilled operator to operate system as and when etc as required. (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)	Each / day	87.00
74.32	Supply and filling of POL for DG sets	KVA / Hour	17.00
74.33	Hire charges for LPG Heater including commercial gas cylinder,regulator and operator with skilled operator to operate system as and when etc as required. (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)	Each / day	2,085.00
74.34	Hire charges for Mist Fan complete with required connections and operator with skilled operator to operate system as and when etc as required. (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)	Each / day	869.00
74.35	Hire charges for Jumbo polycarbonate/fiber body moveable desert cooler complete with water filling and operator with skilled operator to operate system as and when etc as required. (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)	Each / day	1,217.00
74.36	Hire charges for following type of Airconditioners including copper piping , drain piping and electrical connections with skilled operator to operate system as and when etc as required. (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)		
74.36.1	1.5 TR Split AC	Each / day	3,339.00
74.36.2	2.0 TR Split AC	Each / day	3,536.00
74.36.3	3.0 /4.0 TR Tower type split AC	Each / day	6,876.00
74.36.4	5.0/5.5 TR ductable type Split AC	Each / day	9,823.00
74.37	Hire charges of public address system for a important public function with 5/ 6 no. of microphones with following nos of stand Hi Fi box, speakers/ Horns, stand by amplifiers , battery backup complete including transportation etc. with skilled operator to operate system as and when etc as required. : (At district Head Quarters) (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)		
74.37.1	4 Nos 3 Way Big Box Speakers,(upto 5000 audiences)	Each / day	5,387.00
74.37.2	6 Nos 3 Way Big Box Speakers,(above 5000 to 10000 audiences)	Each / day	10,426.00
74.37.3	8 Nos 3 Way Big Box Speakers,(above 10000 to 25000 audiences)	Each / day	14,771.00
74.37.4	10 Nos 3 Way Big Box Speakers,(above 25000 audiences)	Each / day	19,115.00
74.37.5	With 5/6 Mikes, 15 to 20 nos. reflex horns (upto 25000 audiences)	Each / day	6,952.00
74.37.6	With 5/6 Mikes, 25-30 nos. reflex horns (above 25000 audiences)	Each / day	9,558.00

Code No	Description	Unit	Rate Rs.
74.38	Hire charges for table microphone (Delegate type) (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)	Each / day	347.00
74.39	Hire charges for clip microphone with long lead lavilier. (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)	Each / day	417.00
74.40	Hire charges for collar cordless/ Handheld microphone with long lead lavilier. (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)	Each / day	522.00
74.41	Hire charges for public address system consisting of 2 Microphone with stand, Battery Backup, Amplifier, 2 Loudspeakers with skilled operator to operate system as and when etc as required. (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)	Each / day	2,259.00
74.42	Hire charges for 2 nos. 3 way Bigbox speakers with 5/6 Microphones, mixer, echo chamber, Amplifier, Battery back up with skilled operator to operate system as and when etc as required. for Musical programme. (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)	Job / day	8,689.00
74.43	Hire charges for extra battery of 12 V , 125 AH with skilled operator to operate system as and when etc as required. (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)	Each / day	260.00
74.44	Hire charges for cut glass chendilier of 20 lamps with skilled operator to operate system as and when etc as required. (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)	Each / day	695.00
74.45	Hire charges for cut glass chendilier of 15 lamps with skilled operator to operate system as and when etc as required. (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)	Each / day	522.00
74.46	Hire charges for cut glass chendilier of 7 lamps with skilled operator to operate system as and when etc as required. (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)	Each / day	243.00
74.47	Hire charges for spot /palican lights (1000 watt) for stage function with dimmer as required. (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)	Each / day	347.00
74.48	Hire charges for colour effect scanners for stage functions with skilled operator to operate system as and when etc as required. (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)	Each / day	1,912.00
74.49	Hire charges for jumbo strove light for stage functions with skilled operator to operate system as and when etc as required. (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)	Each / day	1,217.00

Code No	Description	Unit	Rate Rs.
74.50	Hire charges for Back or Front Projection Screen with skilled operator to operate system as and when etc as required. (If work continue for more than one day , rates for next subsequent days will be 50% of the original rates.)	Each / day	522.00
74.51	Hire charges for High Lumens LCD Projectors with operator (3500 Lumens) and projector screen of size 8' X 6' with skilled operator to operate system as and when etc as required. (If work continue for more than one day , rates for next subsequent days will be 50% of the original rates.)	Each p. day	2,607.00
74.52	Hire charges for Medium Lumens LCD Projectors with operator (2500 Lumens) and projector screen of size 8' X 6' with skilled operator to operate system as and when etc as required. (If work continue for more than one day , rates for next subsequent days will be 50% of the original rates.)	Each p. day	2,085.00
74.53	Hire charges for Cable fault locator machine with manpower for detecting fault in underground cable of LT 1.1 KV grade or 11/33KV HT cable	Each per Fault	10,426.00

75.0 REPAIRING OF FANS, COOLERS, PUMPS, MOTORS, FRIDGES & AIRCONDITIONERS

Code No	Description	Unit	Rate Rs.
75.1	Rewinding of ceiling fan motor (starting and running winding) including all necessary material. The motor is to be wound taking no. of coils, turns and pitch as it was originally wound with required size super enamelled wire with 'E' class insulation material and making connections etc. as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor. (New model ceiling fan)		
75.1.1	900/1200 mm sweep (New model ceiling fan)	Each	538.00
75.1.2	1400 mm sweep (New model ceiling fan)	Each	636.00
75.1.3	All sizes (Old model ceiling fan)	Each	1,708.00
75.2	Labour charges for removing and refixing of Ceiling fan/ Exhaust fan from site	Each	69.00
75.3	Charges for oiling, overhauling of ceiling fan, table fan, pedestal fan irrespect to the size of fan including removing,refixing of fan from site and testing etc. as required.		
75.3.1	Fans w/o Removing & Refixing	Each	41.00
75.3.2	Fans with Removing & Refixing at Suitable Location	Each	110.00
75.4	Providing and Replacement of ball bearing of ceiling/ exhaust fan and refixing the same at suitable location as requiredand as per OEM recommendations. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	268.00
75.5	Provinding & Replacement of M.S. Shaft of ceiling fan. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	158.00
75.6	P & Replacement of cover/ bearing seat of ceiling/ exhaust fan. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	144.00
75.7	P & F Aluminium Blades (a set of 3 blades) duly painted and well finished 900/ 1200 mm. The material of the fan blade shall be of designation 31500B with condition HX6 aluminium alloy sheet confirming to IS 737/2008	Each	253.00
75.8	P & F Aluminium Blades (a set of 3 blades) duly painted/ powder coated. (1400/ 1500 mm) The material of the fan blade shall be of designation 31500B with condition HX6 aluminium alloy sheet confirming to IS 737/2008	Each	322.00

Code No	Description	Unit	Rate Rs.
75.9	P & F of rubber gromet (fan insulator)	Each	37.00
75.10	Providing and Replacement of Gun metal bush of ceiling/exhaust/cooler fan/ as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	158.00
75.11	P & F 3 Speed rotary switch for Desert Cooler complete with testing etc as required.	Each	85.00
75.12	P & Replacement of M.S. Shaft of fan motor for Desert Cooler/ exhaust fan. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	164.00
75.13	P & replacement of supporting legs(4 no.) of vertical pump of desert cooler as required for Desert Cooler/ exhaust fan. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	117.00
75.14	P & F of stud with nuts and washer for Desert Cooler/ exhaust fan.All the scrap material should be retained by the contractor.	Each	50.00
75.15	Servicing and overhauling of 20" sweep desert cooler including oiling, greasing, painting of tank from inside with rubber paint after properly desmantling each assembly and refixing the same as required.	Each	253.00
75.16	Painting of desert cooler with two coats of rubber paint inside of water tank and two coat of synthetic enamelled paint on both side of cooler body, fan body, grills etc.after cleaning with sand paper, complete in all respect as required.	Each	439.00
75.17	Replacement of cooler pads (heavy) set of 3 no. of size 25" x 27"	Each	103.00
75.18	P & F Brass float valve of weighing approx. 250 gm, 8" long rod,PVC ball of 4" dia. For desert coler as required.	Each	233.00
75.19	P & F adjustable M.S.grill 20/22 gauge of size approx. 24" x 26" including painting etc. as required.	Each	322.00
75.20	P & F aluminium blade for 20" desert cooler fan as required.	Each	227.00
75.21	P & F outer/inner threaded PVC nipple 1/2" dia and 2" long	Each	13.00
75.22	P & Replacement of pvc pipe of 1/2" size for vertical pump of desert cooler as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	32.00
75.23	P & replacement of shaft for vertical pump of desert cooler as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	EACH	69.00
75.24	Spray painting of ceiling fan of size 900/1200/ 1400/ 1500 mm with two coats of white/ brown enamelled paint after cleaning with sand paper. Filling etc. as required.	Each	158.00

Code No	Description	Unit	Rate Rs.
75.25	P & replacement of 4 nos. supporting legs of 20" fan motor with rubber pads of desert cooler as required.Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	151.00
75.26	P & replacement of high quality pvc distribution ' T 'and 3 no. elbow for cooler	Each	24.00
75.27	P & F ISI marked commercial plywood 4.0 mm thick including cutting, hardwares etc. as required.	SQ.Mtr.	288.00
75.28	Labour Charges for fixing of desert cooler in windows including handling of cooler upto desired location, making electrical/water connections, testing etc. as required.		
75.28.1	Ground floor	Each	76.00
75.28.2	First floor	Each	123.00
75.28.3	Second floor	Each	158.00
75.29	P & F of ISI marked vertical pump suitable for 20" desert cooler including making connection testing etc. as required.		
75.29.1	ISI marked vertical pump	Each	556.00
75.30	P & F of submercible pump set suitable for 18/24 "Desert coolers.	Each	316.00
75.31	P & F of submercible pump set suitable for 36 "Desert coolers.	Each	692.00
75.32	P & F fan motor suitable for 20" desert cooler including making connection testing etc. as required.		
75.32.1	with copper winding Motor ISI Marked	Each	3,598.00
75.32.2	with Aluminium winding Motor ISI Marked	Each	2,076.00
75.33	Rewinding of Heavy duty Exhaust fan motor including all necessary material,The motor is to be wound taking no. of coils,turns and pitch as it was originally wound with required size super enamelled wire with 'E' class insulation material and making connections etc. as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.		
75.33.1	300/ 380 mm sweep	Each	803.00
75.33.2	450 mm sweep	Each	1,041.00
75.33.3	600 mm sweep	Each	1,465.00
75.34	Rewinding of 400 mm table fan/pedestal fan motor including all necessary material,The motor is to be wound taking no. of coils,turns and pitch as it was originally wound with required size super enamelled wire with 'E' class insulation material and making connections etc. as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	436.00
75.35	Rewinding of single phase motor of 1400 RPM including all		

Code No	Description	Unit	Rate Rs.
	necessary material and of the same characteristics as original with required size of super enamelled wire 'E' class insulation material and testing etc. as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.		
75.35.1	0.25 H.P. To 0.50 H.P.	Each	938.00
75.35.2	0.75 H.P. To 1.0 H.P.	Each	1,287.00
75.35.3	2.0 H.P.	Each	2,125.00
75.36	Rewinding of three phase squirrel cage induction motor of 1400 to 2800 RPM including all necessary material and of the same characteristics as original with required size of super enamelled wire 'E' class insulation material and testing etc. as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.		
75.36.1	3.0 H.P.	Each	3,485.00
75.36.2	5.0 H.P.	Each	4,326.00
75.36.3	7.5 H.P.	Each	5,065.00
75.36.4	10.0 H.P.	Each	6,449.00
75.36.5	12.5 H.P.	Each	7,813.00
75.36.6	15.0 H.P.	Each	9,889.00
75.37	Rewinding of motor of desert cooler pump with super enamelled copper wire, 'E ' class insulation material including removing,refixing,testing etc. as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	256.00
75.38	Rewinding of motor of desert cooler fan with super enamelled copper wire, 'E ' class insulation material including removing,refixing,testing etc. as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	913.00
75.39	Providing and replacement of heating element of blower type heat convector as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	123.00
75.40	Providing and replacement of heating element rod of radiation type heat convector as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	117.00
75.41	Providing and replacement of Superior quality Chrome plated reflector of radiation type heat convector as required.Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.		

Code No	Description	Unit	Rate Rs.
75.41.1	single rod	Each	137.00
75.41.2	double rod	Each	164.00
75.42	Supplying and charging of fresh refrigerant and testing of performance of air conditioner/ fridge/ water cooler of following capacity including capillary and strainer/ filter.		
75.42.1	1.0 TR Window/ Split A.C.	Each	1,781.00
75.42.2	1.5 TR Window/ Split A.C.	Each	2,467.00
75.42.3	2.0 TR Window/ Split A.C.	Each	3,153.00
75.42.4	25/50 / 40/80 Ltr. Water cooler	Each	1,919.00
75.42.5	60/120 Ltr. Water cooler	Each	2,194.00
75.42.6	150/150 Ltr. Water cooler	Each	2,605.00
75.42.7	165 Ltr Refrigerator	Each	1,439.00
75.42.8	200/210 Ltr Refrigerator	Each	1,987.00
75.42.9	280/310 Ltr Refrigerator	Each	2,399.00
75.43	Replacement of defective compressor by company repaired compressor as per OEM recommendations of following gadgets including testing etc. as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.		
75.43.1	1.0 TR A.C.	Each	10,965.00
75.43.2	1.5 TR A.C.	Each	12,336.00
75.43.3	2.0 TR A.C.	Each	13,021.00
75.43.4	25/50 / 40/80 Ltr. Water cooler	Each	6,100.00
75.43.5	60/120 Ltr. Water cooler	Each	8,155.00
75.43.6	150/150 Ltr. Water cooler	Each	8,841.00
75.43.7	165 Ltr Refrigerator	Each	3,633.00
75.43.8	200/210 Ltr Refrigerator	Each	4,386.00
75.43.9	280/310 Ltr Refrigerator	Each	4,728.00
75.44	P & Replacement of condensing/ cooling coil of copper fins for following capacity A.C./ Water cooler/ Fridge as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.		
75.44.1	1.0 TR A.C.	Each	3,289.00
75.44.2	1.5 TR A.C.	Each	3,700.00
75.44.3	2.0 TR A.C.	Each	4,112.00
75.44.4	25/50 / 40/80 Ltr. Water cooler	Each	2,467.00
75.44.5	60/120 Ltr. Water cooler	Each	3,016.00

Code No	Description	Unit	Rate Rs.
75.44.6	150/150 Ltr. Water cooler	Each	3,289.00
75.44.7	165 Ltr Refrigerator	Each	1,508.00
75.44.8	200/210 Ltr Refrigerator	Each	1,781.00
75.44.9	286/310 Ltr Refrigerator	Each	2,056.00
75.45	Servicing of 1.0/1.5/2.0 TR capacity Split/ Window type air conditioner	Each	686.00
75.46	P & Replacement of overload protection of A.C./ Water cooler as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	480.00
75.47	P & Replacement of thermostat of A.C./ Water cooler/fridge as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	411.00
75.48	P & Replacement of selector switch of 1.0/1.5/2.0 TR A.C Fan as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	123.00
75.49	P & Replacement of starting relay of A.C/water cooler/fridge compressor as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	480.00
75.50	P & Replacement of door liner of 165/200 Ltr. Fridge as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	1,233.00
75.51	P & Replacement of door liner of 286/310 Ltr. Fridge as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	1,508.00
75.52	P & Replacement of main liner of 165/200 Ltr. Fridge as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	2,056.00
75.53	P & Replacement of main liner of 286/310 Ltr. Fridge as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	2,330.00
75.54	P & Replacement of door gasket of 165/200 Ltr. Fridge as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	240.00

Code No	Description	Unit	Rate Rs.
75.55	P & Replacement of door gasket of 286/310 Ltr. Fridge as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	383.00
75.56	P & Replacement of PVC/ acrylic vegetable basket of 165/200 Ltr. Fridge as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	383.00
75.57	P & Replacement of PVC/acrylic vegetable basket of 280/310 Ltr. Fridge as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	383.00
75.58	P & Replacement of glass/acrylic cover for vegetable basket of 165/200 Ltr. Fridge as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	281.00
75.59	P & Replacement of glass/acrylic cover for vegetable basket of 286/310 Ltr. Fridge as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	316.00
75.60	P & Replacement of PVC /acrylic bottle supporter of 165/200/ 286/310 Ltr. Fridge as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	144.00
75.61	P & Replacement of aluminium bottle supporter of 165/200/ 286/310 Ltr. Fridge as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	164.00
75.62	P & Replacement of PVC./acrylic freezer door of 165/200 Ltr. Fridge as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	342.00
75.63	P & Replacement of PVC./acrylic freezer door of 286/310 Ltr. Fridge as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	411.00
75.64	P & Replacement of door handle of 165/200/286/310 Ltr. Fridge as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	309.00
75.65	P & Replacement of lamp of Fridge as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	34.00

Code No	Description	Unit	Rate Rs.
75.66	P & Replacement of PVC/acrylic chiller tray of 165/200 Ltr. Fridge as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	301.00
75.67	P & Replacement of PVC/acrylic chiller tray of 286/310 Ltr. Fridge as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	336.00
75.68	P & Replacement of fridge lock complete as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	212.00
75.69	Spray painting of complete fridge (inside and outside) of 165/ 200 Ltr. Capacity.	Each	1,439.00
75.70	Spray painting of complete fridge (inside and outside) of 286/310 Ltr. Capacity.	Each	1,576.00
75.71	P & Replacement of fan motor of evaporator/ condensor complete as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	2,125.00
75.72	S & F of capacitor of 230V/ 275V, 50Hz rating of plastic casing and terminals -Lugs or copper wire.		
75.72.1	Starting capacitor		
75.72.1.1	20-30 micro farad	Each	137.00
75.72.1.2	40-60 micro farad	Each	181.00
75.72.1.3	60-80 micro farad	Each	239.00
75.72.1.4	80-100 micro farad	Each	301.00
75.72.1.5	100-120 micro farad	Each	316.00
75.72.1.6	120-150 micro farad	Each	370.00
75.72.2	Running capacitor		
75.72.2.1	2.5/3.15 micro farad	Each	48.00
75.72.2.2	4.0 micro farad	Each	57.00
75.72.2.3	6.0 micro farad	Each	74.00
75.72.2.4	8.0 micro farad	Each	84.00
75.72.2.5	10.0 micro farad	Each	97.00
75.72.2.6	15.0 micro farad	Each	130.00
75.72.2.7	20.0 micro farad	Each	211.00
75.72.2.8	25.0 micro farad	Each	235.00

Code No	Description	Unit	Rate Rs.
75.73	P & Replacement of plastic/metallic sheet condensor holder suitable for ceiling fan/ exhaust fan /motor etc complete as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	24.00
75.74	Rewinding of single phase/3phase submersible motor including all necessary material and of the same characteristics as original with required size of super enamelled wire 'E' class insulation material and testing etc. as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.		
75.74.1	0.5 H.P. To 1.0 H.P.	Each	3,700.00
75.74.2	2.0 H.P.to 3.0 HP	Each	6,442.00
75.74.3	Above 3.0 HP to 5.0 HP	Each	8,498.00
75.74.4	From7. 5 HP to 10.0 HP	Each	10,553.00
75.75	Repairing of submersible pump of with replacement of broken impellers ,diffuser,bush/bearing set , oil seal complete with testing etc. as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.		
75.75.1	0.5 H.P. To 1.0 H.P.	Each	2,605.00
75.75.2	2.0 H.P.to 3.0 HP	Each	4,044.00
75.75.3	Above 3.0 HP to 5.0 HP	Each	5,483.00
75.75.4	From7. 5 HP to 10.0 HP	Each	6,853.00

76.0 SOLAR BASED WATER SUPPLY SCHEMES

Code No	Description	Unit	Rate Rs.
76.1	Supply, installation testing and commissioning of MNRE approved Grid tied Solar Panels with inverter, meter, cable etc. suitable for Rooftop installation as well as Unility Scale Solar Power Projects with 25 years of linear generation warranty, Work includes designing of solar panel area and MS frame and foundation on ground/roof of Pump house or CWR, showing arrangement of panel in available space. Installation of PV module on MS frame as per approved design and drawings. Mounting structure shall be suitably designed to withstand wind velocity up to 150km/hr. Grid Tie Transformer less inverters, Multiple independent MPPTs, Peak efficiency of >98%. Connect up to multiple strings PV arrays. Easy & fast connection, Built in string level monitoring, IP 65 protection level, Wi-Fi/ internet based remote monitoring with 5 years warranty. All cabling up to panel and metre, earthing etc. required accessories and taxes are inclusive. The work shall be executed as per detailed technical specifications, approved drawing and direction of Engineer in-charge. Note: There shall be 5 year service warranty for panel, inverter meter, cable etc, and suitable provision shall be included in tender document		
76.1.1	Solar panels up to 10 KW at a single location	Watt	60.00
76.1.2	far panels more than 10 KW and up to 50 KW at a single location,	Watt	57.00
76.2	Supply, installation testing and commissioning of MNRE approved off Grid Solar Panels for running of motor pumps with 25 years of Linear Generation warranty, Work indudes designing of solar panel area and MS frame and foundation on ground/roof of Pump house of CWR, showing arrangement of panel in available space, installation of PV module on MS frame as per approved desgin and drawings. Mounting structure shall be suitably design to withstand wind velocity up to 150km/hr. The work shall be executed as per detaled technical specifications, approved drawing and direction of Engineer in-charge. Note: There shall be 5 year service warranty for panel, inverter meter, cable etc, and suitable provision shall be included in tender document	Watt	43.00
76.3	Supply, installation, testing and commissioning of MNIE approved off Grid Solar Panels for running of motor pumps with 25 years of Linear Generation warranty, Work includes designing of solar panel area and MS fabricated structure 120 micron hot dip galvanized iron, showing arrangement of panel In available space and installation of PV module on frame structure such that minimum height of lower edge of panel shall be 4.0 mtr from ground level to safeguard against damage and theft as per indicative drawing enclosed with the bid document. The foundation of structure shall be in ACC Mounting structure shall be suitably designed to withstand wind velocity up to 150km/hr. The work shall be executed as per detailed		

Code No	Description	Unit	Rate Rs.
	technical specifications, approved drawing and direction of Engineers in-charge. Note There shall be 5 year service warranty for solar panel and mounting structure and suitable provision shall be included in tender document.	Watt	60.00
76.4	Supply, installation, testing and commissioning of MNRE approved off Grid Solar Panels for running of motor pumps with 25 years of Linear Generation warranty. Work includes designing of solar panel area and structure, showing arrangement of panel on rectangular OHSR with flat roof/ MS fabricated structure with polyethylene tank and installation of PV module on above structure as per approved design and drawings. Mounting structure shall be suitably design to withstand wind velocity up to 150km/hr. The work shall be as per detailed technical specifications, approved drawing and direction of Engineer in-charge. Note: There shall be 5 year service warranty for panel, inverter meter, cable etc, and suitable provision shall be included in tender document	Watt	51.00

Annexure-A

Additional Technical parameters of products/ work

- 1 PWD specifications for Electrical works -2012 (as amended upto date), relevent IS codes, National Building Code / National Lighting Code / National electric Code / Indian Electricity Rules (all as amended upto date) shall be treated as part of this Electric BSR-2022 for the purpose of detailed specifications & clarifications, if any. Henceforth this BSR-2022 shall be considered as part of all contracts/ agreements, controversy / dispute in interpretation of BSR -2022, decision of Chief Engineer (Electrical) PWD Rajasthan shall be final & binding.
- 2 The mode of measurement of wiring and method of work execution shall be uniform & strictly as laid down in PWD specification for electrical works 2012 in general and for genuine work practice.
- 3 OEM installation manual guideline practice for execution of work at site must be followed by agency's engineer & verified by department.
- 4 Agency must ensure to execute all hidden items in presence of engineer-in-charge or site engineer. GPS Photo be attach at the time of measurement.
- 5 Tests of specified items below must be done in Government approved OEM's authorised Labs / outsource from government approved any authorised Lab by agency & no extra payment shall be made for below mentioned tests & procedures at all :-↓

Sr.No.	Item Name	Tests must be done in Government approved OEM's authorised Labs / outsource from government approved any authorised Lab as mentioned below:
	↓	01 test if quantity in BOQ/execution is more then ↓
1	Wiring accessories (switch / socket)	500 wiring points
2	Wiring accessories Regulator / dimmer	150 Nos.
3	PVC / Steel Conduit (Total of all sizes)	500 wiring points
4	Sheet Steel Box/ M.S. Box/ GI Box/ PVC Box (Total of all sizes)	300 Nos. (Total of all sizes)
5	MCB/RCCB/Isolator (1 Pole to 4 Pole) (Total of all amp rating)	150 Nos. (Total of all amp rating)
6	Ceiling Fan/ Exhaust /fresh air/ wall mounting fan. (Total All sizes)	100 Nos. (Total All sizes)

- 6 Factory Inspection for testing of specified items below must be done in Government approved **OEM's authorised Labs** by departmental Engineer. Agency must ensure to make all necessary permission and arrangements for the visit & no extra payment shall be made for all this procedure :-↓

Sr.No.	Item Name	Factory inspection for testing in Government approved OEM's authorised Labs by department engineer as mentioned below :-
	↓	If quantity in BOQ/execution is more then ↓
1	Indoor LED Lighting fixture all types	200 Nos.
2	Outdoor LED Lighting fixture all types	50 Nos.
3	Lattice tower all sizes	5 Nos.
4	Air Conditioner	30 Nos.
5	Air cooling machine/ Chillers	5 Nos.
6	Street light pole	30 Nos.
7	Transformer	compulsory for Each quantity
8	High mast pole	compulsory for Each each if height is 16 Mtr. or more
9	DG set	compulsory for Each quantity
10	RMU	compulsory for Each quantity
11	Bus Bar Trunking	compulsory for Each quantity

- 7 Any Items can be send for testing by Engineer-in-Charge in Government Authorised any approved Lab. Payment of testing charge shall be borne by department for that. Agency is liable to make all necessary arrangement to send the sample & get reports from lab without any extra cost.
- 8 Agency will submit minimum one year valid guarantee certificate of Product & Liable product genuineness purchase proof from OEM/ Authorised Dealer .
- 9 Appropriate/ Routine type Test Certificates/ reports related to IS code with liable standard warranty proof / certificate of product from OEM / authorised dealer shall be submitted by agency during / at the time of execution & duly verified by Engineer-in-Charge.
- 10 Agency must ensure to prepare the Satisfactory installation service report from OEM engineer for major items like DG set, Transformer, PSS, RMU, Fire fighting pumps, VRF/VRV, package AC units, ACB, High Mast (16 mtr. or higher) etc. and submit the same in Engineer In-charge office. All record be kept with agreement file.

A - MACHINERY

Note-1: Hire charges include cost of services of operating staff, Cost of lubricating oil, diesel / Petrol/ Kerosene oil, other consumables for running the plant and machinery and excluding GST.

Note-2: The hire charges of plant & machinery on per day basis are for single shift of eight working hours.

Code No	Description	Unit	Rate Rs.
0001	Hydraulic Excavator of 1 cum bucket	hour	930.00
0003	Hire charges of Diesel Truck - 9 tonne	day	1,850.00
0004	Truck 5.5 cum per 10 tonnes	hour	250.00
0005	Truck 5.5 cum per 10 tonnes	tonne.km	5.30
0010	Tipper - 5 cum	hour	235.00
0011	Hire and running charges of DTH drilling system with driver and fuel.	day	8,780.00
0012	Hire and running charges of rotary drilling system with driver and fuel.	day	10,500.00
0013	Transit Mixer 4.0/4.5 cum	hour	800.00
0014	Transit Mixer 4/4.5 cum	tonne.km	14.00
0015	Hire and running charges of Hydraulic Excavator (3D) with driver and fuel.	day	8,780.00
0016	Truck Trailor 30 tonne capacity	hour	1,470.00
0017	Truck Trailor 30 tonne capacity	t.km	6.50
0018	Truck mounted sewer cleaning machine comprising of suction-cum-jetting unit having combined high pressure jetting-cum suction (vacuum) of Suction Pump capacity 400 cum/hour 27" Hg column and Jetting Pump flow capacity 200 ltrs/ minute, max working pressure 150 kg/ sqcm / 2100 PSi and sludge tank and water tank of individual capacity not less than 2000 litres each with operator and driver.	hour	1,060.00
0019	Sewer by passing machinery set comprising of self priming sewage suction-pump, flexible suction and delivery line, DG set, and other necessary equipments with operator diesel lubricants, barricading area etc and expense of to and fro carriage.	hour	1,600.00
0020	Road Milling Machine	hour	2,240.00
0021	Front End loader 1 cum bucket capacity	hour	930.00
0023	Tractor Trolly	hour	240.00
0024	Tractor with Rotevator	hour	330.00
0025	Tractor with Ripper	hour	210.00
0029	Smooth Wheeled Roller 8 tonne	hour	230.00
0031	Vibratory Roller 8 tonne	hour	760.00
0034	Tandem Road Roller (Two wheeled)	hour	1,000.00

Code No	Description	Unit	Rate Rs.
0037	10 HP Pumping set (Diesel Engine Operated)	Day	465.00
0038	Verticality test by plumbing system and Draw down test of tube well by pumping system as per IS: 2800 (Part II) 1979 and yield test i/c hire charges of pump set and transportation	each	6,600.00
0039	Hire charges of Pumpset of capacity 4000 litres/hour.	Day	530.00
0040	High pressure jet machine	Day	1,130.00
0043	Water supply tanker of 5000 litre capacity	each	700.00
0044	Resistivity survey by VES method for locating proper spot for tube well drilling	point	1,430.00
0045	Crane with grab 0.75 cum capacity	hour	1,100.00
0046	Cranes 3 tonnes	hour	320.00
0047	Crane 5 tonne capacity	hour	660.00
0048	Crane 10 tonne capacity	hour	720.00
0049	Crane 15 tonne capacity	hour	800.00
0052	Cranes 35 tonnes	hour	1,000.00
0054	Crane 80 tonnes	hour	1,160.00
0055	Mobile crane.	per day	6,400.00
0057	Dozer D - 50 - A 15	hour	840.00
0058	Dozer D - 80 - A 12	hour	980.00
0059	Hire charges of Concrete Mixer 0.14 cubic metre	Day	530.00
0060	Concrete Mixer 0.4/0.28 cum	hour	150.00
0061	Concrete Mixer 1 cum	hour	185.00
0062	Batching and Mixing Plant (b) 15 - 20 cum capacity	hour	2,000.00
0063	Batching and Mixing Plant (a) 30 cum capacity	hour	2,270.00
0064	Cement concrete batch mix plant @ 75 cum per hour	hour	2,750.00
0065	Cement concrete batch mix plant @ 175 cum per hour (effective output)	hour	11,200.00
0068	Concrete Pump of 45 & 30 cum capacity	hour	650.00
0070	Vibrator(Needle type 40mm)	Day	275.00
0072	Surface Vibrator	Day	400.00
0073	Concrete Paver Finisher with 40 HP Motor	hour	2,850.00
0077	Wet Mix Plant 75 TPH	hour	2,750.00
0080	Hotmix Plant - 120 TPH capacity	hour	1,500.00
0081	Hotmix Plant - 100 TPH capacity	hour	1,500.00
0082	Sewer line CCTV survey and preparation of report	metre	1,500.00
0083	Preparation of special cloth pipe impregnated with special combination of regins	sqm	8,000.00
0084	Air pressuring with computerised controlled compressor	hour	950.00

Code No	Description	Unit	Rate Rs.
0085	Curing with steam with computerised controlled steam supplying machine	hour	850.00
0090	Hire charges of Spraying machine including electric charges	Day	230.00
0091	Bitumen Pressure Distributor	hour	320.00
0092	Bitumen Boiler oil fired	hour	140.00
0093	Epoxy Injection gun	hour	380.00
0095	Motor Grader 3.35 mtr blade	hour	1,630.00
0097	Paver Finisher Hydrostatic with sensor control 100 TPH	hour	1,660.00
0099	Paver Finisher Mechanical 100 TPH	hour	825.00
0100	Mastic Cooker	hour	95.00
0101	HDPE Jointing Machine alongwith 15 KVA DG set	hour	290.00
0105	Road marking machine	hour	130.00
0107	Texturing machine (for rigid pavement)	hour	110.00
0109	Mechanical Broom Hydraulic	hour	220.00
0112	Hydraulic Chip Spreader	hour	1,450.00
0113	Air Compressor 210 CFM	hour	220.00
0115	Air compressor with pneumatic chisel attachment for cutting hard clay.	hour	265.00
0116	Compressor with guniting equipment along with accessories	hour	635.00
0117	Pneumatic Sinking Plant	hour	3,145.00
0118	Induction, deinduction and erection of plant and equipment including all components and accessories for pneumatic method of well sinking.	hour	6,350.00
0119	Piling rig Including double acting pile driving hammer (Hydraulic rig)	hrs	7,170.00
0123	Piling Rig with Bantonite Pump	hour	4,960.00
0125	Pile testing for vertical load	MT	275.00
0126	Pile testing for lateral load	MT	5,510.00
0128	Water tanker 6 KL capacity	hour	150.00
0131	Hire charges of chain pully block with try pod i/c transportation	day	660.00
0132	Joint Cutting Machine with 2-3 blades (for rigid pavement)	hour	110.00
0133	Machine for rubbing of floors	Day	255.00
0134	Hand Grinder For mirror polish	Day	150.00
0136	Hire charges of Derrick monkey rope	Day	640.00
0137	Welding by gas plant	cm	3.00
0138	Welding by electric plant	cm	3.00
0139	Grouting pump with agitator	hour	245.00
0141	Kerb Casting Machine	hour	390.00

Code No	Description	Unit	Rate Rs.
0143	Boat to carry atleast 20 persons	hour	1,950.00
0144	Plate compactor	hour	60.00
0147	Sludge suction tanker 6000 litre capacity	trip	1,150.00
0149	Prestressing Jack with Pump & access	hour	500.00
0150	Electric Generator 33 KVA	hour	510.00
0151	Electric Generator 63 KVA	hour	635.00
0152	Electric Generator 100 KVA	hour	825.00
0153	Electric Generator 125 KVA	hour	910.00
0154	Electric Generator 250 KVA	hour	1,600.00
0156	Drilling of 40mm dia bore hole in rock	metre	100.00
0157	Spray Pump for spraying Chemical for waterproofing	day	110.00
0158	Mechanical Grinder (Gharat) with POL and Driver per day	Day	550.00
0159	M.S. Structure fabrication charges l/c cutting, electric welding etc	kg	15.00
0160	Radio-graphy testing for butt welds	metre	430.00
0161	Ultrasonic testing for fillet welds	metre	225.00
0162	Augur boring 300mm dia	RM	225.00
0163	Monthly rental charges of built up space	per sqm/month	70.00
0164	Monthly charges of tables	month	75.00
0165	Monthly charges of chairs	month	30.00
0166	Monthly charges of steel almirah	month	190.00
0167	Monthly charges of computer & printer	month	1,150.00
0168	Monthly payment of computer operator	month	7,170.00
0169	Monthly charges of laboratory equipments (set of approved equipments)	month	3,710.00
0170	Non destructive Integrated testing of pile	per test	1,590.00
0171	Dynamic load test for checking the load bearing capacity of pile as per ASTM D4945	per test	89,920.00
0172	Sonic logging test on RC bored piles and submission of report.	per test	8,470.00
0173	Testing of finished PSC girder with simulation system.	each	1,05,780.00
0174	Load testing of one or more spans of bridge as per approved load test procedure of IS/IRC/Railway codes upto 100 MT Load.	per test	2,11,560.00
0175	Load testing of one or more spans of bridge as per approved load test procedure of IS/IRC/Railway codes per 100 MT Load or part their of after initial 100 MT.	per 100 MT per test	26,450.00
0176	Plate load test for determining SBC at a specified depth and draw load settlement curve as per Indian standard	each	30,680.00
0180	Photography charges including printing of photo	each	30.00

Code No	Description	Unit	Rate Rs.
0181	Charges for Topographic Survey team using Total Station	day	6,345.00
0182	Charges of Draftsman for developing drawing in AUTO CAD format using the layering system and Geo referencing	day	635.00
0183	Charges for printing detailed drawings in A-2 size	sheet	55.00
0184	Charges for Water Quality Analysis Collecting sample and Physical & Chemical testing of Parameter from NABL approved laboratory: PH, TDS, Taste & Odour, turbidity, magnesium, Total hardness, total alkalinity, chloride, sulphate, nitrate, fluoride, Calcium, Iron, Pesticide, Manganese, Cooper, Aluminium, Residual Chlorine, Zinc, phenolic compound, Arsenic, Cadmium, Chromium, cyanides, lead, selenium, Mercury.	Each	5,930.00
0185	Charges for Raw Sewage Analysis Collecting sample and Physical & Chemical testing of Parameter from NABL approved laboratory: PH, Temperature, TSS, TDS, Inorganic dissolved solids, Alkalinity as CaCO ₃ , total hardness as CaCO ₃ , chloride as Cl, sulphate as SO ₄ , Floride as F, Phosphate as P ₀₄ , Ammoniacal Nitrogen as N, Sodium as Na, TKN, BOD at 200 C, COD, Silica as SiO ₂ , oil and grease, sulphide as S, phenolic compound.	each	5,500.00
0186	Charges for Municipal Solid Waste Sample analysis - Collecting sample of Municipal Solid Waste (MSW) and analyze physical and chemical Characterization and composition of each component in %age in NABL approved laboratory: moisture content, total solids, volatile solids of total solids, fixed solids percent of total solids, organic carbon, COD and calorific value. Composition of each component in %age viz. Paper, Rubber, Leather & Synthetics, Metals, Inert, Plastics, Organics, Textiles, Wood & Others.	each	7,400.00
0187	Charges for Geotechnical Survey below ground by boring method from 0 to 2 metre and submission of detailed report	each	2,645.00
0188	Charges for Geotechnical Survey below ground by boring method from 0 to 4 metre and submission of detailed report	each	3,970.00
0189	Charges for Geotechnical Survey below ground by boring method from 0 to 6 metre and submission of detailed report	each	5,290.00
0190	Charges for Geotechnical Survey below ground by boring method from 0 to 8 metre and submission of detailed report	each	6,610.00
0191	Surveying, collecting sample and testing of stone metal samples from crushers/quarries from NABL approved	each	2,965.00
0192	Surveying, collecting sample and testing of fine Aggregates from crushers/quarries from NABL approved	each	1,480.00
0193	Surveying, collecting sample and testing of GSB from crushers/quarries from NABL approved	each	2,970.00
0194	Surveying, collecting sample and testing of soil of borrow pits sample testing from NABL approved	Each	5,185.00
0195	Collecting water sample and testing Bacteriological Parameter from NABL approved laboratory as per CPHEEO manual: Total coliforms, faecal coliforms	each	1,375.00

Code No	Description	Unit	Rate Rs.
0196	Ambient Air Quality Monitoring- For parameters PM-2.5 & PM-10, SO ₂ , NO ₂ , CO from NABL approved laboratory and submission of report complete in all respect.	each	4,340.00
0197	Ambient Noise Quality Monitoring - To Identify sources of noise, Duration and variations in noise over time etc. (day and night in Leq dBA) from NABL approved laboratory	each	1,745.00
0198	Conducting BBD Tests as per IRC: 81-1997 (Guidelines for Strengthening of Flexible Road Pavements) and pavement evaluation	each	3,920.00
0199	Collecting sample and conducting California Bearing Ratio test	each	1,375.00

B - LABOUR

Code No	Description	Unit	Rate Rs.
0201	Fitter (Grade I)	Day	700.00
0202	Fitter (Grade II) or Assistant Fitter	Day	550.00
0203	Mason (1st class)	day	700.00
0204	Mason (for plaster of paris work) 1st class	Day	800.00
0205	Mason (for ornamental stone work) 1st class	Day	830.00
0206	Mason (brick layer) 2nd class	Day	560.00
0207	Mason (for plain stone work) 2nd class)	Day	680.00
0208	Mason (IInd class)	day	550.00
0209	Carpenter I Class	day	700.00
0210	Carpenter II Class	day	630.00
0211	Carpenter (average)	Day	660.00
0212	Blacksmith 1st class	Day	680.00
0213	Blacksmith (IInd class)	day	560.00
0214	Glazier	Day	700.00
0215	Painter	Day	625.00
0216	Mazdoor/ helper	day	480.00
0217	Coolie	Day	420.00
0218	Skilled Beldar	Day	560.00
0219	White Washer	Day	560.00
0221	Rock Breaker	Day	560.00
0222	Rock Hole Driller	Day	560.00
0225	Skilled torch operator for laying tack	Day	500.00
0229	Bandhani	Day	420.00
0230	Bhishti	Day	420.00
0231	Mate / Supervisor	day	560.00
0232	Mali	Day	480.00
0233	Mistry	Day	700.00
0234	Chokidar	Day	500.00
0236	Driver (for Road Roller, Concrete Mixer, Truck etc.)	Day	700.00
0239	Medical Officer	day	2,030.00
0240	Para medical personnel	day	1,090.00

Code No	Description	Unit	Rate Rs.
0241	Applicator (A person who applies chemical for water proofing)	Day	550.00
0242	Helper for Glass and other decoration work	Day	470.00
0244	Skilled Craftsman	Day	550.00
0245	Expert Artist (For conservation of Fresco paintings and other decorative work)	Day	950.00
0246	Expert Artist (Grade-II) (To assist expert artist)	Day	680.00
0247	Supervisor for Chemical works	Day	680.00
0248	Expert artist for Oil-painting/Glass work (Grade-I)	Day	950.00
0249	Expert for Glass work (Grade-II)	Day	550.00
0250	Hammal (Paldar) (For loading/ unloading heavy stone blocks including chain pully block and T&P for this purpose)	Day	480.00
0257	Skilled Man for khamira	Day	480.00
0258	Skilled craftsman for archaeological excavation	Day	480.00
0260	Wireman/ lineman	Day	680.00
0261	Plumber	Day	550.00
0276	Socio economic surveyer	day	800.00
0277	Engineer/ Surveyer	day	2,700.00

C – MATERIALS

Note: These basic prices/rates are inclusive of material price, freight, insurance, loading & unloading but exclusive of GST, contractor's profit and over heads etc.

Code No	Description	Unit	Rate Rs.
0300	80mm dia DI K-7 grade S&S pipe conforming to I.S. 8329	metre	1,012.00
0301	100mm dia DI K-7 grade S&S pipe conforming to I.S. 8329	metre	1,060.00
0302	150mm dia DI K-7 grade S&S pipe conforming to I.S. 8329	metre	1,498.00
0303	200mm dia DI K-7 grade S&S pipe conforming to I.S. 8329	metre	1,843.00
0304	250mm dia DI K-7 grade S&S pipe conforming to I.S. 8329	metre	2,421.00
0305	300mm dia DI K-7 grade S&S pipe conforming to I.S. 8329	metre	3,100.00
0306	350mm dia DI K-7 grade S&S pipe conforming to I.S. 8329	metre	3,812.00
0307	400mm dia DI K-7 grade S&S pipe conforming to I.S. 8329	metre	4,652.00
0308	450mm dia DI K-7 grade S&S pipe conforming to I.S. 8329	metre	5,487.00
0309	500mm dia DI K-7 grade S&S pipe conforming to I.S. 8329	metre	6,532.00
0310	600mm dia DI K-7 grade S&S pipe conforming to I.S. 8329	metre	8,559.00
0311	700mm dia DI K-7 grade S&S pipe conforming to I.S. 8329	metre	11,504.00
0312	800mm dia DI K-7 grade S&S pipe conforming to I.S. 8329	metre	14,736.00
0313	900mm dia DI K-7 grade S&S pipe conforming to I.S. 8329	metre	18,102.00
0314	1000mm dia DI K-7 grade S&S pipe conforming to I.S. 8329	metre	21,630.00
0315	1100mm dia DI K-7 grade S&S pipe conforming to I.S. 8329	metre	25,739.00
0321	100mm dia DI K-9 grade S&S pipe conforming to I.S. 8329	metre	1,157.00
0322	150mm dia DI K-9 grade S&S pipe conforming to I.S. 8329	metre	1,642.00
0323	200mm dia DI K-9 grade S&S pipe conforming to I.S. 8329	metre	2,209.00
0324	250mm dia DI K-9 grade S&S pipe conforming to I.S. 8329	metre	2,963.00
0325	300mm dia DI K-9 grade S&S pipe conforming to I.S. 8329	metre	3,758.00
0326	350mm dia DI K-9 grade S&S pipe conforming to I.S. 8329	metre	4,612.00
0327	400mm dia DI K-9 grade S&S pipe conforming to I.S. 8329	metre	5,611.00
0328	450mm dia DI K-9 grade S&S pipe conforming to I.S. 8329	metre	6,692.00
0329	500mm dia DI K-9 grade S&S pipe conforming to I.S. 8329	metre	7,829.00
0330	600mm dia DI K-9 grade S&S pipe conforming to I.S. 8329	metre	10,262.00
0331	700mm dia DI K-9 grade S&S pipe conforming to I.S. 8329	metre	13,015.00
0332	800mm dia DI K-9 grade S&S pipe conforming to I.S. 8329	metre	15,978.00
0333	900mm dia DI K-9 grade S&S pipe conforming to I.S. 8329	metre	19,475.00
0334	1000mm dia DI K-9 grade S&S pipe conforming to I.S. 8329	metre	23,543.00

Code No	Description	Unit	Rate Rs.
0335	1100mm dia DI K-9 grade S&S pipe conforming to I.S. 8329	metre	28,445.00
0336	1200mm dia DI K-9 grade S&S pipe conforming to I.S. 8329	metre	32,947.00
0341	100mm dia DI K-9 grade flanged pipe conforming to I.S. 8329	metre	1,740.00
0342	150mm dia DI K-9 grade flanged pipe conforming to I.S. 8329	metre	2,291.00
0343	200mm dia DI K-9 grade flanged pipe conforming to I.S. 8329	metre	3,107.00
0344	250mm dia DI K-9 grade flanged pipe conforming to I.S. 8329	metre	4,151.00
0345	300mm dia DI K-9 grade flanged pipe conforming to I.S. 8329	metre	5,183.00
0346	350mm dia DI K-9 grade flanged pipe conforming to I.S. 8329	metre	6,695.00
0347	400mm dia DI K-9 grade flanged pipe conforming to I.S. 8329	metre	8,147.00
0348	450mm dia DI K-9 grade flanged pipe conforming to I.S. 8329	metre	10,270.00
0349	500mm dia DI K-9 grade flanged pipe conforming to I.S. 8329	metre	12,180.00
0350	600mm dia DI K-9 grade flanged pipe conforming to I.S. 8329	metre	16,116.00
0351	700mm dia DI K-9 grade flanged pipe conforming to I.S. 8329	metre	21,216.00
0352	800mm dia DI K-9 grade flanged pipe conforming to I.S. 8329	metre	25,668.00
0353	900mm dia DI K-9 grade flanged pipe conforming to I.S. 8329	metre	31,872.00
0354	1000mm dia DI K-9 grade flanged pipe conforming to I.S. 8329	metre	37,320.00
0355	1100mm dia DI K-9 grade flanged pipe conforming to I.S. 8329	metre	46,628.00
0361	S&S Centrifugally (Spun) C.I. Pipe class LA 100mm dia	Metre	915.00
0362	S&S Centrifugally (Spun) C.I. Pipe class LA 125mm dia	metre	1,130.00
0363	S&S Centrifugally (Spun) C.I. Pipe class LA 150mm dia	metre	1,319.00
0364	S&S Centrifugally (Spun) C.I. Pipe class LA 200mm dia	Metre	2,325.00
0365	S&S Centrifugally (Spun) C.I. Pipe class LA 250mm dia	Metre	3,041.00
0366	S&S Centrifugally (Spun) C.I. Pipe class LA 300mm dia	Metre	4,091.00
0367	S&S Centrifugally (Spun) C.I. Pipe class LA 350mm dia	metre	4,898.00
0368	S&S Centrifugally (Spun) C.I. Pipe class LA 400mm dia	Metre	6,469.00
0369	S&S Centrifugally (Spun) C.I. Pipe class LA 450mm dia	Metre	7,831.00
0370	S&S Centrifugally (Spun) C.I. Pipe class LA 500mm dia	Metre	9,096.00
0371	S&S Centrifugally (Spun) C.I. Pipe class LA 600mm dia	Metre	12,734.00
0391	C.I. "B" class flanged pipe	kg	79.00
0392	C.I. double flanged standard specials	kg	81.00
0393	C.I. double flanged non-standard specials	kg	84.00
0401	Specials S&S DI K-12 upto 300mm dia	kg	101.00
0402	Specials S&S DI K-12 above 300mm dia and upto 600mm dia	kg	107.00
0403	Specials S&S DI K-12 above 600mm dia and upto 800mm dia	kg	130.00

Code No	Description	Unit	Rate Rs.
0404	Specials S&S DI K-12 above 800mm dia	kg	140.00
0405	Specials Double Chambered Restrained joint DI K-12 upto 600mm dia	kg	270.00
0406	Specials Double Chambered Restrained joint DI K-12 above 600mm dia	kg	318.00
0411	Specials flanged DI K-12 upto 300mm dia	kg	103.00
0412	Specials flanged DI K-12 above 300mm dia and upto 600mm dia	kg	111.00
0413	Specials flanged DI K-12 above 600mm dia and upto 800mm dia	kg	136.00
0414	Specials flanged DI K-12 above 800mm dia	kg	152.00
0421	S & S.C.I.standard specials upto 300 mm dia (heavy class)	quintal	3,565.00
0422	S & S.C.I.standard specials over 300 mm dia (heavy class)	quintal	3,664.00
0425	Flanged C.I. standard specials upto 300 mm dia(heavy class)	quintal	5,446.00
0426	Flanged C.I. standard specials over 300 mm dia(heavy class)	quintal	5,941.00
0431	80 mm dia CI butterfly valve PN 1.0	each	3,175.00
0432	100 mm dia CI butterfly valve PN 1.0	each	3,764.00
0433	125 mm dia CI butterfly valve PN 1.0	each	5,175.00
0434	150 mm dia CI butterfly valve PN 1.0	each	5,880.00
0435	200 mm dia CI butterfly valve PN 1.0	each	10,583.00
0436	250 mm dia CI butterfly valve PN 1.0	each	14,349.00
0437	300 mm dia CI butterfly valve PN 1.0	each	17,638.00
0438	350 mm dia CI butterfly valve PN 1.0	each	27,049.00
0439	400 mm dia CI butterfly valve PN 1.0	each	35,743.00
0440	450 mm dia CI butterfly valve PN 1.0	each	38,337.00
0441	500 mm dia CI butterfly valve PN 1.0	each	39,748.00
0442	600 mm dia CI butterfly valve PN 1.0	each	64,669.00
0443	700 mm dia CI butterfly valve PN 1.0	each	1,04,861.00
0444	750 mm dia CI butterfly valve PN 1.0	each	1,24,192.00
0445	800 mm dia CI butterfly valve PN 1.0	each	1,32,267.00
0446	900 mm dia CI butterfly valve PN 1.0	each	1,69,811.00
0447	1000 mm dia CI butterfly valve PN 1.0	each	2,18,915.00
0471	80 mm dia CI Sluice valve PN 1.0	each	3,070.00
0472	100 mm dia CI Sluice valve PN 1.0	each	4,159.00
0473	125 mm dia CI Sluice valve PN 1.0	each	5,807.00
0474	150 mm dia CI Sluice valve PN 1.0	each	6,949.00
0475	200 mm dia CI Sluice valve PN 1.0	each	11,886.00

Code No	Description	Unit	Rate Rs.
0476	250 mm dia CI Sluice valve PN 1.0	each	18,528.00
0477	300 mm dia CI Sluice valve PN 1.0	each	23,521.00
0478	350 mm dia CI Sluice valve PN 1.0	each	35,830.00
0479	400 mm dia CI Sluice valve PN 1.0	each	45,544.00
0480	450 mm dia CI Sluice valve PN 1.0	each	56,159.00
0481	500 mm dia CI Sluice valve PN 1.0	each	70,573.00
0482	600 mm dia CI Sluice valve PN 1.0	each	1,04,557.00
0483	700 mm dia CI Sluice valve PN 1.0	each	1,97,435.00
0484	750 mm dia CI Sluice valve PN 1.0	each	2,20,174.00
0485	800 mm dia CI Sluice valve PN 1.0	each	2,68,583.00
0486	900 mm dia CI Sluice valve PN 1.0	each	3,52,180.00
0487	1000 mm dia CI Sluice valve PN 1.0	each	5,43,265.00
0511	80 mm dia CI dual plate check valve PN 1.0	each	3,175.00
0512	100 mm dia CI dual plate check valve PN 1.0	each	3,764.00
0513	125 mm dia CI dual plate check valve PN 1.0	each	4,499.00
0514	150 mm dia CI dual plate check valve PN 1.0	each	5,867.00
0515	200 mm dia CI dual plate check valve PN 1.0	each	10,583.00
0516	250 mm dia CI dual plate check valve PN 1.0	each	14,349.00
0517	300 mm dia CI dual plate check valve PN 1.0	each	17,638.00
0518	350 mm dia CI dual plate check valve PN 1.0	each	27,049.00
0519	400 mm dia CI dual plate check valve PN 1.0	each	35,743.00
0520	450 mm dia CI dual plate check valve PN 1.0	each	38,337.00
0521	500 mm dia CI dual plate check valve PN 1.0	each	39,748.00
0522	600 mm dia CI dual plate check valve PN 1.0	each	64,669.00
0523	700 mm dia CI dual plate check valve PN 1.0	each	1,13,544.00
0524	750 mm dia CI dual plate check valve PN 1.0	each	1,30,780.00
0525	800 mm dia CI dual plate check valve PN 1.0	each	1,50,415.00
0526	900 mm dia CI dual plate check valve PN 1.0	each	2,10,362.00
0527	1000 mm dia CI dual plate check valve PN 1.0	each	2,73,597.00
0531	80 mm dia CI Duckfoot Bend	each	1,324.00
0532	100 mm dia CI Duckfoot Bend	each	1,638.00
0533	125 mm dia CI Duckfoot Bend	each	2,268.00
0534	150 mm dia CI Duckfoot Bend	each	2,963.00
0535	200 mm dia CI Duckfoot Bend	each	4,705.00

Code No	Description	Unit	Rate Rs.
0536	250 mm dia CI Duckfoot Bend	each	7,058.00
0537	300 mm dia CI Duckfoot Bend	each	9,932.00
0538	350 mm dia CI Duckfoot Bend	each	14,371.00
0539	400 mm dia CI Duckfoot Bend	each	18,300.00
0541	80 mm dia CI Foot Valve	each	1,288.00
0542	100 mm dia CI Foot Valve	each	1,684.00
0543	125 mm dia CI Foot Valve	each	2,674.00
0544	150 mm dia CI Foot Valve	each	4,752.00
0545	200 mm dia CI Foot Valve	each	9,420.00
0546	250 mm dia CI Foot Valve	each	14,013.00
0547	300 mm dia CI Foot Valve	each	15,869.00
0548	350 mm dia CI Foot Valve	each	30,576.00
0549	400 mm dia CI Foot Valve	each	39,509.00
0550	450 mm dia CI Foot Valve	each	43,058.00
0551	500 mm dia CI Foot Valve	each	61,141.00
0555	80 mm dia C.I. dismantling joint PN 1.0	each	1,516.00
0556	100 mm dia C.I. dismantling joint PN 1.0	each	1,698.00
0557	125 mm dia C.I. dismantling joint PN 1.0	each	1,836.00
0558	150 mm dia C.I. dismantling joint PN 1.0	each	2,845.00
0559	200 mm dia C.I. dismantling joint PN 1.0	each	4,359.00
0560	250 mm dia C.I. dismantling joint PN 1.0	each	6,195.00
0561	300 mm dia C.I. dismantling joint PN 1.0	each	7,962.00
0562	350 mm dia C.I. dismantling joint PN 1.0	each	9,638.00
0563	400 mm dia C.I. dismantling joint PN 1.0	each	12,396.00
0564	450 mm dia C.I. dismantling joint PN 1.0	each	13,763.00
0565	500 mm dia C.I. dismantling joint PN 1.0	each	16,976.00
0566	600 mm dia C.I. dismantling joint PN 1.0	each	25,692.00
0567	700 mm dia C.I. dismantling joint PN 1.0	each	38,272.00
0571	80 mm dia C.I. D joint class-10	each	222.00
0572	100 mm dia C.I. D joint class-10	each	281.00
0573	125 mm dia C.I. D joint class-10	each	347.00
0574	150 mm dia C.I. D joint class-10	each	481.00
0575	200 mm dia C.I. D joint class-10	each	667.00
0576	250 mm dia C.I. D joint class-10	each	840.00

Code No	Description	Unit	Rate Rs.
0577	300 mm dia C.I. D joint class-10	each	1,099.00
0578	350 mm dia C.I. D joint class-10	each	1,730.00
0579	400 mm dia C.I. D joint class-10	each	2,181.00
0580	450 mm dia C.I. D joint class-10	each	3,202.00
0581	500 mm dia C.I. D joint class-10	each	4,062.00
0582	600 mm dia C.I. D joint class-10	each	5,417.00
0591	80 mm dia C.I. D joint class-15	each	245.00
0592	100 mm dia C.I. D joint class-15	each	309.00
0593	125 mm dia C.I. D joint class-15	each	347.00
0594	150 mm dia C.I. D joint class-15	each	530.00
0595	200 mm dia C.I. D joint class-15	each	734.00
0596	250 mm dia C.I. D joint class-15	each	924.00
0597	300 mm dia C.I. D joint class-15	each	1,210.00
0598	350 mm dia C.I. D joint class-15	each	1,902.00
0599	400 mm dia C.I. D joint class-15	each	2,400.00
0600	450 mm dia C.I. D joint class-15	each	3,523.00
0601	500 mm dia C.I. D joint class-15	each	4,468.00
0602	600 mm dia C.I. D joint class-15	each	5,958.00
0611	80 mm dia C.I. transition coupling joint	each	379.00
0612	100 mm dia C.I. transition coupling joint	each	546.00
0613	125 mm dia C.I. transition coupling joint	each	756.00
0614	150 mm dia C.I. transition coupling joint	each	838.00
0615	200 mm dia C.I. transition coupling joint	each	1,074.00
0616	250 mm dia C.I. transition coupling joint	each	1,486.00
0617	300 mm dia C.I. transition coupling joint	each	1,855.00
0618	350 mm dia C.I. transition coupling joint	each	3,014.00
0619	400 mm dia C.I. transition coupling joint	each	3,584.00
0620	450 mm dia C.I. transition coupling joint	each	4,638.00
0621	500 mm dia C.I. transition coupling joint	each	5,451.00
0631	80 mm dia C.I. puddle collar	each	2,051.00
0632	100 mm dia C.I. puddle collar	each	2,507.00
0633	125 mm dia C.I. puddle collar	each	3,234.00
0634	150 mm dia C.I. puddle collar	each	4,113.00
0635	200 mm dia C.I. puddle collar	each	6,273.00

Code No	Description	Unit	Rate Rs.
0636	250 mm dia C.I. puddle collar	each	8,411.00
0637	300 mm dia C.I. puddle collar	each	10,767.00
0638	350 mm dia C.I. puddle collar	each	14,317.00
0639	400 mm dia C.I. puddle collar	each	17,475.00
0640	450 mm dia C.I. puddle collar	each	21,177.00
0641	500 mm dia C.I. puddle collar	each	26,115.00
0651	150 mm dia SS Stainer cylindrical type	each	7,065.00
0652	200 mm dia SS Stainer cylindrical type	each	11,386.00
0653	250 mm dia SS Stainer cylindrical type	each	19,288.00
0654	300 mm dia SS Stainer cylindrical type	each	26,517.00
0655	350 mm dia SS Stainer cylindrical type	each	49,158.00
0656	400 mm dia SS Stainer cylindrical type	each	53,044.00
0657	450 mm dia SS Stainer cylindrical type	each	71,072.00
0658	500 mm dia SS Stainer cylindrical type	each	84,152.00
0676	50 mm dia CI Kinetic Air Valve	each	6,350.00
0677	80 mm dia CI Kinetic Air Valve	each	7,056.00
0678	100 mm dia CI Kinetic Air Valve	each	10,583.00
0679	150 mm dia CI Kinetic Air Valve	each	22,968.00
0680	200 mm dia CI Kinetic Air Valve	each	37,631.00
0681	80 mm dia CI flanged ends single ball air valve	each	3,565.00
0682	100 mm dia CI flanged ends single ball air valve	each	5,050.00
0683	25 mm dia C.I. Air Valve	each	1,177.00
0684	50 mm dia C.I. Air Valve	each	1,980.00
0685	150 mm dia CI flanged ends single ball air valve	each	7,921.00
0689	Water METER BOX- with Weather resistant PE/ GRP box, press fitted Lid fixing & built-in or external lock.	each	397.00
0690	Orifice flow equalizer (Brass) for 15 mm domestic water meter with seal wire & seal (Weight 110 gm +/- 5%)	each	149.00
0691	Nut & Tail piece for orifice flow equalizer 15 mm dia	each	49.00
0692	Multijet magnetic class-B ISI marked domestic water meter for 15mm dia	each	1,015.00
0693	Multijet magnetic class-B ISI marked domestic water meter for 20mm dia	each	1,587.00
0694	Multijet magnetic class-B ISI marked domestic water meter for 25mm dia	each	2,470.00
0695	Orifice Flow Equalizer	each	158.00

Code No	Description	Unit	Rate Rs.
0696	Zero velocity valves 600 mm dia	each	2,34,100.00
0697	Air Cushion valve 150 mm dia	each	97,773.00
0698	Multijet magnetic class-B ISI marked domestic water meter for 32mm dia	each	6,129.00
0699	Multijet magnetic class-B ISI marked domestic water meter for 50mm dia	each	7,937.00
0701	80 mm Electromagnetic Flow Meter for 80 mm dia line	each	85,009.00
0702	100 mm Electromagnetic Flow Meter for 100 mm dia line	each	90,686.00
0703	150 mm Electromagnetic Flow Meter for 150 mm dia line	each	1,06,218.00
0704	200 mm Electromagnetic Flow Meter for 200 mm dia line	each	1,17,419.00
0705	250 mm Electromagnetic Flow Meter for 250 mm dia line	each	1,72,438.00
0706	300 mm Electromagnetic Flow Meter for 300 mm dia line	each	1,93,853.00
0707	400 mm Electromagnetic Flow Meter for 400 mm dia line	each	4,30,231.00
0708	450 mm Electromagnetic Flow Meter for 450 mm dia line	each	4,49,258.00
0709	500 mm Electromagnetic Flow Meter for 500 mm dia line	each	5,38,739.00
0710	600 mm Electromagnetic Flow Meter for 600 mm dia line	each	5,68,511.00
0711	80 mm Bulk Flow Meter for 80 mm dia line	each	9,499.00
0712	100 mm Bulk Flow Meter for 100 mm dia line	each	12,971.00
0713	125 mm Bulk Flow Meter for 125 mm dia line	each	17,617.00
0714	150 mm Bulk Flow Meter for 150 mm dia line	each	18,463.00
0715	200 mm Bulk Flow Meter for 200 mm dia line	each	26,321.00
0716	250 mm Bulk Flow Meter for 250 mm dia line	each	43,590.00
0717	300 mm Bulk Flow Meter for 300 mm dia line	each	75,132.00
0718	400 mm Bulk Flow Meter for 400 mm dia line	each	1,06,804.00
0719	500 mm Bulk Flow Meter for 500 mm dia line	each	1,33,505.00
0720	600 mm Bulk Flow Meter for 600 mm dia line	each	1,60,206.00
0721	150 mm dia C.I. float valve system	each	9,703.00
0722	200 mm dia C.I. float valve system	each	13,069.00
0723	250 mm dia C.I. float valve system	each	20,688.00
0724	300 mm dia C.I. float valve system	each	30,489.00
0725	350 mm dia C.I. float valve system	each	48,019.00
0726	400 mm dia C.I. float valve system	each	81,384.00
0727	Pressure gauge -1 to + 1.0 kg/sq.cm. with isolation valve	each	1,249.00
0728	Pressure gauge 0 to 4.0 kg/sq.cm. with isolation valve	each	1,173.00
0729	Pressure gauge 0 to 6.0 kg/sq.cm. with isolation valve	each	0.00

Code No	Description	Unit	Rate Rs.
0730	Pressure gauge 0 to 10 kg/sq.cm. with isolation valve	each	0.00
0731	G.I. pipes 15 mm dia	metre	81.00
0732	G.I. pipes 20 mm dia	metre	107.00
0733	G.I. pipes 25 mm dia	metre	139.00
0734	GI pipe 32 mm dia "B" class	metre	185.00
0735	G.I. pipes 40 mm dia	metre	250.00
0736	G.I. pipe 50 mm dia as per IS:1239	metre	273.00
0737	G.I. pipes 65 mm dia	metre	345.00
0738	G.I. pipes 80 mm dia	metre	425.00
0740	GI pipe 150 mm dia "B" class	metre	983.00
0743	G.I. back (jam) nuts 25 mm dia	each	10.00
0747	G.I. back (jam) nuts 65 mm dia	each	20.00
0751	M.S. cap 100 mm dia for bore well	each	149.00
0752	M.S. cap 125 mm dia for bore well	each	164.00
0753	M.S. cap 150 mm dia for bore well	each	179.00
0754	M.S. cap 200 mm dia for bore well	each	190.00
0755	M.S. cap 250 mm dia for bore well	each	248.00
0756	M.S. clamp set made of 50 × 6 mm flat iron with nuts and bolts etc. for holding the riser pipe assembly of submersible pump set.	set	198.00
0758	50mm dia G.I. flanged G.I. pipe B Class including rubber washer and bolts & nuts of 8 mm dia (3 metre pipe length)	each	1,189.00
0759	75mm dia G.I. flanged G.I. pipe B Class including rubber washer and bolts & nuts of 8 mm dia (3 metre pipe length)	each	1,634.00
0760	100mm dia G.I. flanged G.I. pipe B Class including rubber washer and bolts & nuts of 8 mm dia (3 metre pipe length)	each	2,228.00
0771	G.I. elbows 15 mm dia	each	19.00
0772	G.I. elbows 20 mm dia	each	30.00
0773	G.I. elbows 25 mm dia	each	36.00
0774	G.I. elbows 32 mm dia	each	58.00
0781	G.I. plugs 15 mm dia	each	10.00
0782	G.I. plugs 20 mm dia	each	14.00
0783	G.I. plugs 25 mm dia	each	21.00
0784	G.I. plugs 32 mm dia	each	35.00
0803	G.I. tees (equal) 25 mm	each	42.00
0807	G.I. tees (equal) 65 mm	each	277.00
0811	G.I. Union 15 mm nominal bore	each	49.00

Code No	Description	Unit	Rate Rs.
0812	G.I. Union 20 mm nominal bore	each	70.00
0813	G.I. Union 25 mm nominal bore	each	97.00
0814	G.I. Union 32 mm nominal bore	each	144.00
0815	G.I. Union 40 mm nominal bore	each	170.00
0816	G.I. Union 50 mm nominal bore	each	257.00
0817	G.I. Union 65 mm nominal bore	each	495.00
0818	G.I. Union 80mm nominal bore	each	692.00
0820	G.I. inlet connection	each	66.00
0822	Steel pipe 40 mm external dia as per IS:1239	metre	223.00
0823	100 mm dia ERW (Electric Resistance Welded) FE 410 mild steel screwed and socketed/ plain ended pipes, conforming to IS: 4270	metre	743.00
0824	125 mm dia ERW (Electric Resistance Welded) FE 410 mild steel screwed and socketed/ plain ended pipes, conforming to IS: 4270	Metre	892.00
0825	150 mm dia ERW (Electric Resistance Welded) FE 410 mild steel screwed and socketed/ plain ended pipes, conforming to IS: 4270	metre	1,032.00
0826	200 mm dia ERW (Electric Resistance Welded) FE 410 mild steel screwed and socketed/ plain ended pipes, conforming to IS: 4270	metre	1,238.00
0827	250 mm dia ERW (Electric Resistance Welded) FE 410 mild steel screwed and socketed/ plain ended pipes, conforming to IS: 4270	metre	1,436.00
0828	125 mm dia slotted ERW (Electric Resistance Welded) FE 410 mild steel screwed and socketed/ plain ended pipes, conforming to IS: 4270	metre	896.00
0829	150 mm dia slotted ERW (Electric Resistance Welded) FE 410 mild steel screwed and socketed/ plain ended pipes, conforming to IS: 4270	metre	1,042.00
0830	200 mm dia slotted ERW (Electric Resistance Welded) FE 410 mild steel screwed and socketed/ plain ended pipes, conforming to IS: 4270	metre	1,248.00
0831	250 mm dia slotted ERW (Electric Resistance Welded) FE 410 mild steel screwed and socketed/ plain ended pipes, conforming to IS: 4270	metre	1,466.00
0832	S.C.I. soil, waste and vent single socketed pipe 1.80 metres long: 75mm dia conforming to I.S. 1729	each	1,044.00
0833	S.C.I. soil, waste and vent single socketed pipe 1.80 metres long: 100mm dia conforming to I.S. 1729	each	1,243.00
0835	S.C.I. plain bend 75mm dia conforming to I.S. 1729	each	221.00
0836	S.C.I. plain bend 100mm dia conforming to I.S. 1729	each	307.00
0838	S.C.I. bend with access door 75mm dia conforming to I.S. 1729	each	258.00
0839	S.C.I. bend with access door 100mm dia conforming to I.S. 1729	each	339.00

Code No	Description	Unit	Rate Rs.
0841	Sand cast iron heel rest bend 75mm dia conforming to I.S. 1729	each	231.00
0842	Sand cast iron heel rest bend 100mm dia conforming to I.S. 1729	each	271.00
0846	S.C.I. plain single equal junctions 75x75x75 mm dia conforming to I.S. 1729	each	264.00
0847	S.C.I. plain single equal junctions 100x100x100 mm dia conforming to I.S. 1729	each	344.00
0848	S.C.I. single equal junctions with access door 75x75x75 mm dia conforming to I.S. 1729	each	291.00
0849	S.C.I. single equal junctions with access door 100x100x100 mm dia conforming to I.S. 1729	each	382.00
0850	S.C.I. plain double equal junctions 75x75x75x75 mm dia conforming to I.S. 1729	each	361.00
0851	S.C.I. plain double equal junctions 100x100x100x100 mm dia conforming to I.S. 1729	each	527.00
0852	S.C.I. double equal junctions with access door 75x75x75x75 mm dia conforming to I.S. 1729	each	441.00
0853	S.C.I. double equal junctions with access door 100x100x100x100 mm dia conforming to I.S. 1729	each	587.00
0854	Sand cast iron S&S plain single unequal junctions : 100x100x75 mm dia conforming to I.S. 1729	each	404.00
0855	Sand cast iron S&S single unequal junctions: 100x100x75 mm dia conforming to I.S. 1729 with access door.	each	431.00
0856	Sand cast iron S&S plain double unequal junctions : 100x100x75x75 mm dia conforming to I.S. 1729	each	560.00
0857	Sand cast iron S&S double unequal junctions: 100x100x75x75 mm dia conforming to I.S. 1729 with access door.	each	603.00
0858	S.C.I. single equal invert branch of required degree 75x75x75 mm dia conforming to I.S. 1729	each	323.00
0859	S.C.I. single equal invert branch of required degree 100x100x100 mm dia conforming to I.S. 1729	each	404.00
0860	S.C.I. double equal invert branch of required degree 75x75x75x75 mm dia conforming to I.S. 1729	each	404.00
0861	S.C.I. double equal invert branch of required degree 100x100x100x100 mm dia conforming to I.S. 1729	each	538.00
0862	S.C.I. single unequal invert branch of required degree 100x100x75 mm dia conforming to I.S. 1729	each	484.00
0863	S.C.I. double unequal invert branch of required degree 100x100x75x75 mm dia conforming to I.S. 1729	each	565.00
0864	S.C.I. S&S, 76 mm offset for 75 mm dia conforming to I.S. 1729 pipe	each	237.00
0865	S.C.I. S&S, 76 mm offset for 100 mm dia conforming to I.S. 1729 pipe	each	269.00

Code No	Description	Unit	Rate Rs.
0866	S.C.I. S&S, 114 mm offset for 75 mm dia conforming to I.S. 1729 pipe	each	291.00
0867	S.C.I. S&S, 114 mm offset for 100 mm dia conforming to I.S. 1729 pipe	each	377.00
0868	S.C.I. S&S, 152 mm offset for 75 mm dia conforming to I.S. 1729 pipe	each	350.00
0869	S.C.I. S&S, 152 mm offset for 100 mm dia conforming to I.S. 1729 pipe	each	452.00
0870	S.C.I. collar 75 mm dia conforming to I.S. 1729	each	124.00
0871	S.C.I. collar 100 mm dia conforming to I.S. 1729	each	178.00
0872	S.C.I. door pieces 75 mm dia conforming to I.S. 1729	each	285.00
0873	S.C.I. door pieces 100 mm dia conforming to I.S. 1729	each	388.00
0874	Slotted cowl (terminal guard)75 mm dia conforming to I.S. 1729	each	161.00
0875	Slotted cowl (terminal guard) 100 mm dia conforming to I.S. 1729	each	215.00
0876	C.I. grating 100x100 mm	each	27.00
0877	C.I. grating 125x125 mm	each	32.00
0878	C.I. grating 150x150 mm	each	48.00
0879	C.I. grating 180x180 mm	each	59.00
0880	C.I. grating 150 mm dia. (Weighing not less than 440 gm)	each	32.00
0881	S.C.I. gully or nahani grating 100 mm dia	each	27.00
0882	C.I. cover and frame 300x300 mm inside	each	355.00
0883	C.I.cover without frame 300x300mm inside i.e.cover of 4.50 kg	each	296.00
0884	Rectangular cover 455x610 mm with frame (low duty)	each	1,523.00
0885	Rectangular cover 455x610mm without frame (low duty)	each	980.00
0886	500 mm dia cover with frame (medium duty)	each	4,769.00
0887	500 mm dia cover without frame (medium duty) wt not less than 58 kg	each	2,390.00
0888	500 mm dia cover without frame heavy duty) wt not less than 108 kg	each	4,575.00
0891	C.C.I.(spun) socketed soil, waste and vent pipe 1.80 metres long:100mm dia conforming to I.S. 3989	each	1,195.00
0892	C.C.I.(spun) socketed soil, waste and vent pipe 1.80 metres long:75mm dia conforming to I.S. 3989	each	1,050.00
0893	S.C.I. S&S bend 100mm dia conforming to I.S. 3989	each	366.00
0894	S.C.I. S&S bend 75mm dia conforming to I.S. 3989	each	188.00
0895	S.C.I. S&S bends with access door 100mm dia conforming to I.S. 3989	each	296.00
0896	S.C.I. S&S bends with access door 75mm dia conforming to I.S. 3989	each	237.00

Code No	Description	Unit	Rate Rs.
0897	S.C.I. S&S heel rest sanitary bend 100mm dia conforming to I.S. 3989	each	291.00
0898	S.C.I. S&S heel rest sanitary bend 75mm dia conforming to I.S. 3989	each	248.00
0899	S.C.I. S&S single equal junctions100x100x100 mm conforming to I.S. 3989	each	463.00
0900	S.C.I. S&S single equal junctions75x75x75 mm conforming to I.S. 3989	each	334.00
0901	S.C.I. S&S single equal junctions with access door 100x100x100 mm conforming to I.S. 3989	each	490.00
0902	S.C.I. S&S single equal junctions with access door 75x75x75 mm conforming to I.S. 3989	each	371.00
0903	S.C.I. S&S double equal junctions100x100x100x100 mm conforming to I.S. 3989	each	603.00
0904	S.C.I. S&S double equal junctions75x75x75x75 mm conforming to I.S. 3989	each	457.00
0905	S.C.I. S&S double equal junctions with access door 100x100x100x100 mm conforming to I.S. 3989	each	604.00
0906	S.C.I. S&S double equal junctions with access door 75x75x75x75 mm conforming to I.S. 3989	each	484.00
0907	S.C.I. S&S single unequal junctions100x100x75 mm conforming to I.S. 3989	each	565.00
0908	S.C.I. S&S single unequal junctions with access door 100x100x75 mm conforming to I.S. 3989	each	640.00
0909	S.C.I. S&S double unequal junctions100x100x75x75 mm conforming to I.S. 3989	each	791.00
0910	S.C.I. S&S double unequal junctions with access door 100x100x75x75 mm conforming to I.S. 3989	each	845.00
0911	S.C.I. S&S single equal invert branch of required degree 100x100x100 mm dia conforming to I.S. 3989	each	414.00
0912	S.C.I. S&S single equal invert branch of required degree 75x75x75 mm dia conforming to I.S. 3989	each	323.00
0913	S.C.I. S&S double equal invert branch of required degree100x100x100x100 mm dia conforming to I.S. 3989	each	522.00
0914	S.C.I. S&S double equal invert branch of required degree 75x75x75x75 mm dia conforming to I.S. 3989	each	420.00
0915	S.C.I. S&S single unequal invert branch of required degree100x100x75 mm dia conforming to I.S. 3989	each	544.00
0916	S.C.I. S&S double unequal invert branch of required degree100x100x75x75 mm dia conforming to I.S. 3989	each	716.00
0917	S.C.I. S&S, 75 mm offset for 75 mm dia conforming to I.S. 3989 pipe	each	226.00

Code No	Description	Unit	Rate Rs.
0919	S.C.I. S&S, 150 mm offset for 75 mm dia conforming to I.S. 3989 pipe	each	280.00
0920	S.C.I. S&S, 150 mm offset for 100 mm dia conforming to I.S. 3989 pipe	each	388.00
0921	C.C.I.(spun)S&S, Slotted Cowl (Terminal Guard) 100 mm conforming to I.S. 3989	each	231.00
0922	C.C.I.(spun)S&S, Slotted Cowl (Terminal Guard) 75 mm conforming to I.S. 3989	each	199.00
0923	C.C.I.(spun)S&S, collars 100 mm conforming to I.S. 3989	each	237.00
0924	C.C.I.(spun)S&S, collars 75 mm conforming to I.S. 3989	each	156.00
0925	Centrifugally cast (spun) iron S&S door pieces 100 mm dia conforming to I.S. 3989	each	420.00
0926	Centrifugally cast (spun) iron S&S door pieces 75 mm dia conforming to I.S. 3989	each	382.00
0927	Casing pipe 100 mm dia	metre	344.00
0928	Standard holder bat clamps for sand cast iron or cast iron pipes 150 mm dia	each	32.00
0929	Sand Cast iron plain shoe 150 mm dia	each	441.00
0930	Centrifugally cast (spun) iron S&S 100 mm inlet and 100 mm outlet self cleaning trap	each	371.00
0931	Centrifugally cast (spun) iron S&S 100 mm inlet and 75 mm outlet self cleaning trap	each	382.00
0934	sealing nipples	each	50.00
0935	200 mm dia (ID) PVC Casing pipe threaded ends	metre	800.00
0936	560 mm dia cover with frame (Heavy duty)	each	9,096.00
0938	Water stops Serrated with central bulb (225 mm wide, 8-11 mm thick)	metre	264.00
0939	Water stops Dumb bell with central bulb	metre	226.00
0941	S.C.I. hand pump	each	646.00
0942	C.I. trap for standard urinal with vent arm with operating and other couplings in C.P.brass: 50 mm dia	each	167.00
0944	C.I. trap for standard urinal with vent arm with operating and other couplings in C.P.brass: 80 mm dia	each	215.00
0945	100 mm S.C.I. trap with vent heel	each	318.00
0946	100 mm S.C.I. trap with 100 mm inlet and 100 mm outlet	each	269.00
0947	100 mm S.C.I. trap with 100 mm inlet and 75 mm outlet	each	215.00
0951	80 mm dia Knife Gate Valve manual operated	each	6,524.00
0952	100 mm dia Knife Gate Valve manual operated	each	8,524.00

Code No	Description	Unit	Rate Rs.
0953	125 mm dia Knife Gate Valve manual operated	each	10,605.00
0954	150 mm dia Knife Gate Valve manual operated	each	12,516.00
0955	200 mm dia Knife Gate Valve manual operated	each	21,240.00
0956	250 mm dia Knife Gate Valve manual operated	each	27,696.00
0957	300 mm dia Knife Gate Valve manual operated	each	33,756.00
0958	350 mm dia Knife Gate Valve manual operated	each	50,784.00
0959	400 mm dia Knife Gate Valve manual operated	each	69,180.00
0960	450 mm dia Knife Gate Valve manual operated	each	95,940.00
0961	500 mm dia Knife Gate Valve manual operated	each	1,21,356.00
0962	600 mm dia Knife Gate Valve manual operated	each	1,65,252.00
0963	700 mm dia Knife Gate Valve manual operated	each	2,56,776.00
0964	750 mm dia Knife Gate Valve manual operated	each	2,84,868.00
0965	800 mm dia Knife Gate Valve manual operated	each	3,05,076.00
0966	900 mm dia Knife Gate Valve manual operated	each	3,97,668.00
0967	1000 mm dia Knife Gate Valve manual operated	each	4,79,952.00
0968	1200 mm dia Knife Gate Valve manual operated	each	6,50,916.00
1001	M.S. Butt hinges 125x90x4 mm	10 Nos	102.00
1003	M.S. heavy weight butt hinges 125x90x4.0mm IS : 1341 marked.	10 Nos	231.00
1004	M.S. heavy weight butt hinges 100x75x3.5 mm IS: 1341 marked	10 Nos.	151.00
1005	M.S. heavy weight butt hinges 75x60x3.1 mm IS: 1341 marked	10 Nos	86.00
1006	M.S. heavy weight butt hinges 50x40x2.5 mm IS : 1341 marked	10 Nos	75.00
1011	Bright finished or black enamelled mild steel butt hinges 125x65x2.12 mm	10 Nos	129.00
1012	Bright finished or black enamelled mild steel butt hinges 100x58x1.90 mm	10 Nos	91.00
1013	Bright finished or black enamelled mild steel butt hinges 75x47x1.70 mm	10 Nos	65.00
1014	Bright finished or black enamelled mild steel butt hinges 50x37x1.50 mm	10 Nos	54.00
1047	Bright finished or black enamelled mild steel screws 50 mm	100 Nos	70.00
1049	Bright finished or black enamelled mild steel screws 40 mm	100 Nos	54.00
1050	Bright finished or black enamelled mild steel screws 30 mm	100 Nos	43.00
1051	Bright finished or black enamelled mild steel screws 25 mm	100 Nos	32.00
1052	Bright finished or black enamelled mild steel screws 20 mm	100 Nos	27.00
1053	Bright finished or black enamelled mild steel bolts and nuts 50x6 mm	each	5.00
1061	Oxidised mild steel butt hinges 125x65x2.12 mm	10 Nos	124.00

Code No	Description	Unit	Rate Rs.
1062	Oxidised mild steel butt hinges 100x58x1.90 mm	10 Nos	91.00
1063	Oxidised mild steel butt hinges 75x47x1.70 mm	10 Nos	65.00
1064	Oxidised mild steel butt hinges 50x37x1.50 mm	10 Nos	48.00
1065	Oxidised mild steel parliamentary hinges 150x125x27x2.8 mm	10 Nos	344.00
1066	Oxidised mild steel parliamentary hinges 125x125x27x2.8 mm	10 Nos	291.00
1067	Oxidised mild steel parliamentary hinges 100x125x27x2.8 mm	10 Nos	221.00
1068	Oxidised mild steel parliamentary hinges 75x100x20x2.24 mm	10 Nos	178.00
1069	Oxidised mild steel single acting spring hinges 150 mm	each	102.00
1070	Oxidised mild steel single acting spring hinges 125 mm	each	91.00
1071	Oxidised mild steel single acting spring hinges 100 mm	each	75.00
1072	Oxidised mild steel double acting spring hinges 150 mm	each	108.00
1073	Oxidised mild steel double acting spring hinges 125 mm	each	97.00
1074	Oxidised mild steel double acting spring hinges 100 mm	each	86.00
1075	Oxidised mild steel sliding door bolt 300x16 mm	each	75.00
1076	Oxidised mild steel sliding door bolt 250x16 mm	each	59.00
1077	Oxidised mild steel door latch 300x20x6 mm	each	40.00
1078	Oxidised mild steel door latch 250x20x6 mm	each	32.00
1079	Oxidised mild steel tower bolt (barrel type) 250x10 mm	each	34.00
1080	Oxidised mild steel tower bolt (barrel type) 200x10 mm	each	28.00
1081	Oxidised mild steel tower bolt (barrel type) 150x10 mm	each	25.00
1082	Oxidised mild steel tower bolt (barrel type) 100x10 mm	each	19.00
1083	Oxidised mild steel handles 125 mm	each	13.00
1084	Oxidised mild steel handles 100 mm	each	10.00
1085	Oxidised mild steel handles 75 mm	each	9.00
1094	Oxidised mild steel hasps and staples(safety type) 150 mm	10 Nos	108.00
1095	Oxidised mild steel hasps and staples(safety type) 115 mm	10 Nos	88.00
1096	Oxidised mild steel hasps and staples(safety type) 90 mm	10 Nos	66.00
1097	Oxidised mild steel pull bolt lock (locking bolt) of size 85 mm x 42 mm with screws,bolts,nuts and washers complete	each	46.00
1098	Oxidised M.S. safety chain (weighing not less than 450 gms) for door	each	59.00
1099	Oxidised M.S. casement stay (straight peg type) 300 mm not less than 0.33 kg	each	25.00
1100	Oxidised M.S. casement stay (straight peg type) 250 mm not less than 0.28 kg	each	20.00
1101	Oxidised M.S.casement stay (straight peg type) 200 mm not less than 0.24 kg	each	18.00

Code No	Description	Unit	Rate Rs.
1102	Oxidised mild steel screws 50 mm	100 Nos	56.00
1103	Oxidised mild steel screws 40 mm	100 Nos	44.00
1104	Oxidised mild steel screws 30 mm	100 Nos	36.00
1105	Oxidised mild steel screws 25 mm	100 Nos	25.00
1106	Oxidised mild steel screws 20 mm	100 Nos	22.00
1107	Counter sunk ribbed head screw 25mm.	100 Nos	70.00
1109	Powder coated M.S. butt hinges 100mm X58mmX1.9mm	10 Nos	97.00
1110	Nickel plated mild steel piano hinges 1 mm thick 35 mm wide	metre	36.00
1111	Nickel plated mild steel piano hinges 1 mm thick 35 mm wide	metre	36.00
1114	Chromium plated brackets (curtain rods)	each	6.00
1115	Nickel plated M. S. piano hinges 50 mm (Overall width)	metre	34.00
1116	Nickel plated M. S. piano hinges 65 mm (Overall width)	metre	40.00
1117	Nickle plated M.S. pipe 20 mm dia.	metre	65.00
1118	Nickle plated M.S. Brackets for curtain rod 20 mm	each	6.00
1119	Nickle plated M.S. Brackets for curtain rod 25 mm	each	6.00
1131	Stainless steel butt hinges 125x64x1.9 mm IS : 12817 marked	10 Nos	261.00
1132	Stainless steel butt hinges 100x58x1.9 mm IS : 12817 marked	10 Nos	194.00
1133	Stainless steel butt hinges 75x47x1.8 mm IS : 12817 marked	10 Nos	156.00
1134	Stainless steel butt hinges 50x37x1.5 mm IS : 12817 marked	10 Nos	135.00
1135	Stainless steel butt hinges (heavy weight) 125x64x2.5 mm IS : 12817 marked	10 Nos	361.00
1136	Stainless steel butt hinges (heavy weight) 100x60x2.5 mm IS : 12817 marked	10 Nos	280.00
1137	Stainless steel butt hinges (heavy weight) 75x50x2.5 mm IS : 12817 marked	10 Nos	231.00
1138	Stainless steel piano hinges 1mm thick 35mm wide	metre	59.00
1139	Stainless steel (SS 304 grade) adjustable friction window stay. 205 x 19mm	each	164.00
1140	Stainless steel (SS 304 grade) adjustable friction window stay 255 x 19mm	each	191.00
1141	Stainless steel (SS 304 grade) adjustable friction window stay. 355 x 19mm	each	221.00
1142	Stainless steel (SS 304 grade) adjustable friction window stay. 510 x 19mm	each	457.00
1143	Stainless steel (SS 304 grade) adjustable friction window stay. 710 x 19mm	each	818.00
1144	Stainless steel screws 50 mm	100 Nos	240.00

Code No	Description	Unit	Rate Rs.
1145	Stainless steel screws 40 mm	100 Nos	190.00
1146	Stainless steal screws 30mm	100 Nos	136.00
1147	Stainless steel screws 25mm	100 Nos	72.00
1148	Stainless steel screws 20 mm	100 Nos	94.00
1155	Flush pipe and spreaders G.I.for single set of one squatting plate urinal	each	172.00
1156	Flush pipe and spreaders G.I.for range of two squatting plates urinal	each	248.00
1157	Flush pipe and spreaders G.I.for range of three squatting plates urinal	each	301.00
1158	Flush pipe and spreaders G.I.for range of four squatting plates urinal	each	388.00
1160	G.I. flush pipe and C.P. brass spreader including C.P. connecting pipe Single lipped urinal	each	457.00
1161	G.I. flush pipe and C.P. brass spreader including C.P. connecting pipe Range of two lipped urinals	each	872.00
1162	G.I. flush pipe and C.P. brass spreader including C.P. connecting pipe Range of three lipped urinals	each	1,146.00
1163	G.I. flush pipe and C.P. brass spreader including C.P. connecting pipe Range of four lipped urinals	each	1,588.00
1164	P.T.M.T. Waste Coupling 31/32MM	Each	45.00
1165	P.T.M.T. Waste Coupling 38/40MM	Each	65.00
1166	P.T.M.T. Bottle Trap 31/32MM	Each	270.00
1167	P.T.M.T. Bottle Trap 38/40MM	Each	275.00
1169	Double action hydraulic floor spring with brass cover plate	each	1,475.00
1170	Double action hydraulic floor spring with stainless steel cover plate	each	1,200.00
1171	6 mm dia. G.I. adjustable hangers including clips (upto 1.2 m length)	each	24.00
1172	Hanger rod 0.5 mm thick	each	11.00
1173	Intermediate cross channel (1.2 mtrs)	each	61.00
1174	Telescopic drawer channels 300mm long .	set	183.00
1175	Stainless steel roller for sliding arrangement in racks/ cupboards/ cabinets shutter .	each	11.00
1176	Magnetic catcher triple strip vertical type.	each	27.00
1177	Magnetic catcher double strip horizontal type.	each	25.00
1178	100 mm mostice lock with 6 levers for aluminium door.	each	350.00
1179	Kickers	metre	248.00
1180	2mm thick UV stabilised fibreglass reinforced plastic sheet for roofing	sqm	624.00
1182	Galvanised steel	tonne	48,494.00

Code No	Description	Unit	Rate Rs.
1183	Galvanised steel corrugated sheets	kg	54.00
1184	Corrugated sheet, 3 mm thick, "Thrie" beam section railing	kg	65.00
1186	Galvanised steel plain sheets	quintal	6,453.00
1187	Galvanised M.S. sheet 0.5 mm thick pressed channel section of size 50x32 mm	metre	62.00
1189	Galvanised M.S. sheet 0.50 mm thick pressed stud. 48x34x36 mm	metre	75.00
1191	Precoated galvanised iron profile sheet 0.50 mm TCT	sqm	361.00
1192	Precoated galvanised steel plain ridges.	metre	301.00
1193	Precoated galvanised steel flashings/aprons.	metre	301.00
1194	Precoated galvanised steel gutter	metre	420.00
1195	Precoated galvanised steel north light curves.	metre	323.00
1196	Precoated galvanised steel barge board.	metre	301.00
1197	Precoated galvanised steel crimp curve	sqm	361.00
1198	Lightening Conductor of G.I. bar of 25mm dia& 2m long	each	807.00
1199	G.I. plate 600x600x6mm with Jointing material	each	1,313.00
1200	G.I. strip 25mm wide & 5mm thick	metre	156.00
1201	Stainless steel kitchen sink - with drain board bowl depth 250 mm.	each	2,557.00
1202	Stainless steel kitchen sink - with drain board 510 x 1040mm bowl depth 225 mm.	each	2,605.00
1203	Stainless steel kitchen sink - with drain board 510 x 1040mm bowl depth 200 mm.	each	2,487.00
1204	Stainless steel kitchen sink - with drain board 510x1040mm bowl depth 178 mm	each	2,325.00
1205	Stainless steel kitchen sink - without drain board 610x510mm bowl depth 200 mm	each	2,131.00
1206	Stainless steel kitchen sink - without drain board 610x460mm bowl depth 200 mm.	each	1,782.00
1207	Stainless steel kitchen sink - without drain board 470x420mm bowl depth 178 mm	each	1,329.00
1208	Salem Stainless steel AISI - 304 (18/8) Round basin 405mm X 355mm	each	1,733.00
1209	Salem Stainless steel AISI - 304 (18/8) Wash basin 530mm X 345mm	each	1,539.00
1210	Salem Stainless steel AISI - 304 (18/8) Orrisa pattern W.C. pan 724mm X 578mm	each	3,283.00
1211	Rolling shutters of 80x0.90 mm laths	sqm	915.00
1212	Rolling shutters of 80x1.2 mm laths	sqm	1,023.00

Code No	Description	Unit	Rate Rs.
1213	Rolling shutter made of 80x1.25 mm machine rolled laths	sqm	1,367.00
1214	Top cover of Rolling shutters 0.90 mm thick	metre	371.00
1215	Top cover of Rolling shutters 1.20 mm thick	metre	431.00
1216	Top cover for rolling shutters 1.25 mm thick	metre	646.00
1217	27.5 cm long wire spring grade no 2 for rolling shutters	each	226.00
1218	Ball bearing for rolling shutters	each	301.00
1219	Extra for mechanical devices chain and cranked operation for operating rolling shutters : exceeding 10.00 sq.m and upto 16.80 sq.m area of door	sqm	694.00
1220	Extra for mechanical devices chain and cranked operation for operating rolling shutters : exceeding 16.80 sq.m area of door	sqm	710.00
1221	Extra for providing grilled rolling shutters with 8 mm dia M.S. rod	sqm	344.00
1222	Mild steel conduit pipe (heavy type) ISI marked-20 mm dia.	metre	46.00
1223	Mild steel conduit pipe (heavy type) ISI marked-25 mm dia.	metre	59.00
1224	M.S. tube 40 mm dia	metre	199.00
1225	Column clamp 450x1070 m	each	1,012.00
1226	Prop 2 m (2-3.5m)	each	684.00
1228	Adjustable span ESO+SI (2.35-3.40)	each	1,572.00
1229	Adjustable span- ESOSI (2.35-3.40m)	each	1,507.00
1230	Adjustable telescopic prop 3 m (2.02-3.75 m)	each	985.00
1231	Adjustable telescopic prop 3m(2.02-3.75m)	each	969.00
1232	Double clip (bridge clip)	each	75.00
1233	Beam clamp 300-380 mm (450-1070 mm)	each set	371.00
1235	Tie bolt 12 mm dia 100 mm length	each	40.00
1236	Tie bolt 12 mm dia 150 mm length	each	51.00
1237	Tie bolt 20 mm dia 150 mm length	each	62.00
1238	Tie bolt 20 mm dia 225 mm length	each	75.00
1239	Stainless steel cramps with nuts, bolts and washer for dry stone cladding .	each	140.00
1240	Stainless steel cramp	kilogram	344.00
1241	Stainless steel pin .	kg	167.00
1242	Galvanised wire mesh of average width of aperture 1.4 mm and nominal dia. of wire 0.63 mm	sqm	194.00
1243	Galvanised wire mesh of average width of aperture 1.18 mm nominal dia. wire 0.556 mm	sqm	274.00
1244	Stainless steel wire mesh of average width of aperture 1.56 mm and	sqm	323.00

Code No	Description	Unit	Rate Rs.
	nominal dia. of wire 0.45 mm		
1245	Mild steel tubes hot finished welded type	kilogram	48.00
1246	Mild steel tubes hot finished seamless type	kilogram	54.00
1247	Mild steel tubes electric resistant or induction butt welded	kilogram	59.00
1248	Pressed steel door frames (mild steel sheet 1.25mm) Profile "A"	metre	253.00
1249	Pressed steel door frames (mild steel sheet 1.25mm) Profile "B"	metre	285.00
1250	Pressed steel door frames (mild steel sheet 1.25mm) Profile "C"	metre	318.00
1251	Ready made steel door with necessary hinges, lugs and glazing clips excluding other fittings & their fixing	sqm	1,862.00
1252	Factory made Steel glazed door,window/ ventilator, all members like as F7D, F4B, K11 and K12B etc.	kg	70.00
1253	Prefabricated steel garden bench/ jhula/ slides and other children play items of approved design and specifications made of MS pipe, Flates, rectangular hollow section or other steel sections duly welded and or nut bolted	kg	70.00
1261	Bolts and nuts	kg	97.00
1262	GI bolt 10 mm Dia	each	18.00
1272	Galvanised steel bolts & nuts 6 mm dia and 25 mm long round head with slots	10 Nos	27.00
1273	Galvanised steel J or L hooks 8 mm dia	10 Nos	110.00
1274	Galvanised steel bolts & nuts 10 mm dia and 125 mm long round head with slots	each	11.00
1275	Galvanised steel bolts 10 mm dia and 7 cm long with nuts	each	16.00
1277	Bolts and nuts upto 300 mm in length	quintal	7,072.00
1278	Bolts and nuts above 300 mm in length	quintal	7,578.00
1279	Mild steel bolts 6 mm dia and 25 mm long with hexagonal head	10 Nos	27.00
1280	20 mm dia holding down bolts	quintal	5,323.00
1281	Galvanised steel bolts & nuts 10 mm dia and 27 cm long both sides threaded with 4 galvanised steel nuts	each	24.00
1282	Mild steel hooks	each	30.00
1283	Mild steel rivets	kg	46.00
1284	Steel nails	kg	72.00
1285	Wire mesh (rabbit)	sqm	190.00
1286	Dash fastener 6 mm dia 50 mm long	each	10.00
1287	Dash hold fastener 12.5 mm dia, 40 mm long with 6 mm dia bolt	each	22.00
1288	Rawl plug 50 mm (designation 10 no.)	each	9.00
1289	Wedge expansion hold fastner 1/4" or 6 mm	each	12.00

Code No	Description	Unit	Rate Rs.
1290	Wedge expansion hold fastner 3/8" or 10 mm	each	12.00
1291	Wedge expansion hold fastner 1/2" or 12 mm	each	28.00
1292	Expandable fastner with plastic sleeve and M.S. screws. 25 mm long	each	9.00
1293	Expandable fastner with plastic sleeve and M.S. screws. 32 mm long	each	10.00
1294	Expandable fastner with plastic sleeve and M.S. screws. 40 mm long	each	12.00
1295	Expandable fastner with plastic sleeve and M.S. screws. 50 mm long	each	13.00
1296	All drive screws (for gypsum board)	100 Nos	54.00
1297	Mild Steel bars	tonne	50,000.00
1298	Mild steel round bars for reinforcements	quintal	5,000.00
1299	Mild steel round bar 12 mm dia and below	quintal	5,000.00
1300	Mild steel round bar above 12 mm dia	quintal	5,000.00
1302	Cold twisted bars (TMT Bars)	tonne	51,000.00
1303	Twisted steel / deformed bars	quintal	5,100.00
1304	Corrosion resistant Structural steel	tonne	56,000.00
1307	Structural Steel	tonne	54,000.00
1308	Structurals such as tees,angles channels and R.S. joists	quintal	5,400.00
1309	Credit for Scrap Structural Steel	tonne	20,000.00
1310	MS Flats upto 10 mm in thickness	quintal	5,300.00
1311	Flats exceeding 10 mm in thickness	quintal	5,400.00
1312	Mild steel plates	quintal	5,550.00
1313	Mild steel sheets for tanks	quintal	5,500.00
1315	Galvanised MS flat clamp	each	50.00
1316	Helical pipes 600mm diameter 0.7mm thickness	metre	6,566.00
1317	Helical pipes 800mm diameter 0.8mm thickness	metre	8,730.00
1318	M.S. Clamps	each	50.00
1319	M.S. Clamps	kg	50.00
1322	Steel drum 300 mm dia 1.2 m high/empty bitumen drum	each	495.00
1323	Steel helmet and cushion block on top of pile head during driving.	kg	59.00
1326	Strip seal expansion join	metre	6,954.00
1327	Tie rods 20mm diameter	each	108.00
1328	Tube anchorage set complete with bearing plate, permanent wedges etc	each	2,530.00
1329	Welded steel wire fabric	kg	59.00
1330	Wire mesh 50mm x 50mm size of 3mm wire	kg	65.00
1331	Mild steel expanded metal 20x60 mm strands	sqm	274.00

Code No	Description	Unit	Rate Rs.
1332	Hard drawn steel wire fabric 75mm x 25mm	sqm	414.00
1333	Galvanised steel wire crates of mesh size 100 mm x 100 mm woven with 4mm dia. GI wire in rolls of required size.	sqm	194.00
1334	Nipples 12mm	each	27.00
1335	Seam bolts and nuts 6 mm dia and 25 mm long	10 Nos	38.00
1337	SS wire gauge with average width of aperture 1.4 mm on both directions with wire of dia 0.63 mm	sqm	328.00
1338	GI wire gauge with average width of aperture 1.4 mm on both directions with wire of dia 0.63 mm	sqm	153.00
1339	Spring coil 12 mm dia for tie bolt	each	14.00
1340	Hard drawn GI wire chain link fabric Aperture 50x50mm and made of 3.15mm wire	sqm	194.00
1341	Hard drawn GI wire chain link fabric Aperture 75x75mm and made of 3.15 mm wire	sqm	172.00
1342	Hard drawn GI wire chain link fabric Aperture 100x100mm and made of 3.15mm wire	sqm	124.00
1343	Hard drawn GI wire chain link fabric Aperture 150x150mm and made of 3.15mm wire	sqm	118.00
1344	Iron pintels including welded pin	each	37.00
1345	GI U clips/ G.I. Staples	kg	46.00
1346	Steel beading	metre	22.00
1347	G.I. Limpet washer	100 Nos	27.00
1348	G.I. plain washer thick	100 Nos	34.00
1349	G.I. plain washer thin	100 Nos	27.00
1350	G.I. plain washer for seam bolts	100 Nos	28.00
1351	Mild steel sheets with bolts and nuts to rest on pintels	each	99.00
1352	Hard drawn steel wire	quintal	4,774.00
1353	Surface box for stop cock	each	98.00
1354	Surface box for sluice valve	each	183.00
1355	Surface box for water meter	each	264.00
1357	C.I. bracket for wash basin and sinks	pair	78.00
1360	Clamps and M.S. stays including bolts and nuts for 100 mm pipe	each	60.00
1361	M.S.Holder bat clamp of approved design for 100 mm S.C.I. pipe	each	29.00
1362	M.S.Holder bat clamp of approved design for 75 mm S.C.I. pipe	each	22.00
1364	Clamps and M.S. stays including bolts and nuts for 50 mm pipe	each	30.00
1365	Clamps and M.S. stays including bolts and nuts for 75 mm pipe	each	34.00

Code No	Description	Unit	Rate Rs.
1368	Mosquito proof coupling of approved design	each	30.00
1369	Connecting clips	each	6.00
1370	Hydraulic door closer bottle type M.S. body with necessary accessories and screws complete	each	468.00
1373	C.I.mouth, brass ferrule 15 mm dia	each	116.00
1374	C.I.mouth, brass ferrule 20 mm dia	each	151.00
1375	C.I.mouth, brass ferrule 25 mm dia	each	201.00
1377	C.I. shoes for the pile	kg	65.00
1380	Circular C.I. Box for ceiling fan	each	51.00
1381	Circular shape 560 mm dia Ductile Iron manhole frame & cover, Hinged Type, Heavy Duty with test load of 400 KN D-400 as per BS EN 124	set	4,596.00
1382	MS Strip for making pipe	kg	46.00
1383	Cadmium plated full threaded steel screws (30x4 mm dia.)	100 Nos	30.00
1384	12 mm M.S. 'U' beading	metre	13.00
1386	Hermetically sealed double glazed unit made with 6mm thick clear float glass both side having 12 mm air gap.	sqm	2,088.00
1387	Binding wire	kg	60.00
1388	Binding wire	kilogram	60.00
1389	Barbed wire	kg	68.00
1397	Pully 25 mm dia	each	24.00
1398	Pully 40 mm dia	each	28.00
1399	Wheel 75 mm dia. 40 mm wide	each	62.00
1401	Brass butt hinges (light/ordinary type) : 125x70x4 mm	10 Nos	624.00
1402	Brass butt hinges (light/ordinary type) : 100x70x4 mm	10 Nos	452.00
1403	Brass butt hinges (light/ordinary type) : 75x40x2.5 mm	10 Nos	258.00
1404	Brass butt hinges (light/ordinary type) : 50x40x2.5 mm	10 Nos	129.00
1405	Brass butt hinges (heavy type) : 125x85x5.5 mm(.70)kg	10 Nos	1,529.00
1406	Brass butt hinges (heavy type) : 100x85x5.5 mm(.56)kg	10 Nos	1,265.00
1407	Brass butt hinges (heavy type) : 75x65x4.0 mm(.20)kg	10 Nos	662.00
1408	Brass parliamentary hinges 150x125x27x5 mm	10 Nos	2,180.00
1409	Brass parliamentary hinges 125x125x27x5 mm	10 Nos	1,938.00
1410	Brass parliamentary hinges 100x125x27x5 mm	10 Nos	1,647.00
1411	Brass parliamentary hinges 75x100x20x3.2 mm	10 Nos	1,378.00
1412	Brass single acting spring hinges 150 mm	each	296.00
1413	Brass single acting spring hinges 125 mm	each	222.00

Code No	Description	Unit	Rate Rs.
1414	Brass single acting spring hinges 100 mm	each	172.00
1415	Brass double acting spring hinges 150 mm	each	431.00
1416	Brass double acting spring hinges 125 mm	each	328.00
1417	Brass double acting spring hinges 100 mm	each	280.00
1418	Brass tower bolt (barrel type) 250x10 mm	each	188.00
1419	Brass tower bolt (barrel type) 200x10 mm	each	151.00
1420	Brass tower bolt (barrel type) 150x10 mm	each	118.00
1421	Brass tower bolt (barrel type) 100x10 mm	each	81.00
1422	Brass flush bolt 250 mm	each	124.00
1423	Brass flush bolt 150 mm	each	102.00
1424	Brass flush bolt 100 mm	each	69.00
1426	Brass handles 125 mm with plate 175x32 mm	each	129.00
1427	Brass handles 100 mm with plate 150x32 mm	each	118.00
1428	Brass handles 75 mm with plate 125x32 mm	each	86.00
1429	Brass door latch 300x16x5 mm (0.380 kg)	each	135.00
1430	Brass door latch 250x16x5 mm (0.350 kg)	each	124.00
1431	Brass mortice latch and lock 100x65 mm with 6 levers and a pair of brass lever handles	each	436.00
1432	Brass mortice latch 100x65mm with a pair of brass lever handles	each	409.00
1435	Brass 150 mm floor door stopper (0.357kg)	each	145.00
1436	Brass hard drawn hooks and eyes 300 mm	10 Nos	581.00
1437	Brass hard drawn hooks and eyes 250 mm	10 Nos	544.00
1438	Brass hard drawn hooks and eyes 200 mm	10 Nos	823.00
1439	Brass hard drawn hooks and eyes 150 mm	10 Nos	441.00
1440	Brass hard drawn hooks and eyes 100 mm	10 Nos	388.00
1441	Brass casement window fastener	Each	39.00
1442	Brass casement stays (straight peg type) 300 mm weighing not less than 0.33 kg	each	98.00
1443	Brass casement stays (straight peg type) 250 mm weighing not less than 0.28 kg	Each	79.00
1444	Brass casement stays (straight peg type) 200 mm weighing not less than 0.24 kg	each	70.00
1445	Brass quadrant stays 300 mm	each	102.00
1446	Brass fanlight catch	10 Nos	156.00
1447	Brass fanlight pivot	10 Nos	188.00
1448	Brass chain with hook for fan light catch	each	24.00

Code No	Description	Unit	Rate Rs.
1449	Brass hasps and staples (safety type) 300 mm	10 Nos	640.00
1450	Brass hasps and staples (safety type) 115 mm	10 Nos	549.00
1451	Brass hasps and staples (safety type)90 mm	10 Nos	447.00
1454	Brass Night latch	each	484.00
1457	Brass helical spring 150 mm	each	253.00
1459	Brass curtain rod 20 mm dia 1.25 mm thick	metre	97.00
1460	Brass curtain rod 25 mm dia 1.25 mm thick	metre	124.00
1461	Brass brackets (curtain rods) 20 mm	each	39.00
1462	Brass cupboard knob or ward robe knob 50 mm	each	32.00
1465	Chromium plated Brass butt hinges (heavy) type 75x65x4.0 mm	10 Nos	694.00
1466	Chromium plated Brass butt hinges (light/ordinary) type 125x70x4 mm	10 Nos	657.00
1467	Chromium plated Brass butt hinges (light/ordinary) type 100x70x4 mm	10 Nos	576.00
1468	Chromium plated Brass butt hinges (light/ordinary) type 75x40x2.5 mm	10 Nos	258.00
1469	Chromium plated Brass butt hinges (light/ordinary) type 50x40x2.5 mm	10 Nos	151.00
1470	Chromium plated Brass handles 125 mm with plate 175 x32 mm	Each	135.00
1471	Chromium plated Brass handles 100 mm with plate 150 x 32 mm	Each	111.00
1472	Chromium plated Brass handles 75mm with plate 125x32 mm	Each	102.00
1473	Chromium plated Brass mortice latch and lock 100x65 mm with6 levers and a pair of brass lever handles	each	452.00
1474	Chromium plated brass casement window fastner	each	81.00
1475	Chromium plated Brass casement stays (straight peg type) 300 mm weighing not less than 0.33 kg	each	108.00
1476	Chromium plated Brass casement stays (straight peg type) 250 mm weighing not less than 0.28 kg	each	99.00
1477	Chromium plated Brass casement stays (straight peg type) 200 mm weighing not less than 0.24 kg	each	83.00
1486	Chromium plated Brass Night latch	each	538.00
1487	Chromium plated Brass Wardrobe Knob 50 mm	each	86.00
1488	Chromium plated Brass curtain rod 12 mm dia 1.25mm thick	metre	172.00
1489	Chromium plated Brass curtain rod 20 mm dia 1.25mm thick	metre	226.00
1490	Chromium plated Brass curtain rod 25 mm dia 1.25mm thick	metre	355.00
1492	Brass 100mm mortice latch and lock with6 levers without pair of handles	each	269.00

Code No	Description	Unit	Rate Rs.
1493	Brass cupboard lock 6 levers (best make of approved quality) 40 mm size	each	59.00
1494	Brass cupboard lock 6 levers (best make of approved quality) 50 mm size	each	81.00
1495	Brass cupboard lock 6 levers (best make of approved quality) 65 mm size	each	97.00
1496	Brass cupboard lock 6 levers (best make of approved quality) 75 mm size	each	113.00
1497	Nickeled Chromium Brass cupboard lock 40 mm size	each	56.00
1498	Nickeled Chromium Brass cupboard lock 50 mm size	each	70.00
1499	Nickeled Chromium Brass cupboard lock 65 mm size	each	91.00
1500	Nickeled Chromium Brass cupboard lock 75 mm size	each	113.00
1501	Brass hanging type door stopper 150 mm	each	70.00
1503	Chromium plated Brass pull bolt lock (locking bolt) of size 85 mmx42 mm with screws,bolts,nuts and washers complete	each	161.00
1505	Strainer brass 40 mm dia 1.5 metre long	each	527.00
1506	Cramp Gun metal 25x6x300 mm	each	70.00
1509	Pig lead	kilogram	102.00
1510	Copper pins 6 mm dia 7.5 cm long	each	12.00
1511	Copper plate	kilogram	323.00
1512	C.P.brass chain with 32 mm dia rubber plug	each	43.00
1513	C.P.brass chain with 40 mm dia rubber plug	each	43.00
1516	Brass screws 50 mm	100 Nos	258.00
1517	Brass screws 40 mm	100 Nos	194.00
1519	Brass screws 30 mm	100 Nos	156.00
1520	Brass screws 25 mm	100 Nos	118.00
1521	Brass screws 20 mm	100 Nos	91.00
1523	Chromium plated Brass screws 50 mm	100 Nos	339.00
1524	Chromium plated Brass screws 40 mm	100 Nos	285.00
1525	Chromium plated Brass screws 30 mm	100 Nos	226.00
1526	Chromium plated Brass screws 25 mm	100 Nos	183.00
1527	Chromium plated Brass screws 20 mm	100 Nos	124.00
1531	Anodised Aluminium butt hinges 125x75x4 mm	10 Nos	585.00
1532	Anodised Aluminium butt hinges 125x63x4 mm	10 Nos	452.00
1533	Anodised Aluminium butt hinges 100x75x4 mm	10 Nos	447.00
1534	Anodised Aluminium butt hinges 100x63x3.2 mm	10 Nos	386.00

Code No	Description	Unit	Rate Rs.
1535	Anodised Aluminium butt hinges 100x63x4 mm	10 Nos	381.00
1536	Anodised Aluminium butt hinges 75x63x4 mm	10 Nos	303.00
1537	Anodised Aluminium butt hinges 75x63x3.2 mm	10 Nos	254.00
1538	Anodised Aluminium butt hinges 75x45x3.2 mm	10 Nos	177.00
1540	Anodised Aluminium sliding door bolt 300x16 mm	each	160.00
1541	Anodised Aluminium sliding door bolt 250x16 mm	each	132.00
1542	Anodised Aluminium tower bolt (barrel type)300x10 mm	10 Nos	513.00
1543	Anodised Aluminium tower bolt (barrel type)250x10 mm	10 Nos	519.00
1544	Anodised Aluminium tower bolt (barrel type)200x10 mm	10 Nos	419.00
1545	Anodised Aluminium tower bolt (barrel type)150x10 mm	10 Nos	331.00
1546	Anodised Aluminium tower bolt (barrel type)100x10 mm	10 Nos	243.00
1547	Anodised Aluminium handles 125 mm with plate 175 x 32 mm	10 Nos	370.00
1548	Anodised Aluminium handles 100 mm with plate 150 x 32 mm	10 Nos	309.00
1549	Anodised Aluminium handles 75mm with plate 125 x 32 mm	10 Nos	243.00
1550	Aluminium round shape handle (anodised AC 15)	each	61.00
1551	Aluminium round shape handle (powder coated)	each	64.00
1552	Aluminium round shape handle (polyester powder coated).	each	66.00
1553	Anodised Aluminium kicking plate 50 cm long100x3.15 mm	each	121.00
1556	Anodised Aluminium hanging type door stopper	each	20.00
1557	Anodised Aluminium pull bolt lock (locking bolt) of size 85 mmx42 mm with screws,bolts,nuts and washers complete	each	44.00
1558	Anodised Aluminium Casement stay 250 mm	each	39.00
1561	600x120 mm glass shelf with anodised aluminium angle frame, C.P. brass brackets and guard rail of standard size	each	160.00
1562	Pair of Anodised Aluminium lever handles for 100mm mortice latch and lock	each	226.00
1563	Aluminium hanging floor door stopper with twin rubber & stopper	each	41.00
1564	Hydraulic door closer tubular type Aluminium section body	each	883.00
1565	Aluminium T or L sections	kilogram	226.00
1566	Aluminium tee channel (heavy duty) with rollers and stop end	metre	61.00
1567	Anodising 15 microns on aluminium sections	kilogram	44.00
1568	Anodising 25 microns on aluminium sections	kilogram	50.00
1573	Aluminium Strip 40 mm wide and 2 mm thick	kilogram	243.00
1575	Strips-Aluminium fluted 3.15mm thick and 150mm wide	metre	259.00
1576	Strips Aluminium fluted 3.15mm thick and 200mm wide metre	Metre	362.00

Code No	Description	Unit	Rate Rs.
1577	Aluminium single cleat of size 30x32x3	each	14.00
1578	Aluminium grip strip of size 50x12x2	each	12.00
1579	Aluminium U beading	kilogram	226.00
1581	Aluminium washer 2 mm thick 15 mm dia	100 Nos	11.00
1583	Aluminium casement window fastner (Anodised AC 15)	each	44.00
1584	Aluminium casement window fastner (powder coated).	each	44.00
1585	Aluminium casement window fastner (polyester powder coated).	each	50.00
1587	Polyester powder coating 50 microns on aluminium sections	kilogram	68.00
1588	Epoxy powder coating 50 microns on aluminium sections.	kilogram	61.00
1589	Aluminium sheeting fixed with encapsulated lens type reflective sheeting in various size including lettering and signs as applicable	sqm	5,772.00
1590	High Intensity retro reflective Type IV sign plate made out of 2.00 mm thick aluminium sheet face to be fully covered with blue/green high intensity grade retro reflective sheet and logo/matters, boarder made of with similar type of white sheeting after etching treatment of aluminium sheet, the black side is to be painted with epoxy grey paint. the plate is to be fixed on 40X40X5 mm angle iron frame with help of aluminium rivets.	sqm	8,807.00
1601	Brass bib-cock 15 mm dia	each	226.00
1602	Brass bib-cock 20 mm dia	each	274.00
1603	Brass stop-cock 15 mm dia	each	242.00
1604	Brass stop-cock 20 mm dia	each	301.00
1605	C.P.brass tap 15 mm	each	145.00
1607	C.P. Brass bibcock 15 mm	each	344.00
1608	C.P. Brass long nose bibcock 15 mm	each	484.00
1609	C.P. Brass long body bibcock 15 mm	each	425.00
1610	C.P. Brass stop cock (concealed) 15 mm	each	522.00
1611	C.P. Brass angle valve 15 mm	each	371.00
1613	C.P. brass tap 15 mm with elbow operation lever	each	533.00
1614	Brass full way valve with C.I. wheel (screwed end) 25 mm dia	each	404.00
1615	Brass full way valve with C.I. wheel (screwed end) 32 mm dia	each	662.00
1616	Brass full way valve with C.I. wheel (screwed end) 40 mm dia	each	861.00
1617	Brass full way valve with C.I. wheel (screwed end) 50 mm dia	each	1,582.00
1618	Brass full way valve with C.I. wheel (screwed end) 65 mm dia	each	2,993.00
1619	Brass full way valve with C.I. wheel (screwed end) 80 mm dia	each	6,319.00
1620	Gunmetal non-return valve-horizontal (screwed end) 25 mm dia	each	600.00

Code No	Description	Unit	Rate Rs.
1621	Gunmetal non-return valve-horizontal (screwed end) 32 mm dia	each	1,090.00
1622	Gunmetal non-return valve-horizontal (screwed end) 40 mm dia	each	1,240.00
1623	Gunmetal non-return valve-horizontal (screwed end) 50 mm dia	each	1,890.00
1624	Gunmetal non-return valve-horizontal (screwed end) 65 mm dia	each	4,555.00
1625	Gunmetal non-return valve-horizontal (screwed end) 80 mm dia	each	6,400.00
1627	Gunmetal non-return valve-vertical (screwed end) 25 mm dia	each	480.00
1628	Gunmetal non-return valve-vertical (screwed end) 32 mm dia	each	760.00
1629	Gunmetal non-return valve-vertical (screwed end) 40 mm dia	each	935.00
1630	Gunmetal non-return valve-vertical (screwed end) 50 mm dia	each	1,580.00
1631	Gunmetal non-return valve-vertical (screwed end) 65 mm dia	each	2,515.00
1632	Gunmetal non-return valve-vertical (screwed end) 80 mm dia	each	3,500.00
1634	Shower rose C.P.brass for 15 to 20 mm inlet 100 mm dia	each	54.00
1635	Shower rose C.P.brass for 15 to 20 mm inlet 150 mm dia	each	70.00
1638	Flush pipe with union spreaders and clamps all in C.P. brass for single stall	each	253.00
1639	Flush pipe with union spreaders and clamps all in C.P. brass for double stall	each	404.00
1640	Flush pipe with union spreaders and clamps all in C.P. brass for range of three stall	each	506.00
1641	Flush pipe with union spreaders and clamps all in C.P. brass for range of four stall	each	571.00
1644	C.P.brass toilet paper holder of standard size	each	124.00
1646	C.P.brass trap 40 mm dia	each	172.00
1647	C.P. brass waste 32 mm	each	73.00
1648	C.P. brass waste 40 mm	each	97.00
1649	Gun metal cramp	kilogram	334.00
1650	15mm dia brass ferrule	each	107.00
1651	20mm dia brass ferrule	each	152.00
1652	25mm dia brass ferrule	each	207.00
1653	Pig lead	kilogram	102.00
1700	Rubber insertions for 50 mm dia pipe joints	each	11.00
1701	Rubber insertions for 80 mm dia pipe joints	each	15.00
1702	Rubber insertions for 100 mm dia pipe joints	each	16.00
1703	Rubber insertions for 125 mm dia pipe joints	each	17.00
1704	Rubber insertions for 150 mm dia pipe joints	each	19.00
1705	Rubber insertions for 200 mm dia pipe joints	each	23.00

Code No	Description	Unit	Rate Rs.
1706	Rubber insertions for 250 mm dia pipe joints	each	31.00
1707	Rubber insertions for 300 mm dia pipe joints	each	39.00
1708	Rubber insertions for 350 mm dia pipe joints	each	47.00
1709	Rubber insertions for 400 mm dia pipe joints	each	62.00
1710	Rubber insertions for 450 mm dia pipe joints	each	79.00
1711	Rubber insertions for 500 mm dia pipe joints	each	91.00
1712	Rubber insertions for 600 mm dia pipe joints	each	118.00
1713	Rubber insertions for 700 mm dia pipe joints	each	150.00
1714	Rubber insertions for 750 mm dia pipe joints	each	153.00
1715	Rubber insertions for 800 mm dia pipe joints	each	156.00
1716	Rubber insertions for 900 mm dia pipe joints	each	160.00
1717	Rubber insertions for 1000 mm dia pipe joints	each	171.00
1718	Rubber insertions for 1100 mm dia pipe joints	each	180.00
1741	Rubber Gaskets for SW Pipe 100mm dia	Each	16.00
1742	Rubber Gaskets for SW Pipe 150mm dia	Each	18.00
1743	Rubber Gaskets for SW Pipe 200mm dia	Each	23.00
1744	Rubber Gaskets for SW Pipe 250mm dia	Each	36.00
1745	Rubber Gaskets for SW Pipe 300mm dia	Each	41.00
1751	150mm Nominal dia AC pipe (Mazza process) Class-1, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	362.00
1752	200 mm Nominal dia AC pipe (Mazza process) Class-1, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	573.00
1753	250 mm Nominal dia AC pipe (Mazza process) Class-1, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	747.00
1754	300 mm Nominal Dia AC pipe (Mazza process) Class-1, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	955.00
1755	350 mm Nominal Dia AC pipe (Mazza process) Class-1, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	1,227.00
1756	400 mm Nominal Dia AC pipe (Mazza process) Class-1, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	1,495.00
1757	450 mm Nominal Dia AC pipe (Mazza process) Class-1, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	1,736.00
1758	500 mm Nominal Dia AC pipe (Mazza process) Class-1, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	2,225.00
1759	600 mm Nominal Dia AC pipe (Mazza process) Class-1, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	3,570.00
1760	700 mm Nominal Dia AC pipe (Mazza process) Class-1, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	4,914.00

Code No	Description	Unit	Rate Rs.
1761	800 mm Nominal Dia AC pipe (Mazza process) Class-1, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	6,488.00
1762	900 mm Nominal Dia AC pipe (Mazza process) Class-1, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	8,194.00
1763	1000 mm Nominal Dia AC pipe (Mazza process) Class-1, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	9,899.00
1766	150mm Nominal dia AC pipe (Mazza process) Class-2, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	448.00
1767	200 mm Nominal dia AC pipe (Mazza process) Class-2, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	754.00
1768	250 mm Nominal dia AC pipe (Mazza process) Class-2, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	938.00
1769	300 mm Nominal Dia AC pipe (Mazza process) Class-2, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	1,302.00
1770	350 mm Nominal Dia AC pipe (Mazza process) Class-2, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	1,655.00
1771	400 mm Nominal Dia AC pipe (Mazza process) Class-2, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	2,100.00
1772	450 mm Nominal Dia AC pipe (Mazza process) Class-2, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	2,480.00
1773	500 mm Nominal Dia AC pipe (Mazza process) Class-2, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	3,111.00
1774	600 mm Nominal Dia AC pipe (Mazza process) Class-2, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	4,422.00
1775	700 mm Nominal Dia AC pipe (Mazza process) Class-2, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	5,435.00
1776	800 mm Nominal Dia AC pipe (Mazza process) Class-2, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	7,732.00
1777	900 mm Nominal Dia AC pipe (Mazza process) Class-2, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	9,668.00
1778	1000 mm Nominal Dia AC pipe (Mazza process) Class-2, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	11,916.00
1781	150mm Nominal dia AC pipe (Mazza process) Class-3, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	563.00
1782	200 mm Nominal dia AC pipe (Mazza process) Class-3, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	943.00
1783	250 mm Nominal dia AC pipe (Mazza process) Class-3, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	1,170.00
1784	300 mm Nominal Dia AC pipe (Mazza process) Class-3, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	1,671.00
1785	350 mm Nominal Dia AC pipe (Mazza process) Class-3, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	2,090.00

Code No	Description	Unit	Rate Rs.
1786	400 mm Nominal Dia AC pipe (Mazza process) Class-3, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	2,741.00
1787	450 mm Nominal Dia AC pipe (Mazza process) Class-3, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	3,301.00
1788	500 mm Nominal Dia AC pipe (Mazza process) Class-3, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	4,024.00
1789	600 mm Nominal Dia AC pipe (Mazza process) Class-3, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	5,722.00
1790	700 mm Nominal Dia AC pipe (Mazza process) Class-3, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	7,539.00
1791	800 mm Nominal Dia AC pipe (Mazza process) Class-3, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	10,120.00
1792	900 mm Nominal Dia AC pipe (Mazza process) Class-3, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	12,550.00
1793	1000 mm Nominal Dia AC pipe (Mazza process) Class-3, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	15,721.00
1800	225 mm DN/ID HDPE Pipe of PE-100 grade material and pressure class PN 6 for sewer application as per IS 14333-1996/2022	metre	1,316.00
1801	200 mm DN/ID HDPE Pipe of PE-100 grade material and pressure class PN 6 for sewer application as per IS 14333-1996/2022	metre	1,153.00
1802	250 mm DN/ID HDPE Pipe of PE-100 grade material and pressure class PN 6 for sewer application as per IS 14333-1996/2022	metre	1,794.00
1803	315 mm DN/ID HDPE Pipe of PE-100 grade material and pressure class PN 6 for sewer application as per IS 14333-1996/2022	metre	2,904.00
1804	355 mm DN/ID HDPE Pipe of PE-100 grade material and pressure class PN 6 for sewer application as per IS 14333-1996/2022	metre	3,413.00
1805	400 mm DN/ID HDPE Pipe of PE-100 grade material and pressure class PN 6 for sewer application as per IS 14333-1996/2022	metre	4,690.00
1806	450 mm DN/ID HDPE Pipe of PE-100 grade material and pressure class PN 6 for sewer application as per IS 14333-1996/2022	metre	5,903.00
1807	500 mm DN/ID HDPE Pipe of PE-100 grade material and pressure class PN 6 for sewer application as per IS 14333-1996/2022	metre	7,802.00
1808	560 mm DN/ID HDPE Pipe of PE-100 grade material and pressure class PN 6 for sewer application as per IS 14333-1996/2022	metre	9,751.00
1809	630 mm DN/ID HDPE Pipe of PE-100 grade material and pressure class PN 6 for sewer application as per IS 14333-1996/2022	metre	12,354.00
1810	800 mm DN/ID HDPE Pipe of PE-100 grade material and pressure class PN 6 for sewer application as per IS 14333-1996/2022	metre	19,881.00
1811	900 mm DN/ID HDPE Pipe of PE-100 grade material and pressure class PN 6 for sewer application as per IS 14333-1996/2022	metre	25,186.00
1812	1000 mm DN/ID HDPE Pipe of PE-100 grade material and pressure class PN 6 for sewer application as per IS 14333-1996/2022	metre	31,114.00

Code No	Description	Unit	Rate Rs.
1821	150 mm DN/ID HDPE DWC (External Annular Corrugated and smooth internal walls) SN-8 as per IS 16098 part 2	metre	268.00
1822	200 mm DN/ID HDPE DWC (External Annular Corrugated and smooth internal walls) SN-8 as per IS 16098 part 2	metre	385.00
1823	250 mm DN/ID HDPE DWC (External Annular Corrugated and smooth internal walls) SN-8 as per IS 16098 part 2	metre	595.00
1824	300 mm DN/ID HDPE DWC (External Annular Corrugated and smooth internal walls) SN-8 as per IS 16098 part 2	metre	809.00
1825	400 mm DN/ID HDPE DWC (External Annular Corrugated and smooth internal walls) SN-8 as per IS 16098 part 2	metre	1,403.00
1826	500 mm DN/ID HDPE DWC (External Annular Corrugated and smooth internal walls) SN-8 as per IS 16098 part 2	metre	2,118.00
1827	600 mm DN/ID HDPE DWC (External Annular Corrugated and smooth internal walls) SN-8 as per IS 16098 part 2	metre	3,688.00
1828	800 mm DN/ID HDPE DWC (External Annular Corrugated and smooth internal walls) SN-8 as per IS 16098 part 2	metre	6,265.00
1829	1000 mm DN/ID HDPE DWC (External Annular Corrugated and smooth internal walls) SN-8 as per IS 16098 part 2	metre	10,199.00
1840	110 mm ID/ND U-PVC pipes as per IS 13592 with socket and spigot joint and rubber ring	metre	152.10
1851	110 mm ID/ND PVC-U pipes (stiffness class SN 8) as per IS 15328	metre	165.00
1852	160 mm ID/ND PVC-U pipes (stiffness class SN 8) as per IS 15328	metre	351.00
1853	200 mm ID/ND PVC-U pipes (stiffness class SN 8) as per IS 15328	metre	548.00
1854	250 mm ID/ND PVC-U pipes (stiffness class SN 8) as per IS 15328	metre	841.00
1855	315 mm ID/ND PVC-U pipes (stiffness class SN 8) as per IS 15328	metre	1,343.00
1856	350 mm ID/ND PVC-U pipes (stiffness class SN 8) as per IS 15328	metre	1,463.00
1857	400 mm ID/ND PVC-U pipes (stiffness class SN 8) as per IS 15328	metre	1,560.00
1858	500 mm ID/ND PVC-U pipes (stiffness class SN 8) as per IS 15328	metre	1,658.00
1859	700 mm ID/ND PVC-U pipes (stiffness class SN 8) as per IS 15328	metre	1,755.00
1861	90 mm dia U-PVC pipes with rubber ring (working pressure 6 kg / cm ²) as per IS: 4985	metre	127.00
1862	110 mm dia U-PVC pipes with rubber ring (working pressure 6 kg / cm ²) as per IS: 4985	metre	188.00
1863	125 mm dia U-PVC pipes with rubber ring (working pressure 6 kg / cm ²) as per IS: 4985	metre	245.00
1864	140 mm dia U-PVC pipes with rubber ring (working pressure 6 kg / cm ²) as per IS: 4985	metre	304.00
1865	160 mm dia U-PVC pipes with rubber ring (working pressure 6 kg / cm ²) as per IS: 4985	metre	391.00

Code No	Description	Unit	Rate Rs.
1866	180 mm dia U-PVC pipes with rubber ring (working pressure 6 kg / cm ²) as per IS: 4985	metre	498.00
1867	200 mm dia U-PVC pipes with rubber ring (working pressure 6 kg / cm ²) as per IS: 4985	metre	617.00
1868	225 mm dia U-PVC pipes with rubber ring (working pressure 6 kg / cm ²) as per IS: 4985	metre	776.00
1869	250 mm dia U-PVC pipes with rubber ring (working pressure 6 kg / cm ²) as per IS: 4985	metre	963.00
1870	280 mm dia U-PVC pipes with rubber ring (working pressure 6 kg / cm ²) as per IS: 4985	metre	1,215.00
1871	315 mm dia U-PVC pipes with rubber ring (working pressure 6 kg / cm ²) as per IS: 4985	metre	1,557.00
1881	90 mm dia U-PVC equal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	302.00
1882	110 mm dia U-PVC equal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	498.00
1883	125 mm dia U-PVC equal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	583.00
1884	140 mm dia U-PVC equal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	878.00
1885	160 mm dia U-PVC equal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	1,304.00
1886	180 mm dia U-PVC equal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	1,701.00
1887	200 mm dia U-PVC equal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	2,141.00
1888	225 mm dia U-PVC equal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	3,409.00
1889	250 mm dia U-PVC equal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	4,312.00
1890	280 mm dia U-PVC equal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	4,729.00
1891	315 mm dia U-PVC equal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	5,306.00
1892	350 mm dia U-PVC equal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	5,850.00
1893	400 mm dia U-PVC equal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	6,338.00
1894	500 mm dia U-PVC equal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	6,825.00
1895	700 mm dia U-PVC equal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	7,313.00

Code No	Description	Unit	Rate Rs.
1901	125 X 110 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	708.00
1902	140 X 110 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	783.00
1903	140 X 125 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	792.00
1904	160 X 110 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	969.00
1905	160 X 125 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	1,093.00
1906	160 X 140 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	1,351.00
1907	180 X 110 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	1,219.00
1908	180 X 125 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	1,847.00
1909	180 X 140 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	1,900.00
1910	180 X 160 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	2,029.00
1911	200 X 110 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	1,930.00
1912	200 X 125 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	1,998.00
1913	200 X 140 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	2,015.00
1914	200 X 160 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	2,029.00
1915	200 X 180 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	2,072.00
1916	225 X 110 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	2,039.00
1917	225 X 125 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	2,161.00
1918	225 X 140 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	2,263.00
1919	225 X 160 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	2,519.00
1920	225 X 180 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	2,591.00
1921	225 X 200 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	2,629.00

Code No	Description	Unit	Rate Rs.
1922	250 X 110 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	2,067.00
1923	250 X 125 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	2,141.00
1924	250 X 140 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	2,550.00
1925	250 X 160 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	2,662.00
1926	250 X 180 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	2,761.00
1927	250 X 200 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	2,920.00
1928	250 X 225 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	3,059.00
1929	280 X 110 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	2,067.00
1930	280 X 125 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	2,574.00
1931	280 X 140 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	2,798.00
1932	280 X 160 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	2,816.00
1933	280 X 180 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	2,823.00
1934	280 X 200 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	2,918.00
1935	280 X 225 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	3,075.00
1936	280 X 250 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	3,276.00
1937	315 X 110 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	3,626.00
1938	315 X 125 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	3,633.00
1939	315 X 140 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	3,710.00
1940	315 X 160 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	3,769.00
1941	315 X 180 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	4,199.00
1942	315 X 200 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	4,232.00

Code No	Description	Unit	Rate Rs.
1943	315 X 225 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	4,394.00
1944	315 X 250 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	4,466.00
1945	315 X 280 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	4,697.00
1951	125 X 110 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	269.00
1952	140 X 110 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	347.00
1953	140 X 125 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	347.00
1954	160 X 110 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	510.00
1955	160 X 125 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	539.00
1956	160 X 140 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	568.00
1957	180 X 110 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	532.00
1958	180 X 125 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	546.00
1959	180 X 140 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	609.00
1960	180 X 160 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	618.00
1961	200 X 110 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	806.00
1962	200 X 125 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	872.00
1963	200 X 140 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	966.00
1964	200 X 160 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	974.00
1965	200 X 180 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	1,062.00
1966	225 X 110 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	906.00
1967	225 X 125 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	990.00
1968	225 X 140 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	1,000.00

Code No	Description	Unit	Rate Rs.
1969	225 X 160 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	1,006.00
1970	225 X 180 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	1,050.00
1971	225 X 200 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	1,075.00
1972	250 X 110 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	969.00
1973	250 X 125 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	1,055.00
1974	250 X 140 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	1,142.00
1975	250 X 160 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	1,171.00
1976	250 X 180 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	1,250.00
1977	250 X 200 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	1,341.00
1978	250 X 225 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	1,394.00
1979	280 X 110 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	1,153.00
1980	280 X 125 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	1,242.00
1981	280 X 140 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	1,328.00
1982	280 X 160 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	1,372.00
1983	280 X 180 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	1,392.00
1984	280 X 200 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	1,492.00
1985	280 X 225 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	1,541.00
1986	280 X 250 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	1,544.00
1987	315 X 110 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	1,676.00
1988	315 X 125 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	1,765.00
1989	315 X 140 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	1,842.00

Code No	Description	Unit	Rate Rs.
1990	315 X 160 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	1,887.00
1991	315 X 180 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	1,916.00
1992	315 X 200 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	2,003.00
1993	315 X 225 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	2,012.00
1994	315 X 250 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	2,093.00
1995	315 X 280 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	2,189.00
2001	90 mm dia U-PVC double/ single socketed 90° bend (class III, 6kg/sqcm) confirming to IS:7834	each	195.00
2002	110 mm dia U-PVC double/ single socketed 90° bend (class III, 6kg/sqcm) confirming to IS:7834	each	337.00
2003	125 mm dia U-PVC double/ single socketed 90° bend (class III, 6kg/sqcm) confirming to IS:7834	each	471.00
2004	140 mm dia U-PVC double/ single socketed 90° bend (class III, 6kg/sqcm) confirming to IS:7834	each	645.00
2005	160 mm dia U-PVC double/ single socketed 90° bend (class III, 6kg/sqcm) confirming to IS:7834	each	927.00
2006	180 mm dia U-PVC double/ single socketed 90° bend (class III, 6kg/sqcm) confirming to IS:7834	each	1,268.00
2007	200 mm dia U-PVC double/ single socketed 90° bend (class III, 6kg/sqcm) confirming to IS:7834	each	1,840.00
2008	225 mm dia U-PVC double/ single socketed 90° bend (class III, 6kg/sqcm) confirming to IS:7834	each	2,616.00
2009	250 mm dia U-PVC double/ single socketed 90° bend (class III, 6kg/sqcm) confirming to IS:7834	each	3,462.00
2010	280 mm dia U-PVC double/ single socketed 90° bend (class III, 6kg/sqcm) confirming to IS:7834	each	5,237.00
2011	315 mm dia U-PVC double/ single socketed 90° bend (class III, 6kg/sqcm) confirming to IS:7834	each	7,671.00
2012	350 mm dia U-PVC double/ single socketed 90° bend (class III, 6kg/sqcm) confirming to IS:7834	each	7,800.00
2013	400 mm dia U-PVC double/ single socketed 90° bend (class III, 6kg/sqcm) confirming to IS:7834	each	8,288.00
2014	500 mm dia U-PVC double/ single socketed 90° bend (class III, 6kg/sqcm) confirming to IS:7834	each	8,775.00
2015	700 mm dia U-PVC double/ single socketed 90° bend (class III, 6kg/sqcm) confirming to IS:7834	each	9,263.00

Code No	Description	Unit	Rate Rs.
2021	90 mm U-PVC double/ single socketed 45/22.5/11.25° bend (class III, 6kg/sqcm) confirming to IS:7834	each	154.00
2022	110 mm U-PVC double/ single socketed 45/22.5/11.25° bend (class III, 6kg/sqcm) confirming to IS:7834	each	257.00
2023	125 mm U-PVC double/ single socketed 45/22.5/11.25° bend (class III, 6kg/sqcm) confirming to IS:7834	each	353.00
2024	140 mm U-PVC double/ single socketed 45/22.5/11.25° bend (class III, 6kg/sqcm) confirming to IS:7834	each	478.00
2025	160 mm U-PVC double/ single socketed 45/22.5/11.25° bend (class III, 6kg/sqcm) confirming to IS:7834	each	678.00
2026	180 mm U-PVC double/ single socketed 45/22.5/11.25° bend (class III, 6kg/sqcm) confirming to IS:7834	each	943.00
2027	200 mm U-PVC double/ single socketed 45/22.5/11.25° bend (class III, 6kg/sqcm) confirming to IS:7834	each	1,318.00
2028	225 mm U-PVC double/ single socketed 45/22.5/11.25° bend (class III, 6kg/sqcm) confirming to IS:7834	each	1,825.00
2029	250 mm U-PVC double/ single socketed 45/22.5/11.25° bend (class III, 6kg/sqcm) confirming to IS:7834	each	2,485.00
2030	280 mm U-PVC double/ single socketed 45/22.5/11.25° bend (class III, 6kg/sqcm) confirming to IS:7834	each	3,483.00
2031	315 mm U-PVC double/ single socketed 45/22.5/11.25° bend (class III, 6kg/sqcm) confirming to IS:7834	each	5,308.00
2041	90 mm dia End Cap (class III, 6kg/sqcm) confirming to IS:7834	each	25.00
2042	110 mm dia End Cap (class III, 6kg/sqcm) confirming to IS:7834	each	36.00
2043	125 mm dia End Cap (class III, 6kg/sqcm) confirming to IS:7834	each	98.00
2044	140 mm dia End Cap (class III, 6kg/sqcm) confirming to IS:7834	each	125.00
2045	160 mm dia End Cap (class III, 6kg/sqcm) confirming to IS:7834	each	140.00
2046	180 mm dia End Cap (class III, 6kg/sqcm) confirming to IS:7834	each	158.00
2047	200 mm dia End Cap (class III, 6kg/sqcm) confirming to IS:7834	each	174.00
2048	225 mm dia End Cap (class III, 6kg/sqcm) confirming to IS:7834	each	451.00
2049	250 mm dia End Cap (class III, 6kg/sqcm) confirming to IS:7834	each	461.00
2050	280 mm dia End Cap (class III, 6kg/sqcm) confirming to IS:7834	each	953.00
2051	315 mm dia End Cap (class III, 6kg/sqcm) confirming to IS:7834	each	1,017.00
2052	350 mm dia End Cap (class III, 6kg/sqcm) confirming to IS:7834	each	1,170.00
2053	400 mm dia End Cap (class III, 6kg/sqcm) confirming to IS:7834	each	1,268.00
2054	500 mm dia End Cap (class III, 6kg/sqcm) confirming to IS:7834	each	1,365.00
2055	700 mm dia End Cap (class III, 6kg/sqcm) confirming to IS:7834	each	1,463.00
2061	90 mm dia U-PVC equal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	418.00

Code No	Description	Unit	Rate Rs.
2062	110 mm dia U-PVC equal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	522.00
2063	125 mm dia U-PVC equal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	831.00
2064	140 mm dia U-PVC equal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	1,022.00
2065	160 mm dia U-PVC equal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	1,521.00
2066	180 mm dia U-PVC equal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	1,892.00
2067	200 mm dia U-PVC equal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	2,628.00
2068	225 mm dia U-PVC equal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	3,426.00
2069	250 mm dia U-PVC equal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	4,812.00
2070	280 mm dia U-PVC equal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	6,065.00
2071	315 mm dia U-PVC equal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	9,316.00
2101	125 X 110 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	1,036.00
2102	140 X 110 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	1,307.00
2103	140 X 125 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	1,442.00
2104	160 X 110 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	1,787.00
2105	160 X 125 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	1,805.00
2106	160 X 140 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	1,824.00
2107	180 X 110 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	2,117.00
2108	180 X 125 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	2,327.00
2109	180 X 140 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	2,390.00
2110	180 X 160 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	2,605.00
2111	200 X 110 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	2,448.00

Code No	Description	Unit	Rate Rs.
2112	200 X 125 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	2,601.00
2113	200 X 140 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	2,622.00
2114	200 X 160 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	2,636.00
2115	200 X 180 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	3,588.00
2116	225 X 110 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	3,892.00
2117	225 X 125 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	4,084.00
2118	225 X 140 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	4,136.00
2119	225 X 160 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	4,650.00
2120	225 X 180 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	5,175.00
2121	225 X 200 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	6,329.00
2122	250 X 110 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	4,563.00
2123	250 X 125 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	4,658.00
2124	250 X 140 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	4,833.00
2125	250 X 160 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	4,661.00
2126	250 X 180 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	4,926.00
2127	250 X 200 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	5,172.00
2128	250 X 225 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	5,370.00
2129	280 X 110 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	5,423.00
2130	280 X 125 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	5,478.00
2131	280 X 140 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	5,533.00
2132	280 X 160 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	5,588.00

Code No	Description	Unit	Rate Rs.
2133	280 X 180 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	5,644.00
2134	280 X 200 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	5,700.00
2135	280 X 225 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	5,903.00
2136	280 X 250 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	6,405.00
2137	315 X 110 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	5,397.00
2138	315 X 125 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	5,423.00
2139	315 X 140 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	5,460.00
2140	315 X 160 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	5,895.00
2141	315 X 180 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	5,950.00
2142	315 X 200 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	6,238.00
2143	315 X 225 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	6,416.00
2144	315 X 250 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	6,612.00
2145	315 X 280 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	7,417.00
2151	125 X 110 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	276.00
2152	140 X 110 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	455.00
2153	140 X 125 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	471.00
2154	160 X 110 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	625.00
2155	160 X 125 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	663.00
2156	160 X 140 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	680.00
2157	180 X 110 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	784.00
2158	180 X 125 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	799.00

Code No	Description	Unit	Rate Rs.
	to IS:7834		
2159	180 X 140 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	862.00
2160	180 X 160 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	872.00
2161	200 X 110 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	912.00
2162	200 X 125 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	932.00
2163	200 X 140 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	1,048.00
2164	200 X 160 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	1,102.00
2165	200 X 180 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	1,183.00
2166	225 X 110 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	1,282.00
2167	225 X 125 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	1,418.00
2168	225 X 140 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	1,435.00
2169	225 X 160 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	1,517.00
2170	225 X 180 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	1,612.00
2171	225 X 200 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	1,701.00
2172	250 X 110 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	1,852.00
2173	250 X 125 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	1,911.00
2174	250 X 140 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	1,993.00
2175	250 X 160 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	2,091.00
2176	250 X 180 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	2,110.00
2177	250 X 200 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	2,196.00
2178	250 X 225 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	2,232.00

Code No	Description	Unit	Rate Rs.
2179	280 X 110 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	1,861.00
2180	280 X 125 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	1,881.00
2181	280 X 140 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	1,991.00
2182	280 X 160 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	2,118.00
2183	280 X 180 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	2,233.00
2184	280 X 200 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	2,305.00
2185	280 X 225 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	2,326.00
2186	280 X 250 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	2,464.00
2187	315 X 110 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	2,811.00
2188	315 X 125 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	2,894.00
2189	315 X 140 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	2,979.00
2190	315 X 160 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	3,012.00
2191	315 X 180 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	3,079.00
2192	315 X 200 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	3,144.00
2193	315 X 225 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	3,243.00
2194	315 X 250 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	3,341.00
2195	315 X 280 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	3,356.00
2201	90 mm dia U-PVC double/ single socketed 90° bend (class V, 10kg/sqcm) confirming to IS:7834	each	310.00
2202	110 mm dia U-PVC double/ single socketed 90° bend (class V, 10kg/sqcm) confirming to IS:7834	each	528.00
2203	125 mm dia U-PVC double/ single socketed 90° bend (class V, 10kg/sqcm) confirming to IS:7834	each	777.00
2204	140 mm dia U-PVC double/ single socketed 90° bend (class V, 10kg/sqcm) confirming to IS:7834	each	1,065.00

Code No	Description	Unit	Rate Rs.
	10kg/sqcm) confirming to IS:7834		
2205	160 mm dia U-PVC double/ single socketed 90° bend (class V, 10kg/sqcm) confirming to IS:7834	each	1,562.00
2206	180 mm dia U-PVC double/ single socketed 90° bend (class V, 10kg/sqcm) confirming to IS:7834	each	2,515.00
2207	200 mm dia U-PVC double/ single socketed 90° bend (class V, 10kg/sqcm) confirming to IS:7834	each	3,109.00
2208	225 mm dia U-PVC double/ single socketed 90° bend (class V, 10kg/sqcm) confirming to IS:7834	each	4,473.00
2209	250 mm dia U-PVC double/ single socketed 90° bend (class V, 10kg/sqcm) confirming to IS:7834	each	6,035.00
2210	280 mm dia U-PVC double/ single socketed 90° bend (class V, 10kg/sqcm) confirming to IS:7834	each	8,261.00
2211	315 mm dia U-PVC double/ single socketed 90° bend (class V, 10kg/sqcm) confirming to IS:7834	each	13,017.00
2221	90 mm dia U-PVC double/ single socketed 45/22.5/11.25° bend (class V, 10kg/sqcm) confirming to IS:7834	each	237.00
2222	110 mm dia U-PVC double/ single socketed 45/22.5/11.25° bend (class V, 10kg/sqcm) confirming to IS:7834	each	413.00
2223	125 mm dia U-PVC double/ single socketed 45/22.5/11.25° bend (class V, 10kg/sqcm) confirming to IS:7834	each	568.00
2224	140 mm dia U-PVC double/ single socketed 45/22.5/11.25° bend (class V, 10kg/sqcm) confirming to IS:7834	each	775.00
2225	160 mm dia U-PVC double/ single socketed 45/22.5/11.25° bend (class V, 10kg/sqcm) confirming to IS:7834	each	1,122.00
2226	180 mm dia U-PVC double/ single socketed 45/22.5/11.25° bend (class V, 10kg/sqcm) confirming to IS:7834	each	1,560.00
2227	200 mm dia U-PVC double/ single socketed 45/22.5/11.25° bend (class V, 10kg/sqcm) confirming to IS:7834	each	2,194.00
2228	225 mm dia U-PVC double/ single socketed 45/22.5/11.25° bend (class V, 10kg/sqcm) confirming to IS:7834	each	3,078.00
2229	250 mm dia U-PVC double/ single socketed 45/22.5/11.25° bend (class V, 10kg/sqcm) confirming to IS:7834	each	4,183.00
2230	280 mm dia U-PVC double/ single socketed 45/22.5/11.25° bend (class V, 10kg/sqcm) confirming to IS:7834	each	6,317.00
2231	315 mm dia U-PVC double/ single socketed 45/22.5/11.25° bend (class V, 10kg/sqcm) confirming to IS:7834	each	8,915.00
2241	90 mm dia End Cap (class V, 10kg/sqcm) confirming to IS:7834	each	62.00
2242	110 mm dia End Cap (class V, 10kg/sqcm) confirming to IS:7834	each	122.00
2243	125 mm dia End Cap (class V, 10kg/sqcm) confirming to IS:7834	each	157.00

Code No	Description	Unit	Rate Rs.
2244	140 mm dia End Cap (class V, 10kg/sqcm) confirming to IS:7834	each	208.00
2245	160 mm dia End Cap (class V, 10kg/sqcm) confirming to IS:7834	each	362.00
2246	180 mm dia End Cap (class V, 10kg/sqcm) confirming to IS:7834	each	409.00
2247	200 mm dia End Cap (class V, 10kg/sqcm) confirming to IS:7834	each	792.00
2248	225 mm dia End Cap (class V, 10kg/sqcm) confirming to IS:7834	each	851.00
2249	250 mm dia End Cap (class V, 10kg/sqcm) confirming to IS:7834	each	907.00
2250	280 mm dia End Cap (class V, 10kg/sqcm) confirming to IS:7834	each	1,125.00
2251	315 mm dia End Cap (class V, 10kg/sqcm) confirming to IS:7834	each	1,769.00
2261	U-PVC Single socketed rain water pipe confirming to IS : 13592 Class "A" 75 mm dia.	metre	75.00
2262	U-PVC Single socketed rain water pipe confirming to IS : 13592 Class "A" 110 mm dia.	metre	140.00
2263	Rubber (Seal) Ring for 75 mm dia UPVC pipe conforming to IS : 5382	each	17.00
2264	Rubber (Seal) Ring for 110 mm dia UPVC pipe conforming to IS : 5382	each	22.00
2265	UPVC coupler for UPVC drainage pipes 75 mm	each	35.00
2266	UPVC coupler for UPVC drainage pipes 110 mm	each	65.00
2267	UPVC pushfit coupler (single) 75 mm thick	each	40.00
2268	UPVC pushfit coupler (single) 110 mm thick	each	65.00
2269	UPVC single equal Tee (without door) 75x75x75 mm	each	75.00
2270	UPVC single equal Tee (without door) 110x110x110 mm	each	150.00
2271	UPVC single equal Tee (with door) 75x75x75 mm	each	85.00
2272	UPVC single equal Tee (with door) 110x110x110 mm	each	175.00
2281	UPVC bend 87.5o 75 mm	each	50.00
2282	UPVC bend 87.5o 110 mm	each	75.00
2285	UPVC plain shoe 75 mm	each	110.00
2286	UPVC plain shoe 110 mm	each	215.00
2287	UPVC pipe clip 75 mm	each	15.00
2288	UPVC pipe clip 110 mm	each	20.00
2341	20 mm dia HDPE pipe PN 6 (class PE-80)	metre	25.00
2342	25 mm dia HDPE pipe PN 6 (class PE-80)	metre	35.00
2343	32 mm dia HDPE pipe PN 6 (class PE-80)	metre	56.00
2347	20 mm dia MDPE pipe PN 6	metre	22.00
2348	25 mm dia MDPE pipe PN 6	metre	31.00
2349	32 mm dia MDPE pipe PN 6	metre	49.00

Code No	Description	Unit	Rate Rs.
2351	Electro Fusion Tapping saddle with Moulded female threaded metal insert of SS304 material and integrated in the body(single piece) as per with Pressure rating of PN 12.5 and for drinking water applications	each	586.00
2352	Polypropylene Compression connector with Metal Insert Female Thread Adaptor with SS304 material, Polypropylene Nut / Cap, Packing bush, NBR "O" ring, pressure rating PN 12.5 and for drinking water applications	each	129.00
2353	Double Compression Elbow with Polypropylene Nut / Cap, packing bush, Clip Ring-POM (Acetylic resin), "O" ring – NBR, Pressure rating PN 12.5 for drinking water applications for user connection	each	61.00
2361	Poly propylene- Random - Co - Polymer (PPR) pipes SDR 7.4 - 16 Outer dia	metre	45.00
2362	Poly propylene - Random - Co - Polymer (PPR) pipes SDR 7.4 - 20mm Outer dia.	metre	50.00
2363	Poly propylene - Random - Co - polymer (PPR) pipes SDR 7.4 - 25 mm outer dia.	metre	80.00
2364	Poly propylene - Random - Co - polymer (PPR) pipes SDR 7.4 - 32 mm Outer dia.	metre	125.00
2365	Poly propylene - Random - Co - polymer (PPR) pipes SDR 7.4 - 40mm Outer dia.	metre	190.00
2366	Poly propylene - Random - Co - polymer (PPR) pipes SDR 7.4 - 50mm Outer dia.	metre	290.00
2367	Poly propylene - Random - Co - polymer (PPR) pipes SDR 7.4 - 63mm Outer dia.	metre	455.00
2368	Poly propylene - Random - Co - polymer (PPR) pipes SDR 7.4 - 75mm Outer dia.	metre	660.00
2369	Poly propylene - Random - Co - polymer (PPR) pipes SDR 7.4 - 90mm Outer dia.	metre	940.00
2370	Poly propylene - Random - Co - polymer (PPR) pipes SDR - 11 - 110mm Outer dia.	metre	1,395.00
2371	Poly propylene - Random - Co - polymer (PPR) pipes SDR - 11- 160mm Outer dia.	metre	3,990.00
2372	Chlorinated Polyvinyl - chloride (CPVC) pipe 15 mm outer dia.	metre	50.00
2373	Chlorinated Polyvinyl - chloride (CPVC) pipe 20 mm outer dia.	metre	75.00
2374	Chlorinated Polyvinyl - chloride (CPVC) pipe 25 mm outer dia.	metre	110.00
2375	Chlorinated Polyvinyl - chloride (CPVC) pipe 32 mm outer dia.	metre	180.00
2376	Chlorinated Polyvinyl - chloride (CPVC) pipe 40 mm outer dia.	metre	230.00
2377	Chlorinated Polyvinyl - chloride (CPVC) pipe 50 mm outer dia.	metre	405.00
2378	Chlorinated Polyvinyl - chloride (CPVC) pipe 62.5mm inner dia.	metre	930.00

Code No	Description	Unit	Rate Rs.
2379	Chlorinated Polyvinyl - chloride (CPVC) pipe 75 mm inner dia.	metre	1,210.00
2380	Chlorinated Polyvinyl - chloride (CPVC) pipe 100 mm inner dia.	metre	1,750.00
2381	Chlorinated Polyvinyl - chloride (CPVC) pipe 150 mm inner dia.	metre	2,740.00
2382	1216 mm PE-AL-PE Composite pressure pipe	Metre	63.00
2383	1620 mm PE-AL-PE Composite pressure pipe	Metre	75.00
2384	2025 mm PE-AL-PE Composite pressure pipe	Metre	105.00
2385	2532 mm PE-AL-PE Composite pressure pipe	Metre	145.00
2386	3240 mm PE-AL-PE Composite pressure pipe	Metre	210.00
2387	4050 mm PE-AL-PE Composite pressure pipe	Metre	300.00
2388	15 mm PTMT bib cock	each	95.00
2389	15 mm PTMT bib cock with flange (fancy)	each	135.00
2390	15 mm PTMT bib cock long body with flange	each	155.00
2391	P.T.M.T. Bib cock with nozzle 15mm	each	125.00
2392	PTMT pillar cock	each	160.00
2394	P.T.M.T. Urinal cock 15mm dia	each	110.00
2395	PTMT push cock 15 mm dia.	each	80.00
2396	PTMT push cock 12 mm dia. 20 mm BSP	each	75.00
2397	15 mm dia PTMT stop cock(male thread)	each	95.00
2399	20 mm dia. PTMT stop cock	each	115.00
2400	P.T.M.T. Ball Cock 15mm Complete with Epoxy Coated Aluminium Rod & H.D. Ball	Each	135.00
2401	P.T.M.T. Ball Cock 20mm Complete with Epoxy Coated Aluminium Rod & H.D. Ball	Each	190.00
2402	P.T.M.T. Ball Cock 25mm Complete with Epoxy Coated Aluminium Rod & H.D. Ball	Each	385.00
2403	P.T.M.T. Ball Cock 40mm Complete with Epoxy Coated Aluminium Rod & H.D. Ball	Each	640.00
2404	P.T.M.T. Ball Cock 50mm Complete with Epoxy Coated Aluminium Rod & H.D. Ball	Each	1,050.00
2405	P.T.M.T. Angle Stop cock with Flange 15mm	Each	120.00
2406	P.T.M.T. Swivelling shower 15mm	Each	95.00
2408	P.T.M.T. Liquid Soap Container of 400ml capacity	Each	135.00
2409	P.T.M.T. Towel Ring 215xd200x37mm	Each	130.00
2410	P.T.M.T. Towel Rail (450MM)	Each	180.00
2411	P.T.M.T. Towel Rail (600MM)	Each	215.00
2412	P.T.M.T. Shelf 450x124x36mm	Each	255.00

Code No	Description	Unit	Rate Rs.
2413	P.T.M.T. Urinal Spreader 15MM	Each	105.00
2414	P.T.M.T. Soap Dish/Holder 138x102x75mm	Each	100.00
2415	P.T.M.T. Stop cock (concealed) 15mm	each	150.00
2416	Flushing Cistern P.V.C. 10 lts capacity (low level) (White) (with fittings, accessories and flush pipe)	each	595.00
2417	Flushing Cistern P.V.C. 10 lts capacity (low level) (Coloured) (with fittings, accessories and flush pipe)	each	635.00
2418	P.V.C. automatic flushing cistern 5 lts capacity	each	460.00
2419	P.V.C. automatic flushing cistern 10 lts capacity	each	495.00
2421	Semi Rigid PVC waste pipe for sink and wash basin 32 mm dia with length not less than 700 mm i/c PVC waste fittings	each	25.00
2422	Semi Rigid PVC waste pipe for sink and wash basin 40 mm dia with length not less than 700 mm i/c PVC waste fittings	each	35.00
2423	Flexible (coil shaped) PVC waste pipe for sink and wash basin 32 mm dia with length not less than 700 mm i/c PVC waste fittings	each	30.00
2424	Flexible (coil shaped) PVC waste pipe for sink and wash basin 40 mm dia with length not less than 700 mm i/c PVC waste fittings	each	30.00
2425	Unplasticised P.V.C.connection pipe with brass union 30 cm long 15 mm bore	each	23.00
2426	Unplasticised P.V.C.connection pipe with brass union 30 cm long 20 mm bore	each	30.00
2427	Unplasticised P.V.C.connection pipe with brass union 45 cm long 15 mm bore	each	30.00
2428	Unplasticised P.V.C.connection pipe with brass union 45 cm long 20 mm bore	each	40.00
2429	H.P. or L.P. ball valve with polythene floats: 15 mm dia	each	200.00
2430	H.P. or L.P. ball valve with polythene floats: 20 mm dia	each	239.00
2431	H.P. or L.P. ball valve with polythene floats: 25 mm dia	each	340.00
2432	White plastic seat (solid)with lid C.P.brass hinges and rubber buffers	each	325.00
2433	Black plastic seat (solid) with lid C.P.brass hinges and rubber buffers	each	285.00
2434	15 mm nominal bore and 30 cm length PVC connection pipe with P.T.M.T. Nuts	each	40.00
2435	15 mm nominal bore and 45 cm length PVC connection pipe with P.T.M.T. Nuts	each	50.00
2436	P.T.M.T. extension nipple 15mm	each	20.00
2437	P.T.M.T. extension nipple 20mm	each	35.00
2438	P.T.M.T. extension nipple 25mm	each	55.00
2440	P.T.M.T. Grating square slit 150mm	each	70.00

Code No	Description	Unit	Rate Rs.
2441	Plastic HDPE Circular Manhole Chamber internal diameter of 1000mm, structured wall corrugated DWC having a base and riser shaft of 1000mm internal diameter and top cone with cover opening of internal diameter of 600mm, total depth 2000mm and having provision for depth extension with provision with arrangement for 4 nos. connections at the base and of various diameter pipes.	each	37,637.00
2442	Plastic HDPE Circular Manhole Chamber internal diameter of 1200mm, structured wall corrugated DWC having a base and riser shaft of 1200mm internal diameter and top cone with cover opening of internal diameter of 600mm, total depth 2000mm and having provision for depth extension with provision with arrangement for 4 nos. connections at the base and of various diameter pipes.	each	43,487.00
2443	Plastic HDPE Circular Manhole middle column piece of internal diameter of 1000mm, height 250mm/ 500mm/ 750mm/ 1000mm, structured wall corrugated DWC.	metre	18,038.00
2444	Plastic HDPE Circular Manhole middle column piece of internal diameter of 1200mm, height 250mm/ 500mm/ 750mm/ 1000mm, structured wall corrugated DWC.	metre	20,964.00
2445	Plastic HDPE Circular Inspection Chamber having internal diameter of 600mm and depth 500 mm with arrangement for 4 nos. connections at the base to receive / connect various diameter pipes OD of 315mm having integrated base benching reinforced with horizontal and vertical ribs of minimum 20mm thick and a projection of 40mm	each	4,095.00
2446	Plastic HDPE Circular Inspection Chamber having internal diameter of 600mm and depth 750 mm with arrangement for 4 nos. connections at the base to receive / connect various diameter pipes OD of 315mm having integrated base benching reinforced with horizontal and vertical ribs of minimum 20mm thick and a projection of 40mm	each	6,435.00
2447	Plastic HDPE Circular Inspection Chamber having internal diameter of 600mm and depth 1000 mm with arrangement for 4 nos. connections at the base to receive / connect various diameter pipes OD of 315mm having integrated base benching reinforced with horizontal and vertical ribs of minimum 20mm thick and a projection of 40mm	each	8,970.00
2448	Plastic HDPE Circular Inspection Chamber having internal diameter of 600mm and depth 1200 mm with arrangement for 4 nos. connections at the base to receive / connect various diameter pipes OD of 315mm having integrated base benching reinforced with horizontal and vertical ribs of minimum 20mm thick and a projection of 40mm	each	11,359.00
2449	Plastic HDPE Circular Inspection Chamber having internal diameter of 600mm and depth 1500 mm with arrangement for 4 nos. connections at the base to receive / connect various diameter pipes OD of 315mm having integrated base benching reinforced with	each	13,748.00

Code No	Description	Unit	Rate Rs.
	horizontal and vertical ribs of minimum 20mm thick and a projection of 40mm		
2451	PTMT grating 100 mm dia.	each	25.00
2452	PTMT grating 125 mm dia.	each	30.00
2501	3 mm thick translucent white acrylic plastic sheet	sqm	535.00
2502	Neoprine /EPDM rubber gasket	metre	22.00
2503	Plastic cone 12 mm dia	each	15.00
2504	UV stabilised 2 mm thick plain FRP sheet .	sqm	468.00
2505	UV stabilised 2 mm thick corrugated FRP sheet .	sqm	465.00
2509	Factory made PVC rigid foam sheet 1mm thick	sqm	145.00
2525	Polyvinyl chloride sheet 400 micron thick	sqm	33.00
2541	A.P.P. modified polymeric felt (two layers) 1.5 mm thick	sqm	65.00
2542	A.P.P. modified polymeric felt (two layers) 2 mm thick	sqm	98.00
2543	A.P.P. modified 2 mm thick membrane reinforced with glass fibre matt	sqm	130.00
2544	A.P.P. modified 3 mm thick membrane reinforced with glass fibre matt	sqm	200.00
2545	A.P.P. modified 3 mm thick membrane reinforced with polyester matt	sqm	220.00
2551	50mmX42mmX2mm thick Factory made door frame of PVC extruded sections in white, grey or wooden finish	metre	150.00
2552	25mm thick factory made PVC flash door shutter i/c carriage.	sqm	1,755.00
2553	Factory made glass reinforced plastic door frame 90x45 mm i/c carriage.	metre	358.00
2554	30 mm thick factory made glass fiber reinforced plastic panel door shutter i/c carriage.	sqm	2,057.00
2556	Factory made solid PVC door frame 60 x 30mm i/c carriage.	metre	276.00
2557	28mm factory made solid PVC panel door shutter i/c carriage.	sqm	2,650.00
2558	30 mm thick factory made glass fiber reinforced plastic flush door shutter i/c carriage.	sqm	1,966.00
2559	Factory made PVC rigid foam panelled shutter i/c carriage	sqm	2,070.00
2560	Factory made PVC rigid foam panelled shutter as per IS : 4020 i/c carriage	sqm	2,270.00
2561	24 mm thick Factory made shutters with frame, rails and panels of PVC extruded sections in white, grey or wooden finish	sqm	1,310.00
2562	30 mm thick Factory made shutters with frame, rails and panels of PVC extruded sections in white, grey or wooden finish	sqm	1,430.00
2563	48mmX40mmX1.5mm thick Factory made door frame of PVC extruded sections in white, grey or wooden finish	metre	130.00

Code No	Description	Unit	Rate Rs.
2564	Factory made door frame PVC extruded sheet i/c carriage	metre	330.00
2587	Polyethylene water storage tank with cover and suitable locking arrangement	per litre	6.00
2588	PTMT handle 125x34x24mm	Each	26.00
2589	PTMT handle 150x34x24mm	Each	27.00
2590	PTMT butt hinges 75x60x10mm	Each	35.00
2591	PTMT butt hinges 100x75x10mm	Each	45.00
2592	PTMT Tower bolt 152x42x18mm	Each	53.00
2593	PTMT Tower bolt 202x42x18mm	Each	70.00
2594	PTMT door catcher 72x42mm	Each	25.00
2595	Expanded polystyrene type N- Normal	sqm	130.00
2596	Expanded polystyrene type - SE	sqm	155.00
2597	PVC tap written "DANDER"	metre	15.00
2598	Second class kail/ local wood in scantling	cum	16,117.00
2599	Second class kail wood in planks	cum	17,364.00
2601	Superior class teak wood such as Dandeli, Balarshah or Malabar in planks	10 cudm	1,061.00
2602	First class teak wood in scantling	10 cudm	842.00
2603	First class teak wood in planks	10 cudm	821.00
2604	Second class teak wood in scantling	10 cudm	645.00
2605	Second class teak wood in planks	10 cudm	676.00
2607	Extra for selected planks of first class teakwood	10 cudm	146.00
2608	Extra for selected planks of second class teakwood	10 cudm	111.00
2612	Second class deodar wood in planks	10 cudm	624.00
2614	Extra for selected planks of second class deodarwood	10 cudm	99.00
2615	First class kail/ local wood in planks	10 cudm	322.00
2616	Second class kail/ local wood in scantling	10 cudm	255.00
2617	Second class kail wood in planks	10 cudm	260.00
2622	Hollock wood in scantling	10 cudm	348.00
2623	Hollock wood in planks	10 cudm	390.00
2624	Sal wood in scantling	10 cudm	458.00
2625	Kiln seasoning of timber	cum	759.00
2626	Teak wood lipping of size 25x3 mm in pelmets	metre	17.00
2627	Lipping of 2nd class teak wood batten 25mm thick on Block board flush door	sqm of door area	281.00

Code No	Description	Unit	Rate Rs.
2628	Fuel wood	quintal	416.00
2629	Ply wood 5 ply with commercial ply on both faces 6 mm thick	sqm	374.00
2631	2nd class teak wood lipping/ moulded beading or Taj beading of size 18X5mm	metre	26.00
2632	IInd class teak wood lipping 25 mm wide x 12 mm thick	metre	31.00
2636	Hollock ballies 125 mm diameter	metre	38.00
2640	Wooden ballies 2" Dia for bracing	each	48.00
2641	Wooden ballies 4" Dia	metre	50.00
2642	Safeda ballies 125 mm diameter	metre	40.00
2644	Wooden ballies 8" Dia and 9 m long	each	587.00
2645	Bamboo 25 mm dia 2.5 metre long	score	341.00
2648	Seesam wood in plank	10 cudm	634.00
2649	Babool wood	10 cudm	296.00
2651	Block board construction flush door with teak wood ply on both faces 35 mm thick	sqm	1,768.00
2652	Block board construction flush door with teak wood ply on both faces 30 mm thick	sqm	1,664.00
2653	Block board construction flush door with teak wood ply on both faces 25 mm thick	sqm	1,404.00
2654	Block board construction flush door with commercial ply on both faces 35 mm thick	sqm	967.00
2655	Block board construction flush door with commercial ply on both faces 30 mm thick	sqm	920.00
2656	Block board construction flush door with commercial ply on both faces 25 mm thick	sqm	879.00
2657	35 mm thick Block board construction flush door with teak ply on one side and commercial ply on other side	sqm	1,347.00
2658	30 mm thick Block board construction flush door with teak ply on one side and commercial ply on other side	sqm	1,154.00
2659	For flush door shutters Extra for providing teak veneering on one side instead of commercial veneering	sqm	343.00
2660	25 mm thick Block board construction flush door with teak ply on one side and commercial ply on other side	sqm	1,045.00
2661	25 mm thick particle board	sqm	458.00
2662	25 mm thick melamine faced prelaminated three layer particle board	sqm	806.00
2665	25 mm prelaminated flush door both side decorative	sqm	738.00
2671	Veneered particle board with commercial veneering on both sides 12 mm thick	sqm	483.00

Code No	Description	Unit	Rate Rs.
2677	Prelaminated particle board with one side decorative and other side balancing lamination, flat pressed 3 layer & graded (medium density) Grade I, Type II conforming to IS : 12823 (exterior grade)12 mm thick	sqm	577.00
2678	Prelaminated particle board with one side decorative and other side balancing lamination, flat pressed 3 layer & graded (medium density) Grade I, Type II conforming to IS : 12823 (exterior grade)18 mm thick	sqm	702.00
2679	Prelaminated particle board with one side decorative and other side balancing lamination, flat pressed 3 layer & graded (medium density) Grade I, Type II conforming to IS : 12823 (exterior grade)25 mm thick	sqm	910.00
2680	Prelaminated particle board with both sides decorative lamination, flat pressed 3 layer & graded (medium density) Grade I, Type II conforming to IS : 12823 (exterior grade)12 mm thick	sqm	613.00
2681	6 mm teak ply BWR one side	sqm	476.00
2682	12 mm thick Acoustical Board	sqm	494.00
2683	12 mm thick one side laminated board Practical board (Phenol bonded)	sqm	671.00
2684	Flat pressed 3 layer particle board (medium density) Grade I :12 mm thick	sqm	264.00
2687	Extra for veneered particle board with : Teak veneering on one side and commercial veneered on other side	sqm	218.00
2688	Extra for veneered particle board with : Commercial veneering on both sides	sqm	130.00
2689	Extra for veneered particle board with : Teak veneering on both sides	sqm	437.00
2690	Flat pressed 3 layer and graded particle board (medium density) Grade 1 conforming to IS : 3087 - 18 mm thick	sqm	385.00
2691	Decorative plywood 4 mm	sqm	328.00
2692	Ply wood 5 ply with teak ply on one face and commercial ply on another face 9 mm thick	sqm	598.00
2693	Ply wood 5 ply with teak ply on both faces 9 mm thick	sqm	816.00
2694	Ply wood 5 ply with teak ply on one face and commercial ply on another face 9 mm thick	sqm	671.00
2695	Ply wood 7 ply with teak ply on one face and commercial ply on another face 9 mm thick	sqm	894.00
2696	12mm thick marine plywood conforming to IS:710	sqm	841.00
2697	12mm thick fire retardant plywood conforming to IS: 5509.	sqm	863.00
2698	Water proof ply 12mm thick.	sqm	681.00
2699	1.5mm thick decorative laminated sheet	sqm	463.00

Code No	Description	Unit	Rate Rs.
2700	1.0mm thick decorative laminated sheet	sqm	307.00
2701	Factory made 35 mm thick shutters with laminated veneer lumber styles rails as per TADS IS:1995 and panels of 12 mm thick plain type-I, medium density flat pressed three layer, graded particle board (FPT-I) as per IS:3087-1985 bonded with BWP type synthetic resin adhesive as per IS : 848 and pre-lamination conforming to IS : 12823 Grade 1, Type - II marked:	sqm	1,580.00
2702	Factory made 35 mm thick shutters with laminated veneer lumber styles rails as per TADS IS:1995 and panels of 12 mm thick both sides prelaminated type-I, medium density flat pressed three layer, graded particle board (FPT-I) as per IS:3087-1985 bonded with BWP type synthetic resin adhesive as per IS : 848 and pre-lamination conforming to IS : 12823 Grade 1, Type - II marked:	sqm	1,695.00
2703	Factory made 35 mm thick shutters with laminated veneer lumber styles rails as per TADS IS:1995 and panels of 12 mm thick one side prelaminated type-I, and other side balancing lamination, medium density flat pressed three layer, graded particle board (FPT-I) as per IS:3087-1985 bonded with BWP type synthetic resin adhesive as per IS : 848 and pre-lamination conforming to IS : 12823 Grade 1, Type - II marked:	sqm	1,721.00
2704	Factory made 30 mm thick shutters with laminated veneer lumber styles rails as per TADS IS:1995 and panels of sheet glass using 10 kg/ sqm glass panes	sqm	1,424.00
2705	Factory made 35 mm thick shutters with laminated veneer lumber styles rails as per TADS IS:1995 and panels of galvanised wire gauge with average width of aperture 1.4 mm on both directions with wire of dia 0.63 mm	sqm	1,456.00
2706	Factory made 30 mm thick shutters with laminated veneer lumber styles rails as per TADS IS:1995 and panels of galvanised wire gauge with average width of aperture 1.4 mm on both directions with wire of dia 0.63 mm	sqm	1,263.00
2707	Laminated veneer lumber confirming to TADSS IS:1995 manufactured in factory in frames of doors, windows	10 cudm	595.00
2708	White face insulating board:12 mm thick	sqm	265.00
2711	Natural colour insulating board:12 mm thick	sqm	224.00
2714	Flame retardant face insulating board: 12 mm thick	sqm	338.00
2717	Flame retardant face insulating, Impregnated fibre board 12 mm thick	sqm	390.00
2719	Standard quality hard board sheet 3 mm thick	sqm	166.00
2721	Standard quality hard board sheet 4.5 mm thick	sqm	296.00
2723	Coir veneered board 4mm thick	sqm	291.00
2724	Coir veneered board 6mm thick	sqm	385.00

Code No	Description	Unit	Rate Rs.
2726	Coir veneered board 12mm thick	sqm	676.00
2727	Coir veneered board 18mm thick	sqm	385.00
2731	Labour for making Square vision panel in Block board construction flush door	sqm of door area	148.00
2732	Labour for making Circular vision panel in Block board construction flush door	Sqm of door area	154.00
2733	Labour for making Louvers in Decorative type Block board construction flush door	sqm of door area	329.00
2734	Labour for Rebate cutting in Block board construction flush door	sqm of door area	115.00
2735	Gypsum panel 666 X 500 X 100 mm size.	sqm	530.00
2736	Nylon sleeves & wooden screws (40mm)	each	3.00
2741	Shesham wood	10 cudm	660.00
2742	Nigeria wood	10 cudm	743.00
2743	Ghana wood	10 cudm	754.00
2744	Ivory coast	10 cudm	915.00
2745	Chir wood	10 cudm	317.00
2751	12mm thick Ply wood with commercial ply on both face	sqm	437.00
2752	12mm thick Ply wood with teak ply on one face and commercial ply on another face	sqm	806.00
2753	12mm thick Ply wood with teak ply on both face	sqm	977.00
2800	Stone grit 6 mm and down size or pea sized gravel	cum	660.00
2801	Stone Aggregate (Single size) : 06 mm nominal size	cum	676.00
2802	Stone Aggregate (Single size) : 10 mm nominal size	cum	769.00
2803	Stone Aggregate (Single size) : 12.5 mm nominal size	cum	764.00
2804	Stone Aggregate (Single size) : 20 mm nominal size	cum	884.00
2805	Stone Aggregate (Single size) : 25 mm nominal size	cum	863.00
2806	Stone Aggregate (Single size) : 40 mm nominal size	cum	785.00
2821	Aggregates 10 mm to 5 mm	cum	717.00
2824	Aggregates 13.2 mm to 5.6 mm	cum	686.00
2825	Aggregates 13.2 mm to 10 mm	cum	702.00
2828	Aggregates 22.4 mm to 2.36 mm	cum	733.00
2830	Aggregates 25 mm to 10 mm	cum	676.00
2833	Aggregates 45 mm to 2.8 mm	cum	629.00
2834	Aggregates 45 mm to 22.4 mm	cum	686.00
2835	Aggregates 53 mm to 2.8 mm	cum	629.00

Code No	Description	Unit	Rate Rs.
2836	Aggregates 53 mm to 22.4 mm	cum	593.00
2837	Aggregates 63 mm to 2.8 mm	cum	608.00
2838	Aggregates 63 mm to 45 mm	cum	655.00
2840	Aggregates 90 mm to 45 mm (hand broken)	cum	561.00
2841	Close graded Granular sub-base Material 2.36 mm	cum	561.00
2843	Close graded Granular sub-base Material 4.75mm to 2.36 mm	cum	561.00
2844	Close graded Granular sub-base Material 9.5 mm to 2.36 mm	cum	572.00
2845	Close graded Granular sub-base Material 9.5 mm to 4.75 mm	cum	577.00
2846	Close graded Granular sub-base Material 26.5 mm to 9.5 mm	cum	593.00
2848	Close graded Granular sub-base Material 53 mm to 9.5 mm	cum	587.00
2849	Aggregates 63 mm to 45 mm (hand broken)	cum	577.00
2851	Stone crusher dust finer than 3mm with not more than 10% passing 0.075 sieve.	cum	520.00
2852	Coarse graded Granular sub-base Material 2.36 mm & below	cum	603.00
2854	Coarse graded Granular sub-base Material 4.75 mm to 2.36 mm	cum	515.00
2855	Coarse graded Granular sub-base Material 9.5 mm to 4.75 mm	cum	525.00
2856	Coarse graded Granular sub-base Material 26.5 mm to 4.75 mm	cum	572.00
2859	Coarse graded Granular sub-base Material 53 mm to 26 .5mm	cum	530.00
2860	Pre-coated stone chips of 13.2 mm nominal size	cum	884.00
2861	Stone for masonry work	cum	800.00
2863	Random Rubble Stone	cum	700.00
2865	Boundary stone of size 15cmx10cmx120cm	each	80.00
2866	Through and bond stone	Nos	16.00
2869	Locally available sand	cum	599.00
2870	Cost of Earth for RE wall fill as per MoRT&H clause 3100	cum	100.00
2871	Boulder with minimum size of 300 mm for Pitching at Site	cum	795.00
2872	Credit for excavated rock found suitable for use	cum	151.00
2873	Coarse sand	cum	1,200.00
2874	Fine sand	cum	1,100.00
2875	Moorum	cum	452.00
2876	Gravel/Quarry spall at Site	Cum	406.00
2877	Granular Material or hard Moorum for GSB works at Site	Cum	426.00
2878	Filter media/Filter Material as per Table 300-3 (MoRT&H Specification)	Cum	624.00
2879	Earth	cum	52.00

Code No	Description	Unit	Rate Rs.
2880	Selected earth	cum	62.00
2881	Bentonite	kg	5.00
2882	Whiting	quintal	650.00
2883	Dehradun white lime	quintal	620.00
2884	Unslaked lime	tonne	2,932.00
2886	Plaster of Paris	kilogram	8.00
2887	Coal (steam)	quintal	2,300.00
2888	Empty gunny bag (empty cement bag)	each	6.00
2889	Geotextile filter	sqm	119.00
2902	8mm thick (mirror polished tiles machine cut edge) Raj Nagar white	sqm	475.00
2903	8 mm thick marble tiles (polished) Raj Nagar	sqm	345.00
2904	8 mm thick granite stone tiles (mirror polished of all shades)	sqm	625.00
2905	Marble Makrana 'Adanga' Upto to 1500 Cm2 Tiles	sqm	515.00
2906	Marble Makrana 'Adanga' 1501 Cm2 to 3600 Cm2 Tiles	sqm	615.00
2907	Marble Makrana 'Adanga' Above 3601 Cm2 Slabs	sqm	795.00
2908	Marble Rajnagar 1st quality/ Ageria with light spots Upto to 1500 Cm2 Tiles	sqm	400.00
2909	Marble Rajnagar 1st quality/ Ageria with light spots 1501 Cm2 to 3600 Cm2 Tiles	sqm	490.00
2910	Marble Rajnagar 1st quality/ Ageria with light spots Above 3601 Cm2 Slabs	sqm	585.00
2911	Marble Keseriaji/ Abu Ambaji (Green Marble) Upto to 1500 Cm2 Tiles	sqm	515.00
2912	Marble Keseriaji/ Abu Ambaji (Green Marble) 1501 Cm2 to 3600 Cm2 Tiles	sqm	610.00
2913	Marble Keseriaji/ Abu Ambaji (Green Marble) Above 3601 Cm2 Slabs	sqm	795.00
2914	Marble Bhaislana, Abu, Kishangarh Zebra (Black Marble) Upto to 1500 Cm2 Tiles	sqm	400.00
2915	Marble Bhaislana, Abu, Kishangarh Zebra (Black Marble) 1501 Cm2 to 3600 Cm2 Tiles	sqm	465.00
2916	Marble Bhaislana, Abu, Kishangarh Zebra (Black Marble) Above 3601 Cm2 Slabs	sqm	620.00
2917	Granite Jhunjhunu / Jalore (Red / Chocolate Colour) Upto to 1500 Cm2 Tiles	sqm	830.00
2918	Granite Jhunjhunu / Jalore (Red / Chocolate Colour) 1501 Cm2 to 3600 Cm2 Tiles	sqm	1,245.00
2919	Granite Jhunjhunu / Jalore (Red / Chocolate Colour) Above 3601	sqm	1,520.00

Code No	Description	Unit	Rate Rs.
	Cm2 Slabs		
2920	Granite South (Red) Upto to 1500 Cm2 Tiles	sqm	825.00
2921	Granite South (Red) 1501 Cm2 to 3600 Cm2 Tiles	sqm	1,310.00
2922	Granite South (Red) Above 3601 Cm2 Slabs	sqm	2,550.00
2923	Granite Green / Black Upto to 1500 Cm2 Tiles	sqm	750.00
2924	Granite Green / Black 1501 Cm2 to 3600 Cm2 Tiles	sqm	1,500.00
2925	Granite Green / Black Above 3601 Cm2 Slabs	sqm	3,000.00
2927	Udaipur green marble slab plain 18mm thick	sqm	490.00
2935	Granite Black marble, 18 mm thick slab, above 0.2 sqm upto 0.5 sqm (area wise)	sqm	800.00
2937	Granite Black marble, 18 mm thick slab, above 1.0 sqm upto 2.0 sqm (area wise)	sqm	895.00
2945	Agaria White marble slab plain 18mm thick	sqm	935.00
2946	Black Zebra marble slab plain 18mm thick	sqm	545.00
2947	Pink marble slab plain 18mm thick	sqm	525.00
2948	Fine grained stone slab of 90mm average thickness for roofing from approved quarry for span upto 2m	sqm	470.00
2949	Fine grained stone slab of 90mm average thickness for roofing from approved quarry for span above 2m and upto 2.5m	sqm	500.00
2950	Fine grained stone slab of 90mm average thickness for roofing from approved quarry for span above 2.5m and upto 3.0m	sqm	565.00
2951	Fine grained stone slab of 90mm average thickness for roofing from approved quarry for span above 3m and upto 3.5m	sqm	610.00
2952	Table rubbed polished stone 18mm thick (75x50cm) Granite stone - 18mm thick	sqm	1,130.00
2953	White sand stone block	10 cudm	95.00
2954	White sand stone slab 75 mm thick (un-dressed)	sqm	475.00
2955	White sand stone slab 40 mm thick (un-dressed)	sqm	350.00
2956	White sand stone slab 45 mm and 50 mm thick (un-dressed)	sqm	370.00
2957	Red sand stone block	10 cudm	60.00
2958	Red sand stone slab 40 mm thick (un-dressed)	sqm	315.00
2959	Red sand stone slab 30 mm thick (un-dressed)	sqm	220.00
2960	Red sand stone slab 45 mm and 50 mm thick (un-dressed)	sqm	340.00
2961	White sand stone gang saw cut 30mm thick.	sqm	505.00
2962	Red sand stone gang saw cut 30mm thick.	sqm	350.00
2963	Kota stone slab 20 mm to 25 mm thick (semi-polished) area 900-2000 sqcm	sqm	250.00

Code No	Description	Unit	Rate Rs.
2964	Kota stone slab 25mm thick (rough chiselled)	sqm	225.00
2965	Kota stone slab 20 mm to 25 mm thick (semi-polished) area 2001-5000 sqcm	sqm	300.00
2967	Marble dust/ powder	cum	110.00
2968	Marble chips upto 4mm and downsize White & black	quintal	155.00
2971	Marble chips large size above 4 mm White & black	quintal	170.00
2973	White marble makrana second quality plain veined stone pieces for crazy flooring	quintal	132.00
2978	Cutting marble or sand stone slab upto 50 mm thick by mechanical device	metre	10.00
2981	75mm x 75mm Single paitam (rebated) stone doors windows and ventilator frames of approved quarry	metre	75.00
2982	100mm x 60mm Single paitam (rebated) stone doors windows and ventilator frames of approved quarry	metre	85.00
2983	100mm x 75mm Single paitam (rebated) stone doors windows and ventilator frames of approved quarry	metre	100.00
2984	125mm x 100mm Single paitam (rebated) stone doors windows and ventilator frames of approved quarry	metre	105.00
2985	100mm x 75mm Double paitam (rebated) stone doors windows and ventilator frames of approved quarry	metre	96.00
2986	125mm x 100mm Double paitam (rebated) stone doors windows and ventilator frames of approved quarry	metre	115.00
2991	Sand stone slab 25 mm thick machine cut and polished for shelves	sqm	236.00
2992	Sand stone slab 50 mm thick machine cut and polished for shelves	sqm	336.00
2993	Kota stone slab 30 mm thick machine cut and polished for shelves	sqm	275.00
3001	R.C.C. pipes NP4 class 150 mm dia	metre	313.00
3002	R.C.C. pipes NP4 class 200 mm dia	metre	409.00
3003	R.C.C. pipes NP4 class 250 mm dia	metre	548.00
3004	R.C.C. pipes NP4 class 300 mm dia	metre	790.00
3005	R.C.C. pipes NP4 class 350 mm dia	metre	1,195.00
3006	R.C.C. pipes NP4 class 400 mm dia	metre	1,330.00
3007	R.C.C. pipes NP4 class 450 mm dia	metre	1,430.00
3008	R.C.C. pipes NP4 class 500 mm dia	metre	1,706.00
3009	R.C.C. pipes NP4 class 600 mm dia	metre	2,410.00
3010	R.C.C. pipes NP4 class 700 mm dia	metre	3,160.00
3011	R.C.C. pipes NP4 class 800 mm dia	metre	3,885.00
3012	R.C.C. pipes NP4 class 900 mm dia	metre	4,930.00

Code No	Description	Unit	Rate Rs.
3013	R.C.C. pipes NP4 class 1000 mm dia	metre	5,896.00
3014	R.C.C. pipes NP4 class 1100 mm dia	metre	6,052.00
3015	R.C.C. pipes NP4 class 1200 mm dia	metre	7,313.00
3016	R.C.C. pipes NP4 class 1400 mm dia	metre	11,210.00
3017	R.C.C. pipes NP4 class 1600 mm dia	metre	13,486.00
3018	R.C.C. pipes NP4 class 1800 mm dia	metre	17,180.00
3019	R.C.C. pipes NP4 class 2000 mm dia	metre	25,370.00
3021	R.C.C. pipes NP3 class 150 mm dia	metre	296.00
3022	R.C.C. pipes NP3 class 200 mm dia	metre	376.00
3023	R.C.C. pipes NP3 class 250 mm dia	metre	512.00
3024	R.C.C. pipes NP3 class 300 mm dia	metre	711.00
3025	R.C.C. pipes NP3 class 350 mm dia	metre	993.00
3026	R.C.C. pipes NP3 class 400 mm dia	metre	1,111.00
3027	R.C.C. pipes NP3 class 450 mm dia	metre	1,213.00
3028	R.C.C. pipes NP3 class 500 mm dia	metre	1,364.00
3029	R.C.C. pipes NP3 class 600 mm dia	metre	1,637.00
3030	R.C.C. pipes NP3 class 700 mm dia	metre	2,226.00
3031	R.C.C. pipes NP3 class 800 mm dia	metre	2,897.00
3032	R.C.C. pipes NP3 class 900 mm dia	metre	3,808.00
3033	R.C.C. pipes NP3 class 1000 mm dia	metre	4,620.00
3034	R.C.C. pipes NP3 class 1100 mm dia	metre	5,262.00
3035	R.C.C. pipes NP3 class 1200 mm dia	metre	5,903.00
3036	R.C.C. pipes NP3 class 1400 mm dia	metre	8,690.00
3037	R.C.C. pipes NP3 class 1600 mm dia	metre	10,876.00
3038	R.C.C. pipes NP3 class 1800 mm dia	metre	14,411.00
3039	R.C.C. pipes NP3 class 2000 mm dia	metre	18,820.00
3041	R.C.C. pipes NP2 class 150 mm dia	metre	278.00
3042	R.C.C. pipes NP2 class 200 mm dia	metre	390.00
3043	R.C.C. pipes NP2 class 250 mm dia	metre	419.00
3044	R.C.C. pipes NP2 class 300 mm dia	metre	517.00
3045	R.C.C. pipes NP2 class 350 mm dia	metre	623.00
3046	R.C.C. pipes NP2 class 400 mm dia	metre	735.00
3047	R.C.C. pipes NP2 class 450 mm dia	metre	836.00
3048	R.C.C. pipes NP2 class 500 mm dia	metre	1,091.00

Code No	Description	Unit	Rate Rs.
3049	R.C.C. pipes NP2 class 600 mm dia	metre	1,231.00
3050	R.C.C. pipes NP2 class 700 mm dia	metre	1,619.00
3051	R.C.C. pipes NP2 class 800 mm dia	metre	1,850.00
3052	R.C.C. pipes NP2 class 900 mm dia	metre	2,612.00
3053	R.C.C. pipes NP2 class 1000 mm dia	metre	3,004.00
3054	R.C.C. pipes NP2 class 1100 mm dia	metre	3,788.00
3055	R.C.C. pipes NP2 class 1200 mm dia	metre	4,373.00
3056	R.C.C. pipes NP2 class 1400 mm dia	metre	5,407.00
3057	R.C.C. pipes NP2 class 1600 mm dia	metre	7,071.00
3058	R.C.C. pipes NP2 class 1800 mm dia	metre	7,532.00
3059	R.C.C. pipes NP2 class 2000 mm dia	metre	8,407.00
3064	R.C.C. collars NP2 class 300 mm dia	each	99.00
3065	AC pipe 100 mm dia	metre	28.00
3066	AC pipe 150 mm dia	metre	42.00
3071	Composite fiberglass reinforced polymer manhole cover with frame 560mm Dia confirming to BSEN – 124 : 1994 - HD-20 Tonne	each	5,031.00
3072	Composite fiberglass reinforced polymer manhole cover with frame 560mm Dia confirming to BSEN – 124 : 1994 - HD-35 Tonne	each	6,159.00
3075	Circular 300 mm dia precast R.C.C. manhole cover with frame - M.D. - 10	each	683.00
3076	Circular 450 mm dia precast R.C.C. manhole cover - M.D. - 10	each	780.00
3077	Circular shape 450 mm dia precast R.C.C. manhole cover with frame - L.D. - 25	each	870.00
3078	Circular shape 450 mm dia precast R.C.C. manhole cover with frame - H.D. - 20	each	1,196.00
3079	Circular shape 500 mm dia precast R.C.C. manhole cover with frame - M.D. - 10	each	1,086.00
3080	Circular shape 560 mm dia SFRC manhole cover with frame - H.D. - 20	each	1,413.00
3081	Circular shape 560 mm dia SFRC manhole cover with frame - E.H.D. - 35	each	1,631.00
3082	Circular shape 560 mm dia SFRC manhole cover - H.D. - 20	each	870.00
3083	Circular shape 560 mm dia SFRC manhole cover - E.H.D. - 35	each	1,086.00
3084	Rectangular shape 600x450 mm precast R.C.C. manhole cover with frame - L.D. - 25	each	761.00
3085	Square shape 350x350 mm precast R.C.C. manhole cover with frame - L.D. - 25	each	606.00

Code No	Description	Unit	Rate Rs.
3086	Rectangular shape 500x500 mm precast R.C.C. manhole cover with frame - M.D. - 10	each	729.00
3087	Precast R.C.C. grating with frame 500x450 mm horizontal grating	each	755.00
3088	Precast R.C.C. grating with frame 450x100 mm vertical grating	each	350.00
3089	Plastic encapsulated CI/MS Foot Rest	each	160.00
3090	Precast terrazzo tiles 22 mm thick (light shade)	sqm	190.00
3091	Precast terrazzo tiles 22 mm thick (medium shade)	sqm	175.00
3092	Precast terrazzo tiles 22 mm thick (dark shade)	sqm	165.00
3093	Chequered terrazzo tiles 22 mm thick (light shade)	sqm	150.00
3094	Chequered terrazzo tiles 22 mm thick (medium shade)	sqm	160.00
3095	Chequered terrazzo tiles 22 mm thick (dark shade)	sqm	150.00
3099	Chequered precast cement concrete tiles 22mm thick using marble chips of size 6mm - Light shade using white	sqm	245.00
3100	Acid and alkali resistant tiles 300x300 mm size, 10 mm thick	10 Nos	460.00
3101	Precast chequered cement tiles 22 mm thick Dark shade using ordinary cement	sqm	220.00
3102	Cobble stones in sizes 125x125x75mm	sqm	780.00
3103	Factory made Interlocking C.C. paver block M-30 Grade, 100 mm thick	sqm	390.00
3104	Factory made Interlocking C.C. paver block M-30 Grade, 80 mm thick	sqm	320.00
3105	Factory made Interlocking C.C. paver block M-30 Grade, 60 mm thick	sqm	270.00
3106	RCC vent shaft 9.10 m long of standard design complete	each	15,254.00
3107	Reinforced Ferro-Cement drain covers designed for 'A' class loading of size 600 x 800 mm	sqm	1,071.00
3108	Reinforced Ferro-Cement drain covers designed for 'A' class loading of size 1000 x 800 mm	sqm	1,784.00
3109	Reinforced Ferro-Cement drain covers designed for 'A' class loading of size 1500 x 600 mm	sqm	2,033.00
3110	Reinforced Ferro-Cement drain covers designed for 'A' class loading of size 2100 x 500 mm	sqm	2,379.00
3111	Reinforced Ferro-Cement drain covers designed for 'AA' class loading of size 600 x 800 mm	sqm	1,190.00
3112	Reinforced Ferro-Cement drain covers designed for 'AA' class loading of size 1000 x 800 mm	sqm	1,982.00
3113	Reinforced Ferro-Cement drain covers designed for 'AA' class loading of size 1500 x 600 mm	sqm	2,258.00

Code No	Description	Unit	Rate Rs.
3114	Reinforced Ferro-Cement drain covers designed for 'AA' class loading of size 2100 x 500 mm	sqm	2,676.00
3115	Pre-cast RCC M40 eccentric conical manhole piece ID 0.56m, OD 1.0m, vertical height 0.605m and wall thickness 125mm	each	4,174.00
3116	Pre-cast RCC M40 eccentric conical manhole piece ID 0.56m, OD 1.2m, vertical height 0.805m and wall thickness 125mm	each	5,797.00
3117	Pre-cast RCC M40 eccentric conical manhole piece ID 0.56m, OD 1.5m, vertical height 1.105m and wall thickness 125mm	each	8,370.00
3118	Pre-cast RCC M-40 grade circular manhole extension piece ID 1.0m ID, height 0.3m wall thickness 125mm	each	1,212.00
3119	Pre-cast RCC M-40 grade circular manhole extension piece ID 1.2m ID, height 0.3m wall thickness 125mm	each	1,378.00
3120	Pre-cast RCC M-40 grade circular manhole extension piece ID 1.5m ID, height 0.3m wall thickness 125mm	each	1,652.00
3121	Precast RCC M-40 grade Box culvert section designed for 'AA' class loading as per IRC specification size 600mm x 600mm	metre	3,745.00
3122	Precast RCC M-40 grade Box culvert section designed for 'AA' class loading as per IRC specification size 750mm x 750mm	metre	4,626.00
3123	Precast RCC M-40 grade Box culvert section designed for 'AA' class loading as per IRC specification size 1000mm x 1000mm	metre	7,160.00
3124	Precast RCC M-40 grade Box culvert section designed for 'AA' class loading as per IRC specification size 1000mm x 1250mm	metre	9,032.00
3125	Precast RCC M-40 grade Box culvert section designed for 'AA' class loading as per IRC specification size 1250mm x 1250mm	metre	10,133.00
3126	Precast RCC M-40 grade Box culvert section designed for 'AA' class loading as per IRC specification size 1250mm x 1500mm	metre	13,216.00
3127	Precast RCC M-40 grade Box culvert section designed for 'AA' class loading as per IRC specification size 1500mm x 1500mm	metre	14,318.00
3128	Precast RCC M-40 grade Box culvert section designed for 'AA' class loading as per IRC specification size 1750mm x 1750mm	metre	18,279.00
3129	Precast RCC M-40 grade Box culvert section designed for 'AA' class loading as per IRC specification size 2000mm x 2000mm	metre	22,033.00
3130	Precast SFRC circular manhole spacer 560mm ID 100mm thick for raising manhole.	each	731.00
3131	Pre-cast RCC M-30 grade tree guard consisting of four panels of size 1800mm (Height) X 600mm (Width) X 35mm	set	1,328.00
3132	Pre-cast RCC M-40 grade Cylindrical property chamber size 0.30m ID, 0.45m depth, 100mm wall and base thickness	each	1,450.00
3133	Pre-cast RCC M-40 grade Cylindrical property chamber size 0.450m ID, 0.60m depth, 100mm wall and base thickness	each	2,300.00
3134	Pre-cast RCC M-40 grade Cylindrical property chamber size 0.450m	each	2,950.00

Code No	Description	Unit	Rate Rs.
	ID, 0.90m depth, 100mm wall and base thickness		
3135	Pre-cast RCC M-30 grade circular manhole cover frame (ID 0.56m, OD 0.86m, height 0.20m)	each	442.00
3136	Precast RCC M-30 bench consisting of 2 Nos. "L" shaped base support of thickness 100 mm back height 1000mm, front height 450 mm, base width 420mm and 5 Nos. RCC planks of size of 1500x100 x 50 mm and 1 Nos of 150x200x50mm	each	5,927.00
3137	Factory made Interlocking C.C. paver block, 60 mm thick casted with rubber mould having min. strength 300 kg/ sq cm	sqm	322.00
3138	60 to 75 mm thick stone slab covering of required size	sqm	561.00
3139	40 to 50 mm thick stone slab covering of required size	sqm	208.00
3140	Pre-cast RCC M40 eccentric conical manhole piece ID 0.56m, OD 0.66m, vertical height 0.605m and wall thickness 100mm	each	2,599.00
3195	40mm thick Pre-cast CC M-20 Grade (Vibro-pressed) drain section block as per approved size and design of 'L' shape 'U' shape	metre	244.00
3196	60mm thick Pre-cast CC M-20 Grade (Vibro-pressed) drain section block as per approved size and design of 'L' shape 'U' shape	metre	296.00
3197	80mm thick Pre-cast CC M-20 Grade (Vibro-pressed) drain section block as per approved size and design of 'L' shape 'U' shape	metre	390.00
3198	Precast RCC M-15 grade pillar of size 300mm x 300mm x 900mm height	each	977.00
3199	Precast RCC M-15 grade pillar of size 150mm x 150mm x 450mm height	each	177.00
3201	Cement Concrete Jali 50 mm thick	sqm	254.00
3202	Cement Concrete Jali 40 mm thick	sqm	184.00
3203	Cement Concrete Jali 25 mm thick	sqm	151.00
3205	Non - Asbestos multi purpose fibre cement board 6mm thick.	sqm	224.00
3206	Non - Asbestos multi purpose fibre cement board 8mm thick.	sqm	265.00
3208	Non - Asbestos fibre cement corrugated sheet 6mm thick.	sqm	218.00
3209	Non - Asbestos fibre cement close fitting adjustable ridge.	metre	250.00
3210	Non - Asbestos fibre cement corrugate serrated adjustable ridge.	metre	224.00
3211	Non - Asbestos fibre cement plain wing adjustable ridge.	metre	229.00
3212	Non - Asbestos fibre cement unserrated adjustable ridge for hips.	metre	239.00
3213	Non - Asbestos fibre cement corrugated apron piece.	metre	192.00
3214	Non - Asbestos fibre cement eaves filler piece.	each	125.00
3215	Non - Asbestos fibre cement north light curves.	metre	255.00
3216	Non - Asbestos fibre cement ventilator curves.	each	312.00
3217	Non - Asbestos fibre cement barge boards 6 mm thick.	metre	276.00

Code No	Description	Unit	Rate Rs.
3218	Non - Asbestos fibre cement ridge finial .	pair	125.00
3219	Non - Asbestos fibre cement special north light curves.	each	338.00
3220	Non - Asbestos fibre cement S type louvers.	each	203.00
3233	High-performance ready to use pothole repair premix mortar	kg	25.00
3234	pre-mixed, ready to use, geo polymer based mortar confirming to ASTM C: 1600 (Technofill)	kg	146.00
3235	pre-mixed, ready to use, geo polymer based mortar confirming to ASTM C: 1600 (Geocrete CR)	kg	309.00
3236	High-performance Cement (Instacem HD)	kg	18.00
3237	Portland Cement	tonne	4,300.00
3238	Pre-packed cement based polymer concrete of strength 45 Mpa at 28 days	kg	14.00
3239	Cement OPC	tonne	4,870.00
3240	Cement PPC	tonne	4,320.00
3241	White Cement	tonne	14,063.00
3242	Water proofing cement paint	kilogram	57.00
3243	Acid Proof cement	tonne	8,167.00
3244	Cement primer	litre	56.00
3247	sulphur resistant/sulphate resistant cement	tonne	6,484.00
3248	300mm x 300mm x 16mm cement tactile directional and warning tiles	sqm	750.00
3249	300mm x 300mm x 9.8mm vitrified tactile warning and directional tiles	sqm	1,223.00
3250	300mm x 300mm x 3mm polyurethane stick	sqm	2,203.00
3251	Ceramic glazed vitrified tiles of colour standard white, grey, ivory, fume, red brown, light green, light blue, and other light shades 1st quality Size 600mm x 600mm	sqm	830.00
3252	Ceramic glazed vitrified tiles of colour standard white, grey, ivory, fume, red brown, light green, light blue, and other light shades 1st quality Size 800mm x 800mm	sqm	850.00
3253	Ceramic glazed vitrified tiles of colour standard white, grey, ivory, fume, red brown, light green, light blue, and other light shades 1st quality Size 600mm x 1200mm	sqm	1,045.00
3254	Ceramic glazed vitrified tiles of colour standard white, grey, ivory, fume, red brown, light green, light blue, and other light shades 1st quality Size 800mm x 1200mm	sqm	1,355.00
3255	Ceramic glazed vitrified tiles of colour standard white, grey, ivory, fume, red brown, light green, light blue, and other light shades 1st quality Size 896mm x 1215mm	sqm	1,355.00

Code No	Description	Unit	Rate Rs.
3256	Ceramic glazed vitrified tiles of colour standard white, grey, ivory, fume, red brown, light green, light blue, and other light shades 1st quality Size 1000mm x 2000mm	sqm	3,035.00
3261	Mat & Glossy Ceramic tiles of colour standard white, grey, ivory, fume, red brown, light green, light blue, and other light shades 1st quality Size 250mm x 375mm	sqm	350.00
3262	Mat & Glossy Ceramic tiles of colour standard white, grey, ivory, fume, red brown, light green, light blue, and other light shades 1st quality Size 300mm x 450mm	sqm	420.00
3263	Mat & Glossy Ceramic tiles of colour standard white, grey, ivory, fume, red brown, light green, light blue, and other light shades 1st quality Size 200mm x 600mm	sqm	465.00
3264	Mat & Glossy Ceramic tiles of colour standard white, grey, ivory, fume, red brown, light green, light blue, and other light shades 1st quality Size 300mm x 600mm	sqm	490.00
3265	Mat & Glossy Ceramic tiles of colour standard white, grey, ivory, fume, red brown, light green, light blue, and other light shades 1st quality Size 250mm x 1000mm	sqm	650.00
3271	Heavy duty vitrified digital polished tiles 1st quality Size 298mm x 298mm	sqm	333.00
3272	Heavy duty vitrified digital polished tiles 1st quality Size 300mm x 450mm	sqm	334.00
3273	Heavy duty vitrified digital polished tiles 1st quality Size 600mm x 600mm	sqm	631.00
3274	Heavy duty vitrified digital polished tiles 1st quality Size 600mm x 1200mm	sqm	940.00
3275	Heavy duty vitrified glazed MAT tiles 1st quality Size 600mm x 600mm	sqm	752.00
3276	Heavy duty vitrified glazed MAT tiles 1st quality Size 600mm x 1200mm	sqm	1,124.00
3277	Heavy duty vitrified double charged tiles 1st quality Size 600mm x 600mm	sqm	565.00
3278	Heavy duty vitrified double charged tiles 1st quality Size 800mm x 800mm	sqm	752.00
3279	Heavy duty vitrified double charged tiles 1st quality Size 1000mm x 1000mm	sqm	875.00
3301	100 mm DN/ID SW pipes as per IS: 651:1980 (60 cm long)	each	104.00
3302	150 mm DN/ID SW pipes as per IS: 651:1980 (60 cm long)	each	203.00
3303	200 mm DN/ID SW pipes as per IS: 651:1980 (60 cm long)	each	343.00
3304	230 mm DN/ID SW pipes as per IS: 651:1980 (60 cm long)	each	395.00
3305	250 mm DN/ID SW pipes as per IS: 651:1980 (60 cm long)	each	587.00

Code No	Description	Unit	Rate Rs.
3306	300 mm DN/ID SW pipes as per IS: 651:1980 (60 cm long)	each	733.00
3310	S.W. gully trap P type 100x100 mm	each	73.00
3312	S.W. gully trap P type 150x100 mm	each	109.00
3314	S.W. gully trap P type 180x150 mm	each	198.00
3317	Stone ware spouts 100 mm dia 60 cm long	each	36.00
3318	S.W. intercepting trap 100 mm dia	each	182.00
3319	S.W. intercepting trap 150 mm dia	each	250.00
3322	White vitreous china laboratory sink 450x300x150 mm	each	1,113.00
3323	White vitreous china laboratory sink 600x450x200 mm	each	1,835.00
3324	Vitreous china Surgeon type wash basin of size 660x460 mm	each	983.00
3325	Vitreous china flat back wash basin 450x300 mm	each	374.00
3326	Vitreous china flat back wash basin 550x400 mm	each	613.00
3327	Vitreous china flat back wash basin 630x450 mm	each	686.00
3328	Vitreous china angle back wash basin 600x480 mm	each	650.00
3329	Vitreous china angle back wash basin 400x400 mm	each	406.00
3330	Vitreous china pedestal for wash basin	each	842.00
3331	Vitreous china toilet paper holder of standard size	each	99.00
3332	Vitreous china 10 litres low level cistern without fittings	each	759.00
3333	Vitreous china 10 litres low level cistern with fittings	each	1,305.00
3334	Vitreous china indian type w.c. pan size 580 mm	each	385.00
3335	Vitreous china orrisa type w.c. pan size 580 mm	each	920.00
3336	Coloured Orissa pattern W.C. pan 580x440 mm	each	1,700.00
3337	Coloured Pedestal type W.C. pan 580x440 mm (European type)	each	1,305.00
3338	Coloured (other than black) solid P.V.C. seat in European W.C. pan	each	408.00
3339	Coloured Vitreous china 10 lit. low level cistern	each	1,144.00
3340	White Vitreous china 10 lit. (full flush) capacity controlled low level flushing cistern with all fittings	each	816.00
3341	Coloured Vitreous china 10 lit. (full flush) capacity controlled low level flushing cistern with all fittings	each	1,248.00
3342	Vitreous china lipped front urinal	each	447.00
3343	Vitreous china squatting plate urinal	each	801.00
3344	White vitreous china clay half stall urinal flat back 580x380x350 mm or angle back 450x375x350 mm with waste fittings as per IS : 2556	each	1,024.00
3345	Vitreous china pedestal type water closet	each	759.00
3346	White vitreous china dual purpose closet (Anglo Indian W.C.) suitable for use as squatting pan or European type water closet as	each	1,778.00

Code No	Description	Unit	Rate Rs.
	per manufacturer's specifications		
3347	Vitreous china foot rests 250x125x25 mm	pair	88.00
3348	Vitreous china foot rests 250x130x30 mm	pair	109.00
3349	Ceramic Glazed Tiles 1st quality minimum thickness 5mm in all colours shades and designs except burgundy, bottle green, black	sqm	229.00
3350	Ceramic Glazed Tiles 1st quality 300 x 300mm in all shades and designs of White, Ivory, grey, Fuem Red brown etc.	sqm	260.00
3351	Ceramic Glazed Tiles 1st quality 300 x 300 in all shades designs except White, Ivory, Grey, Fuem Red Brown etc.	sqm	312.00
3352	Ceramic Glazed Tiles 1st quality 400 x 400 in all shades designs White, Ivory, Grey, Fuem Red Brown etc.	sqm	390.00
3353	Ceramic Glazed Tiles 1st quality 400 x 400 in all shades designs except White, Ivory, Grey, Fuem Red Brown etc.	sqm	426.00
3354	Polished porcelain floor tile 450x450mm	sqm	717.00
3355	Polished porcelain floor tile 600x600mm	sqm	738.00
3356	Polished porcelain floor tile 800x800mm	sqm	894.00
3357	Polished porcelain floor tile 100x100 cm	sqm	1,206.00
3359	Fire clay kitchen sink: 600x450x250 mm	each	1,742.00
3360	Decorative glazed border tile 75 mm wide	metre	177.00
3361	Decorative glazed Motive tile size 200x200 mm	each	94.00
3362	Decorative glazed Motive tile size 200x300 mm	each	114.00
3363	White glazed fire clay draining board 600x450x25 mm	each	463.00
3367	Glass sheet (Pin headed) 4 mm thick	sqm	234.00
3368	Float glass sheet of nominal thickness 4 mm (weight not less than 10kg/sqm).	sqm	296.00
3369	Float glass sheet of nominal thickness 5.5 mm.(weight not less than 13.50 kg/sqm).	sqm	447.00
3370	Float glass sheet of nominal thickness 8 mm	sqm	671.00
3372	Frosted glass sheet of nominal thickness 4 mm (weighing not less than 10 kg/sqm)	sqm	354.00
3375	Glass strip 40 mm wide 4 mm thick	metre	17.00
3381	Circular shape 450 mm dia Mirror with Plastic moulded frame	each	432.00
3382	Rectangular shape 453x357 mm Mirror with Plastic moulded frame	each	281.00
3383	Ovel shape 450x350 mm (outer dimensions) Mirror with Plastic moulded frame	each	322.00
3384	Mirror of superior make glass 60x45 cm	each	291.00
3385	Rectangular shape 1500x450 mm Mirror with Plastic moulded frame	each	686.00

Code No	Description	Unit	Rate Rs.
3387	Resin Bonded Glass wool 16 kg/m ³ 50 mm thick	sqm	109.00
3388	Resin Bonded Glass wool 24 kg/m ³ 50 mm thick	sqm	156.00
3389	Fibre glass tissue reinforcement Type II Grade I	sqm	78.00
3390	Fiber glass reinforced plastic chajja.	sqm	3,358.00
3391	Glass reinforced Gyp sum (GRG) board 8.5 mm thick	sqm	239.00
3392	Fibre glass cloth	sqm	42.00
3394	Glue	kilogram	109.00
3401	Bricks class 100 1st grade	1000 Nos	4,500.00
3402	F.P.S. bricks class designation 75	1000 Nos	4,000.00
3404	F.P.S. bricks tile class designation 100	1000 Nos	4,500.00
3405	F.P.S. bricks tile class designation 75	1000 Nos	4,000.00
3407	F.P.S. clay fly ash bricks class designation 75	1000 Nos	4,000.00
3408	Modular bricks class designation 125	1000 Nos	3,985.00
3409	Modular bricks of class designation 75	1000 Nos	4,000.00
3410	Machine moulded FPS bricks of class designation 125	1000 Nos	4,500.00
3411	Machine moulded tile bricks of class designation 125	1000 Nos	4,300.00
3412	Machine moulded perforated FPS bricks of class designation 125	1000 Nos	4,500.00
3413	Machine moulded modular perforated bricks of class designation 125	1000 Nos	4,500.00
3414	Extruded burnt flyash clay sewer bricks conforming to I.S 4885 - 1988	1000 Nos	4,600.00
3415	Fly ash lime bricks (FALG Bricks) conforming to I.S. 12894-1989	1000 Nos	2,830.00
3416	Calcium Silicate Bricks machine moulded confirming to I.S. 4139 - 1989	1000 Nos	4,400.00
3417	Mechanised Autoclaved flyash lime bricks.	1000 Nos	4,130.00
3418	Autoclaved aerated cement (AAC) blocks i/c carriage	cum	3,120.00
3420	Mangalore ridge tiles x.....mm and 20mm thick.	each	26.00
3421	Mangalore tiles x.....mm 20mm thick.	each	11.00
3422	Pressed clay tiles	1000 Nos	9,100.00
3423	Brick Aggregate (Single size) : 63 mm nominal size	cum	500.00
3425	Brick Aggregate (Single size) : 40 mm nominal size	cum	530.00
3427	Brick Aggregate (Single size) : 20 mm nominal size	cum	540.00
3428	Brick bats	cum	400.00
3429	Hard crete	litre	36.00
3432	Surkhi	cum	483.00

Code No	Description	Unit	Rate Rs.
3433	Fly ash conforming to IS: 3812 (Part II & I) at HMP Plant / Batching Plant / Crushing Plant	Cum	320.00
3434	Flyash	cum	11.00
3435	Royalty for sludge	cum	88.00
3436	Grass (Doob)	kg	16.00
3437	Grass (Fine)	kg	52.00
3438	Hedge plants	each	23.00
3439	Sapling 2 m high 25 mm dia	each	120.00
3440	Flowering Plants	each	33.00
3441	Shrubs	each	11.00
3443	Sludge / Farm yard manure	cum	489.00
3444	Pesticide	kg	489.00
3445	Cost of Water	KL	38.50
3446	Wedelia trilobata (SunFlower Family) 300mm height in poly bags /earthen pots	each	16.00
3447	Alternanthera green (Parrot Leaf) 300mm height in poly bags /earthen pots	each	59.00
3448	Iresine herbstii (Blood Leaf) 300mm height in poly bags /earthen pots	each	16.00
3449	Ophiopogon Black (Lily Turf, Mondograss) 300mm height in poly bags /earthen pots	each	21.00
3450	Asparagus myerii (Fox Tail) 300mm height in poly bags /earthen pots	each	50.00
3451	Lantana sellowiana 300mm height in poly bags /earthen pots	each	7.00
3452	Rhoeo spathacea 'Compacta' (Oyster, Boat Lily) 300mm height in poly bags /earthen pots	each	16.00
3453	Golden duranta 300mm height in poly bags /earthen pots	each	21.00
3454	Pennisetum setaceum (Fountain Grass) 300mm height in poly bags /earthen pots	each	18.00
3455	Ficus panda 900mm height in poly bags / earthen pots	each	177.00
3456	Tecoma capensis (Ratanjot) 900mm height in poly bags / earthen pots	each	50.00
3457	Clerodendron inermii (Choti Aari) 900mm height in poly bags / earthen pots	each	50.00
3458	Tabernaemontana variegated (Chandni) 900mm height in poly bags / earthen pots	each	50.00
3459	Hamelia patens (Firebush, Thal Kamal) 900mm height in poly bags / earthen pots	each	25.00

Code No	Description	Unit	Rate Rs.
3460	Hibiscus variegated (Guddal) 900mm height in poly bags / earthen pots	each	35.00
3461	Rhaphis excelsa with 3-4 suckers (Lady Palm) 600mm height in pots	each	244.00
3462	Furcaria with 10-12 leaves (cactus) 600mm height in pots	each	390.00
3463	Agave with 10-12 leaves (Kamal Cactus) 600mm height in pots	each	541.00
3464	Phonenix sylvertris (Date Palm) 600mm height in pots	each	977.00
3465	Plumeria alba (Champa) 2 M height minimum	each	333.00
3466	Gulmohar(Delonix regia) 2 M height minimum	each	198.00
3467	Neem(Azadirachta indica) 2 M height minimum	each	59.00
3468	Jacaranda mimosifolia (Neelli Gulmohar) 2 M height minimum	each	59.00
3469	Bauhinia blakeana (Arckid) 2 M height minimum	each	79.00
3470	Erythrina variegata (Lantern Tree) 2 M height minimum	each	59.00
3471	Bottle Brush(Callistemon Lanciolatous) 2 M height minimum	each	99.00
3472	Mangifera indica (Mango) 2 M height minimum	each	117.00
3473	Yucca 2 M height minimum	each	333.00
3474	Bignonia Venusta 2 M height minimum	each	35.00
3475	Quis quallis indica (Madhu Malti) 2 M height minimum	each	25.00
3476	Morning glory (Ipomea) 2 M height minimum	each	35.00
3477	Vernonium (Parda Bel) 2 M height minimum	each	35.00
3478	Bougain villea 2 M height minimum	each	35.00
3479	Plumeria alba (Champa) 3 M height minimum	each	120.00
3480	Gulmohar(Delonix regia) 3 M height minimum	each	59.00
3481	Neem(Azadirachta indica) 3 M height minimum	each	59.00
3482	Jacaranda mimosifolia (Neelli Gulmohar) 3 M height minimum	each	59.00
3483	Bauhinia blakeana (Arckid) 3 M height minimum	each	45.00
3484	Erythrina variegata (Lantern Tree) 3 M height minimum	each	660.00
3485	Bottle Brush(Callistemon Lanciolatous) 3 M height minimum	each	59.00
3486	Mangifera indica (Mango) 3 M height minimum	each	53.00
3487	Yucca 3 M height minimum	each	515.00
3488	Well deoiled neem cake duly packed in used gunny bags.	cum	333.00
3489	1500 Microns thick 6 m wide HDPE Geo membrane	sqm	244.00
3490	Synthetic clay liner	sqm	260.00
3491	Caw dung	cum	489.00
3492	Synthetic fibre 6 mm / 12 mm (125 gram)	pack of 125g	40.00

Code No	Description	Unit	Rate Rs.
3493	HDPE sheet 2.5mm thick	sqm	265.00
3499	Flexcoat (EMCE COLOR FLEX)	kg	307.00
3500	Primar (Premix)	kg	158.00
3501	Enamel paint	litre	222.00
3502	Floor enamel paint in all shades except green	litre	222.00
3505	Roofing paint for iron sheets in red colour	litre	125.00
3506	Synthetic enamel paint in black or chocolate shade	litre	177.00
3507	Synthetic enamel paint in all shades except black or chocolate shade	litre	172.00
3508	Paint	litre	148.00
3509	Pavement Marking Paint	litre	166.00
3512	Primer for cement paint	litre	94.00
3513	Water based cement paint	litre	42.00
3514	Aluminium primer	litre	88.00
3515	Aluminium paint	litre	156.00
3517	Acid proof paint (chocolate or black)	litre	156.00
3518	Black japan	litre	83.00
3519	Special Primer	litre	130.00
3520	Metal Primer	litre	94.00
3523	Red oxide Zinc chromate primer	litre	73.00
3525	White lead	kilogram	104.00
3526	Distemper primer	litre	62.00
3527	Dry distemper	kilogram	31.00
3528	Oil bound washable distemper/ Acrylic distemper	kilogram	42.00
3529	Multi surface paint	litre	291.00
3530	Acrylic exterior paint	litre	213.00
3531	Premium Acrylic exterior paint	litre	192.00
3532	Textured exterior paint	litre	250.00
3533	Epoxy harder and resin	kg	995.00
3534	Epoxy compound with accessories for preparing epoxy mortar	kg	655.00
3535	Epoxy primer	kg	447.00
3536	Epoxy paint	litre	260.00
3537	Fire retardant paint	litre	302.00
3539	Primer (for gypsum board)	litre	83.00
3540	Pink primer (for wood)	litre	95.00

Code No	Description	Unit	Rate Rs.
3541	Plastic emulsion paint	litre	198.00
3543	Wax polish (ready made)	kilogram	244.00
3544	Ordinary varnish	litre	78.00
3545	Superior copal varnish	litre	114.00
3546	Superior spar varnish	litre	151.00
3547	Melamine polish	litre	286.00
3548	Black colour dark shade pigment	kilogram	60.00
3549	Red, chocolate, orange, buff or yellow (red oxide of iron) light shade pigment	kilogram	52.00
3550	Green or blue medium shade pigment	kilogram	52.00
3551	Shellac	kilogram	463.00
3552	Spirit	litre	52.00
3553	Oil type wood preservative	litre	83.00
3555	Water proofing materials	kilogram	28.00
3557	Copper acetate	kilogram	286.00
3558	Hydrochloric acid	kilogram	21.00
3559	Copper chloride	kilogram	276.00
3560	Copper nitrate	kilogram	203.00
3561	Ammonium chloride	kilogram	17.00
3562	Premixed super white gypsum plaster.	kg	7.00
3571	Analytical Balance (Quotation not available for 1.0mg accuracy)	No	24,393.00
3572	Autoclave	No	17,104.00
3573	Dissolved Oxygen Sampler	No	14,661.00
3574	Drying Oven (Hot Air)	No	14,661.00
3575	Hot Plates	No	4,523.00
3576	Incubator 20°C (BOD)	No	4,419.00
3577	Microscope, Binocular with oil immersion and movable stage counting cell	No	17,550.00
3578	Membrane Filter Assembly	No	2,152.00
3579	Muffle Furnace	No	13,933.00
3580	PH Meter portable	No	3,416.00
3581	Refrigerator (165 ltr.)	No	9,000.00
3582	Sludge Sampler (Quotation not available)	No	3,416.00
3583	Soxhlet extraction unit (Quotation not available)	No	14,661.00
3584	Turbidity meter	No	11,750.00

Code No	Description	Unit	Rate Rs.
3585	Vacuum pump	No	5,823.00
3586	Water bath (thermostat controlled)	No	5,823.00
3587	Glasswares and analytical chemicals as required (Lump sum).	No	19,517.00
3601	Ceiling sections	metre	48.00
3602	Perimetre channel	metre	29.00
3603	Intermediate channel	metre	52.00
3604	Ceiling angle	metre	21.00
3605	Soffit cleat	each	4.00
3606	Joint filler	kilogram	25.00
3607	Joint finisher	kilogram	25.00
3608	Joint tape roll	roll	109.00
3609	Wall form panel 1250x500 mm	each	738.00
3610	Corner angle 45x45x5 mm 1.50 m long	each	208.00
3611	100 mm channel shoulder 2.5 m long	each	769.00
3612	Single clip	each	6.00
3613	Wall form panel 1250x450 mm	each	686.00
3614	Corner angle 45x45x5 m 2.50 m long	each	265.00
3616	Perimeter channel having one flange of 20mm and another flange of 30mm with thickness of 0.55mm and web of length 27mm.	metre	36.00
3617	Ceiling sections 0.55 mm thick having a knurled web of 51.55mm and two flanges of 26mm each with lips of 10.55mm.	metre	42.00
3618	Main T ceiling sections 24x38x0.3 mm (3 metre long)	each	146.00
3619	Perimeter wall angle 21x21 mm (3 metre long)	each	88.00
3620	Intermediate cross channel (1.6 mtrs)	each	62.00
3621	Adjustment clip	each	6.00
3622	Soffit cleat	each	4.00
3623	Gypsum board	sqm	307.00
3624	8 mm thick tapered edge calcium silicate board .	sqm	265.00
3625	10 mm thick calcium silicate board.	sqm	385.00
3626	12.5 mm thick Glass fibre reinforced Gypsum board .	sqm	177.00
3628	Hard board 6 mm thick	sqm	135.00
3629	Plain ceiling tiles (BWP type phenol formaldehyde synthetic resin bonded) (600x600x12 mm)	each	114.00
3631	12 thick particle board ceiling tile	sqm	156.00
3632	Bonding plaster for Gypsum panel.	kg	36.00

Code No	Description	Unit	Rate Rs.
3633	Compressible Fibre Board(20mm thick)	sqm	634.00
3634	Designing of facia panel and its accessories, fabrication and supply of Geo grid strip and casting accessories to be used in facia panel	sqm	1,410.00
3635	Carriage of facia panel to site of work and its erection	sqm	376.00
3636	Putty for wood work	kilogram	33.00
3638	Plug	each	6.00
3711	Super plastisizer admixture IS marked as per 9103-1999	kg	47.00
3714	Blasting powder	kg	36.00
3715	Blasting fuse (Fuse wire)	each	16.00
3716	Gelatine 80%	kg	463.00
3718	Electric Detonators @ 1 detonator for 1/2 gelatine stick of 125 gms each	100 Nos	1,913.00
3720	Delineators from ISI certified firm as per the standard drawing given in IRC - 79	each	364.00
3722	HTS strand	tonne	70,000.00
3723	Pre moulded Joint filler,25 mm thick for expansion joint.	sqm	432.00
3724	Reflectorising glass beads	kg	94.00
3725	Joint Sealant Compound	kg	520.00
3726	Quick setting compound	kg	146.00
3727	High polymer modified quickset tile adhesive.	kg	16.00
3728	Polymer modified cementation coating	kg	62.00
3729	Silicon sealant.	cartridge	229.00
3730	Hot applied thermoplastic compound	litre	88.00
3731	Curing compound	liter	42.00
3736	Geotextile 120 gsm membrane	sqm	35.00
3742	Polymer modified cementation coating	kilogram	133.00
3746	Spun yarn	kilogram	47.00
3747	Spunyarn	kilogram	47.00
3748	Jute Rassi	kg	70.00
3749	Masking tape.	metre	4.00
3750	Bhusa	quintal	343.00
3753	Chlorpyriphos E.C. 20%	litre	161.00
3754	Bleaching powder	kg	18.00
3757	Dowel bar made of 25mm MS round steel bar	kg	60.00
3758	Plastic sheath, 1.25 mm thick for dowel bars	sqm	50.00

Code No	Description	Unit	Rate Rs.
3759	Separation Membrane of impermeable plastic sheeting 125 micron thick	sqm	25.00
3760	Sheathing duct 85mm dia	metre	200.00
3768	Bearing (Elastomeric bearing assembly consisting of 7 internal layers of elastomer bonded to 6 nos. internal reinforcing steel laminates by the process of vulcanisation,)	cc	1.00
3772	Bearing (Pot type bearing assembly consisting of a metal piston supported by a disc, PTFE pads providing sliding surfaces against stainless steel mating together with cast steel assemblies/fabricated structural steel assemblies duly painted with all components	nos	98,624.00
3783	Direction and place identifications retro-reflectorised sign as per IRC:67 made of high intensity grade sheeting vide clause 807.3, fixed over aluminium sheeting 2 mm thick size upto 0.9 sqm and as per approved drawing.	sqm	291.00
3784	Direction and place identifications retro-reflectorised sign as per IRC:67 made of high intensity grade sheeting vide clause 807.3, fixed over aluminium sheeting 2 mm thick size above 0.9 sqm and as per approved drawing.	sqm	894.00
3785	Single Molded twin Shank Cat's eye made of polycarbonate and ABS moulded body and reflective panels with micro prismatic lens shall support a load of 16000 kg complying to Specifications of Category A of MORTH The height, width and length shall not exceed 50 mm, 100 mm and 100 mm	each	291.00
3786	Fabricated sign board made of board base of A.C.P / transparent PVC acrylic sheet 3 mm thick fixed on MS hollow rectangular section size 50mmx25mm, letters made of acrylic material sheet 3 mm thick fixed with LED lights with all accessories	sqm	9,649.00
3787	ASA (Acrylic styrene Acrylortrite) cat's eye	each	166.00
3788	CAT's eye made of aluminium alloy size 75x100x22mm having 21 biconvex lenses embedded in circular disk of AS plastic on each side	each	104.00
3789	L type bollard	each	1,367.00
3790	SWISS type bollard	each	1,217.00
3791	Hazard Marker	each	416.00
3792	SWISS type Hazard Marker	each	551.00
3797	Sand bags (Cost of sand and Empty cement bag)	nos	10.00
3799	Cabel for 5 level water level indicator	metre	56.00
3800	Water level indicator with 5 level indications, prons and cabling upto length of 5 metre	set	7,662.00
3801	Capacitance type level indicator-transmitter for measuring liquid microprocessor based with 6 digit LCD display for 0-3 m depth	set	22,733.00
3802	Capacitance type level indicator-transmitter for measuring liquid	set	29,621.00

Code No	Description	Unit	Rate Rs.
	microprocessor based with 6 digit LCD display for 0-6 m depth		
3803	Capacitance type level indicator-transmitter for measuring liquid microprocessor based with 6 digit LCD display for 0-10 m depth	set	39,312.00
3811	Electrically opeared overhead hoist (EOH) single bridge girder carrying two wheels with chain pulley block load chain, hand chain encased gears, trolley track, wheels, axle & shaft, swivel type lifting hook for 2 MT capacity, 6 m lift and 7 m span	set	3,07,332.00
3812	Electrically opeared overhead hoist (EOH) single bridge girder carrying two wheels with chain pulley block load chain, hand chain encased gears, trolley track, wheels, axle & shaft, swivel type lifting hook for 2 MT capacity, 6 m lift and 9 m span	set	3,53,424.00
3813	Electrically opeared overhead hoist (EOH) single bridge girder carrying two wheels with chain pulley block load chain, hand chain encased gears, trolley track, wheels, axle & shaft, swivel type lifting hook for 3 MT capacity, 6 m lift and 7 m span	set	3,76,548.00
3814	Electrically opeared overhead hoist (EOH) single bridge girder carrying two wheels with chain pulley block load chain, hand chain encased gears, trolley track, wheels, axle & shaft, swivel type lifting hook for 3 MT capacity, 6 m lift and 9 m span	set	4,28,496.00
3815	Electrically opeared overhead hoist (EOH) single bridge girder carrying two wheels with chain pulley block load chain, hand chain encased gears, trolley track, wheels, axle & shaft, swivel type lifting hook for 5 MT capacity, 6 m lift and 7 m span	set	4,39,152.00
3816	Electrically opeared overhead hoist (EOH) single bridge girder carrying two wheels with chain pulley block load chain, hand chain encased gears, trolley track, wheels, axle & shaft, swivel type lifting hook for 5 MT capacity, 6 m lift and 9 m span	set	4,81,152.00
3819	Set of Extra length of lifting chain and operating electrical cable of EOT crane upto 5MT	metre	766.00
3820	Set of Extra length of lifting chain and operating hand chain of HOT crane upto 5MT	metre	766.00
3821	Mono Rail single girder crane for 1 Tonne capacity for lift upto 9 m with chain pulley block and travelling trolley excluding girder.	set	20,304.00
3822	Mono Rail single girder crane for 2 Tonne capacity for lift upto 9 m with chain pulley block and travelling trolley excluding girder.	set	26,160.00
3823	Mono Rail single girder crane for 3 Tonne capacity for lift upto 9 m with chain pulley block and travelling trolley excluding girder.	set	32,124.00
3824	Vacuum feed gas chlorinator with all accessories for 1 Kg/Hr capacity	set	3,93,240.00
3825	Vacuum feed gas chlorinator with all accessories for 2 Kg/Hr capacity	set	4,01,100.00
3826	Vacuum feed gas chlorinator with all accessories for 3 Kg/Hr capacity	set	4,05,036.00

Code No	Description	Unit	Rate Rs.
3827	Chlorine tonner with rollers complete	set	1,17,612.00
3828	Chlorine leak detector with two sensors	each	65,676.00
3829	Self contained compressed breathing apparatus complete	each	41,592.00
3830	safety shower with eye wash	each	11,493.00
3831	Emergency toner repair kit	each	39,408.00
3832	Protective clothing such as PVC overall gloves, rubber boots	each	6,165.00
3900	Bituminous washer	100 Nos	24.00
3903	Kerosene oil	litre	50.00
3904	LDO for steam curing	litre	59.00
3905	Commercial LPG in cylinder.	kg	85.00
3907	Low viscosity bitumen emulsion RS1	kg	37.40
3908	Bitumen VG-grade 30	tonne	40,872.00
3910	Paving bitumen S-90 of approved quality	tonne	37,872.00
3911	Bitumen (modified graded PMB-40)	tonne	40,770.00
3913	Bitumen (modified graded CRMB-60)	tonne	42,800.00
3916	Bitumen primer for bitumen membrane	litre	82.00
3917	Pre-moulded asphalt filler board	sqm	85.00
3918	Bitumen (emulsion)	tonne	37,800.00
3920	Blown type petroleum bitumen of penetration 85/25 of approved quality	tonne	38,000.00
3921	Bitumen hot sealing compound : grade A	kilogram	25.00
3922	Bitumen solution primer of approved quality	litre	50.00
3924	Bitumen felt fibre base (vegetable or animal):Type 2 grade 1	sqm	65.00
3926	Bitumen felt :Type 3 grade 1	sqm	65.00
3927	Coal Tar	litre	36.00
3928	Anticorrosive bituminous paint (black)	litre	90.00
3929	Oxygen Cylinder	each	474.00
3930	DA Cylinder	each	634.00
3931	Linseed oil (double boiled)	Litre	164.00
3932	Mobil Oil	Litre	270.00
3933	High Speed Diesel	Litre	93.69
4001	3-6 months Slaked lime	Qtl	769.00
4004	Coconut oil	litre	114.00
4007	Jhikki	cum	2,685.00
4008	Lapti	Kg	23.00

Code No	Description	Unit	Rate Rs.
4010	Malmal cloth	metre	33.00
4015	Stone Slab 3.3 to 5.5 mtr. (100-150mm thick) (as per existing matching to particular temple site)	sqm	1,612.00
4023	Wacker-290 (Chemical)	Kg	754.00
4024	Wacker-Ceilent	Kg	1,061.00
4025	Solvent (Mintrolium)	litre	187.00
4026	Protekta-Guard	litre	127.00
4027	Protekta-Base	litre	244.00
4028	Protekta-G.A.	litre	406.00
4029	Protekta-Micro Emulsion	litre	473.00
4073	Hirmich	kg	99.00
4074	Washing soap	each	42.00
4075	Bectokill chemical	0.15	1,365.00
4076	UV tube	0.1	7,032.00
4081	R.C.C. pipes NP4 class with steel pushing collar 150 mm dia	metre	939.00
4082	R.C.C. pipes NP4 class with steel pushing collar 200 mm dia	metre	1,226.00
4083	R.C.C. pipes NP4 class with steel pushing collar 250 mm dia	metre	1,775.00
4084	R.C.C. pipes NP4 class with steel pushing collar 300 mm dia	metre	2,371.00
4085	R.C.C. pipes NP4 class with steel pushing collar 350 mm dia	metre	2,599.00
4086	R.C.C. pipes NP4 class with steel pushing collar 400 mm dia	metre	3,057.00
4087	R.C.C. pipes NP4 class with steel pushing collar 450 mm dia	metre	3,785.00
4088	R.C.C. pipes NP4 class with steel pushing collar 500 mm dia	metre	4,242.00
4089	R.C.C. pipes NP4 class with steel pushing collar 600 mm dia	metre	5,324.00
4090	R.C.C. pipes NP4 class with steel pushing collar 700 mm dia	metre	6,655.00
4091	R.C.C. pipes NP4 class with steel pushing collar 800 mm dia	metre	8,609.00
4092	R.C.C. pipes NP4 class with steel pushing collar 900 mm dia	metre	9,566.00
4093	R.C.C. pipes NP4 class with steel pushing collar 1000 mm dia	metre	10,606.00
4094	R.C.C. pipes NP4 class with steel pushing collar 1100 mm dia	metre	12,103.00
4095	R.C.C. pipes NP4 class with steel pushing collar 1200 mm dia	metre	13,777.00
4096	R.C.C. pipes NP4 class with steel pushing collar 1400 mm dia	metre	18,924.00
4097	R.C.C. pipes NP4 class with steel pushing collar 1600 mm dia	metre	22,272.00
4098	R.C.C. pipes NP4 class with steel pushing collar 1800 mm dia	metre	29,166.00
4099	R.C.C. pipes NP4 class with steel pushing collar 2000 mm dia	metre	38,711.00
4101	Horizontal directional drilling (by trenchless technology) of suitable dia hole below natural ground level in all type of soil and pulling upto	metre	2,340.00

Code No	Description	Unit	Rate Rs.
	200 mm dia (ID) HDPE pipe including excavation, shoring/ strutting, preparation, maintaining the thrust and receiving pit of depth up to 3.0 m		
4102	Horizontal directional drilling (by trenchless technology) of suitable dia hole below natural ground level in all type of soil and pulling 225-315 mm dia (ID) HDPE pipe including excavation, shoring/ strutting, preparation, maintaining the thrust and receiving pit of depth up to 3.0 m	metre	3,554.00
4103	Horizontal directional drilling (by trenchless technology) of suitable dia hole below natural ground level in all type of soil and pulling 350-450 mm dia (ID) HDPE pipe including excavation, shoring/ strutting, preparation, maintaining the thrust and receiving pit of depth up to 3.0 m	metre	6,294.00
4104	Horizontal directional drilling (by trenchless technology) of suitable dia hole below natural ground level in all type of soil and pulling 500-630 mm dia (ID) HDPE pipe including excavation, shoring/ strutting, preparation, maintaining the thrust and receiving pit of depth up to 3.0 m	metre	14,069.00
4105	Horizontal directional drilling (by trenchless technology) of suitable dia hole below natural ground level in all type of soil and pulling 700-1000 mm dia (ID) HDPE pipe including excavation, shoring/ strutting, preparation, maintaining the thrust and receiving pit of depth up to 3.0 m	metre	20,733.00
4106	Horizontal directional drilling (by trenchless technology) of suitable dia hole below natural ground level in all type of rocks and pulling upto 200 mm dia (ID) HDPE pipe including excavation, shoring/ strutting, preparation, maintaining the thrust and receiving pit of depth up to 3.0 m	metre	9,405.00
4107	Horizontal directional drilling (by trenchless technology) of suitable dia hole below natural ground level in all type of rocks and pulling 225-315 mm dia (ID) HDPE pipe including excavation, shoring/ strutting, preparation, maintaining the thrust and receiving pit of depth up to 3.0 m	metre	11,990.00
4108	Horizontal directional drilling (by trenchless technology) of suitable dia hole below natural ground level in all type of rocks and pulling 350-450 mm dia (ID) HDPE pipe including excavation, shoring/ strutting, preparation, maintaining the thrust and receiving pit of depth up to 3.0 m	metre	30,960.00
4109	Horizontal directional drilling (by trenchless technology) of suitable dia hole below natural ground level in all type of rocks and pulling 500-630 mm dia (ID) HDPE pipe including excavation, shoring/ strutting, preparation, maintaining the thrust and receiving pit of depth up to 3.0 m	metre	54,794.00
4110	Horizontal directional drilling (by trenchless technology) of suitable dia hole below natural ground level in all type of rocks and pulling 700-1000 mm dia (ID) HDPE pipe including excavation, shoring/	metre	71,825.00

Code No	Description	Unit	Rate Rs.
	strutting, preparation, maintaining the thrust and receiving pit of depth up to 3.0 m		
4111	Micro Tunnelling (by trenchless technology) of suitable dia hole below natural ground level in all type of soil and pushing upto 300 mm dia MS pipe (ID)/ RCC pipe (OD) including excavation, shoring/ strutting, preparation, maintaining the thrust and receiving pit of depth up to 3.0 m	metre	18,950.00
4112	Micro Tunnelling (by trenchless technology) of suitable dia hole below natural ground level in all type of soil and pushing 350-450 mm dia MS pipe (ID)/ RCC pipe (OD) including excavation, shoring/ strutting, preparation, maintaining the thrust and receiving pit of depth up to 3.0 m	metre	20,850.00
4113	Micro Tunnelling (by trenchless technology) of suitable dia hole below natural ground level in all type of soil and pushing 500-600mm dia MS pipe (ID)/ RCC pipe (OD) including excavation, shoring/ strutting, preparation, maintaining the thrust and receiving pit of depth up to 3.0 m	metre	26,850.00
4114	Micro Tunnelling (by trenchless technology) of suitable dia hole below natural ground level in all type of soil and pushing 700-900mm dia MS pipe (ID)/ RCC pipe (OD) including excavation, shoring/ strutting, preparation, maintaining the thrust and receiving pit of depth up to 3.0 m	metre	43,700.00
4115	Micro Tunnelling (by trenchless technology) of suitable dia hole below natural ground level in all type of soil and pushing 1000-1200 mm dia MS pipe (ID)/ RCC pipe (OD) including excavation, shoring/ strutting, preparation, maintaining the thrust and receiving pit of depth up to 3.0 m	metre	56,100.00
4116	Micro Tunnelling (by trenchless technology) of suitable dia hole below natural ground level in all type of soil and pushing 1400mm dia MS pipe (ID)/ RCC pipe (OD) including excavation, shoring/ strutting, preparation, maintaining the thrust and receiving pit of depth up to 3.0 m	metre	69,800.00
4117	Micro Tunnelling (by trenchless technology) of suitable dia hole below natural ground level in all type of soil and pushing 1600mm dia MS pipe (ID)/ RCC pipe (OD) including excavation, shoring/ strutting, preparation, maintaining the thrust and receiving pit of depth up to 3.0 m	metre	71,450.00
4118	Micro Tunnelling (by trenchless technology) of suitable dia hole below natural ground level in all type of soil and pushing 1800-2000 mm dia MS pipe (ID)/ RCC pipe (OD) including excavation, shoring/ strutting, preparation, maintaining the thrust and receiving pit of depth up to 3.0 m	metre	88,825.00
4119	Micro Tunnelling (by trenchless technology) of suitable dia hole below natural ground level in rock and pushing upto 300 mm dia MS pipe (ID)/ RCC pipe (OD) including excavation, shoring/ strutting, preparation, maintaining the thrust and receiving pit of depth up to	metre	83,085.00

Code No	Description	Unit	Rate Rs.
	3.0 m		
4120	Micro Tunnelling (by trenchless technology) of suitable dia hole below natural ground level in rock and pushing 350-450 mm dia MS pipe (ID)/ RCC pipe (OD) including excavation, shoring/ strutting, preparation, maintaining the thrust and receiving pit of depth up to 3.0 m	metre	1,04,900.00
4121	Micro Tunnelling (by trenchless technology) of suitable dia hole below natural ground level in rock and pushing 500-600 mm dia MS pipe (ID)/ RCC pipe (OD) including excavation, shoring/ strutting, preparation, maintaining the thrust and receiving pit of depth up to 3.0 m	metre	1,54,250.00
4122	Micro Tunnelling (by trenchless technology) of suitable dia hole below natural ground level in rock and pushing 700-900 mm dia MS pipe (ID)/ RCC pipe (OD) including excavation, shoring/ strutting, preparation, maintaining the thrust and receiving pit of depth up to 3.0 m	metre	1,74,850.00
4123	Micro Tunnelling (by trenchless technology) of suitable dia hole below natural ground level in rock and pushing 1000-1200 mm dia MS pipe (ID)/ RCC pipe (OD) including excavation, shoring/ strutting, preparation, maintaining the thrust and receiving pit of depth up to 3.0 m	metre	2,05,700.00
4124	Micro Tunnelling (by trenchless technology) of suitable dia hole below natural ground level in rock and pushing 1400 mm dia MS pipe (ID)/ RCC pipe (OD) including excavation, shoring/ strutting, preparation, maintaining the thrust and receiving pit of depth up to 3.0 m	metre	2,60,070.00
4125	Micro Tunnelling (by trenchless technology) of suitable dia hole below natural ground level in rock and pushing 1600 mm dia MS pipe (ID)/ RCC pipe (OD) including excavation, shoring/ strutting, preparation, maintaining the thrust and receiving pit of depth up to 3.0 m	metre	2,65,960.00
4126	Micro Tunnelling (by trenchless technology) of suitable dia hole below natural ground level in rock and pushing 1800-2000 mm dia MS pipe (ID)/ RCC pipe (OD) including excavation, shoring/ strutting, preparation, maintaining the thrust and receiving pit of depth up to 3.0 m	metre	3,11,670.00
4131	Extra for excavation in all type of soil of driven/ exit pit beyond 3 metre depth, required for pushing/ pulling of MS/HDPE/RCC pipe in trenchless technology, with proper protection at three sides with shoring sheets/ wooden planks and ISMB's, maintaining, back filling, necessary de-watering.	per pit per metre	22,780.00
4132	Extra for excavation in rocks of driven/ exit pit beyond 3 metre depth, required for pushing/ pulling of MS/HDPE/RCC pipe in trenchless technology, with proper protection at three sides with shoring sheets/ wooden planks and ISMB's, maintaining, back filling, necessary de-watering.	per pit per metre	45,540.00

Code No	Description	Unit	Rate Rs.
4152	90 mm dia HDPE pipe PE-100 PN-10 for potable water as per IS 4984	metre	248.00
4153	110 mm dia HDPE pipe PE-100 PN-10 for potable water as per IS 4984	metre	332.00
4154	125 mm dia HDPE pipe PE-100 PN-10 for potable water as per IS 4984	metre	445.00
4155	140 mm dia HDPE pipe PE-100 PN-10 for potable water as per IS 4984	metre	549.00
4156	160 mm dia HDPE pipe PE-100 PN-10 for potable water as per IS 4984	metre	752.00
4157	180 mm dia HDPE pipe PE-100 PN-10 for potable water as per IS 4984	metre	938.00
4158	200 mm dia HDPE pipe PE-100 PN-10 for potable water as per IS 4984	metre	1,175.00
4159	225 mm dia HDPE pipe PE-100 PN-10 for potable water as per IS 4984	metre	1,488.00
4201	75 mm dia HDPE pipe PE-100 PN6 for potable water as per IS 4984	metre	125.00
4202	90 mm dia HDPE pipe PE-100 PN6 for potable water as per IS 4984	metre	177.00
4203	110 mm dia HDPE pipe PE-100 PN6 for potable water as per IS 4984	metre	268.00
4204	125 mm dia HDPE pipe PE-100 PN6 for potable water as per IS 4984	metre	329.00
4205	140 mm dia HDPE pipe PE-100 PN6 for potable water as per IS 4984	metre	412.00
4206	160 mm dia HDPE pipe PE-100 PN6 for potable water as per IS 4984	metre	540.00
4207	180 mm dia HDPE pipe PE-100 PN6 for potable water as per IS 4984	metre	679.00
4208	200 mm dia HDPE pipe PE-100 PN6 for potable water as per IS 4984	metre	842.00
4209	225 mm dia HDPE pipe PE-100 PN6 for potable water as per IS 4984	metre	1,069.00
4210	250 mm dia HDPE pipe PE-100 PN6 for potable water as per IS 4984	metre	1,319.00
4211	280 mm dia HDPE pipe PE-100 PN6 for potable water as per IS 4984	metre	1,644.00
4212	315 mm dia HDPE pipe PE-100 PN6 for potable water as per IS 4984	metre	2,189.00
4213	355 mm dia HDPE pipe PE-100 PN6 for potable water as per IS 4984	metre	2,780.00

Code No	Description	Unit	Rate Rs.
4214	400 mm dia HDPE pipe PE-100 PN6 for potable water as per IS 4984	metre	3,536.00
4215	450 mm dia HDPE pipe PE-100 PN6 for potable water as per IS 4984	metre	4,512.00
4221	75 mm dia HDPE equal "Tee" PE-100 PN6 for potable water as per IS 4984	each	87.00
4222	90 mm dia HDPE equal "Tee" PE-100 PN6 for potable water as per IS 4984	each	148.00
4223	110 mm dia HDPE equal "Tee" PE-100 PN6 for potable water as per IS 4984	each	344.00
4224	125 mm dia HDPE equal "Tee" PE-100 PN6 for potable water as per IS 4984	each	497.00
4225	140 mm dia HDPE equal "Tee" PE-100 PN6 for potable water as per IS 4984	each	614.00
4226	160 mm dia HDPE equal "Tee" PE-100 PN6 for potable water as per IS 4984	each	865.00
4227	180 mm dia HDPE equal "Tee" PE-100 PN6 for potable water as per IS 4984	each	1,228.00
4228	200 mm dia HDPE equal "Tee" PE-100 PN6 for potable water as per IS 4984	each	1,620.00
4229	225 mm dia HDPE equal "Tee" PE-100 PN6 for potable water as per IS 4984	each	2,325.00
4230	250 mm dia HDPE equal "Tee" PE-100 PN6 for potable water as per IS 4984	each	3,227.00
4231	280 mm dia HDPE equal "Tee" PE-100 PN6 for potable water as per IS 4984	each	4,515.00
4232	315 mm dia HDPE equal "Tee" PE-100 PN6 for potable water as per IS 4984	each	5,361.00
4233	355 mm dia HDPE equal "Tee" PE-100 PN6 for potable water as per IS 4984	each	7,593.00
4234	400 mm dia HDPE equal "Tee" PE-100 PN6 for potable water as per IS 4984	each	10,950.00
4235	450 mm dia HDPE equal "Tee" PE-100 PN6 for potable water as per IS 4984	each	15,600.00
4241	75 mm dia HDPE Bend 90 degree PE-100 PN6 for potable water as per IS 4984	each	96.00
4242	90 mm dia HDPE Bend 90 degree PE-100 PN6 for potable water as per IS 4984	each	153.00
4243	110 mm dia HDPE Bend 90 degree PE-100 PN6 for potable water as per IS 4984	each	210.00
4244	125 mm dia HDPE Bend 90 degree PE-100 PN6 for potable water	each	311.00

Code No	Description	Unit	Rate Rs.
	as per IS 4984		
4245	140 mm dia HDPE Bend 90 degree PE-100 PN6 for potable water as per IS 4984	each	429.00
4246	160 mm dia HDPE Bend 90 degree PE-100 PN6 for potable water as per IS 4984	each	635.00
4247	180 mm dia HDPE Bend 90 degree PE-100 PN6 for potable water as per IS 4984	each	898.00
4248	200 mm dia HDPE Bend 90 degree PE-100 PN6 for potable water as per IS 4984	each	1,226.00
4249	225 mm dia HDPE Bend 90 degree PE-100 PN6 for potable water as per IS 4984	each	1,758.00
4250	250 mm dia HDPE Bend 90 degree PE-100 PN6 for potable water as per IS 4984	each	2,420.00
4251	280 mm dia HDPE Bend 90 degree PE-100 PN6 for potable water as per IS 4984	each	3,348.00
4252	315 mm dia HDPE Bend 90 degree PE-100 PN6 for potable water as per IS 4984	each	4,848.00
4253	355 mm dia HDPE Bend 90 degree PE-100 PN6 for potable water as per IS 4984	each	6,795.00
4254	400 mm dia HDPE Bend 90 degree PE-100 PN6 for potable water as per IS 4984	each	9,955.00
4255	450 mm dia HDPE Bend 90 degree PE-100 PN6 for potable water as per IS 4984	each	14,177.00
4261	75 mm dia HDPE End Plug PE-100 PN6 for potable water as per IS 4984	each	30.00
4262	90 mm dia HDPE End Plug PE-100 PN6 for potable water as per IS 4984	each	44.00
4263	110 mm dia HDPE End Plug PE-100 PN6 for potable water as per IS 4984	each	82.00
4264	125 mm dia HDPE End Plug PE-100 PN6 for potable water as per IS 4984	each	100.00
4265	140 mm dia HDPE End Plug PE-100 PN6 for potable water as per IS 4984	each	127.00
4266	160 mm dia HDPE End Plug PE-100 PN6 for potable water as per IS 4984	each	205.00
4267	180 mm dia HDPE End Plug PE-100 PN6 for potable water as per IS 4984	each	211.00
4268	200 mm dia HDPE End Plug PE-100 PN6 for potable water as per IS 4984	each	326.00
4269	225 mm dia HDPE End Plug PE-100 PN6 for potable water as per IS 4984	each	426.00

Code No	Description	Unit	Rate Rs.
4270	250 mm dia HDPE End Plug PE-100 PN6 for potable water as per IS 4984	each	523.00
4271	280 mm dia HDPE End Plug PE-100 PN6 for potable water as per IS 4984	each	660.00
4272	315 mm dia HDPE End Plug PE-100 PN6 for potable water as per IS 4984	each	754.00
4273	355 mm dia HDPE End Plug PE-100 PN6 for potable water as per IS 4984	each	1,065.00
4274	400 mm dia HDPE End Plug PE-100 PN6 for potable water as per IS 4984	each	1,642.00
4275	450 mm dia HDPE End Plug PE-100 PN6 for potable water as per IS 4984	each	2,066.00
4281	110mm HDPE Stub End (LNPE) with MS Galvanised Slip on flange Suitable for connecting Valve of 100mm dia	each	592.00
4282	140/160 mm HDPE Stub End (LNPE) with MS Galvanised Slip on flange Suitable for connecting Valve of 125mm dia	each	647.00
4283	200mm HDPE Stub End (LNPE) with MS Galvanised Slip on flange Suitable for connecting Valve of 200mm dia	each	770.00
4284	250mm HDPE Stub End (LNPE) with MS Galvanised Slip on flange Suitable for connecting Valve of 250mm dia	each	890.00
4285	315 mm HDPE Stub End (LNPE) with MS Galvanised Slip on flange Suitable for connecting Valve of 300mm dia	each	978.00
4321	80 mm dia DI Sluice valve PN 1.0	each	5,064.00
4322	100 mm dia DI Sluice valve PN 1.0	each	6,548.00
4323	125 mm dia DI Sluice valve PN 1.0	each	7,841.00
4324	150 mm dia DI Sluice valve PN 1.0	each	9,134.00
4325	200 mm dia DI Sluice valve PN 1.0	each	14,496.00
4326	250 mm dia DI Sluice valve PN 1.0	each	25,680.00
4327	300 mm dia DI Sluice valve PN 1.0	each	34,416.00
4328	350 mm dia DI Sluice valve PN 1.0	each	46,140.00
4329	400 mm dia DI Sluice valve PN 1.0	each	50,496.00
4330	450 mm dia DI Sluice valve PN 1.0	each	89,892.00
4331	500 mm dia DI Sluice valve PN 1.0	each	91,164.00
4332	600 mm dia DI Sluice valve PN 1.0	each	1,29,600.00
4333	700 mm dia DI Sluice valve PN 1.0	each	2,72,784.00
4334	750 mm dia DI Sluice valve PN 1.0	each	3,30,924.00
4335	800 mm dia DI Sluice valve PN 1.0	each	3,45,504.00
4336	900 mm dia DI Sluice valve PN 1.0	each	5,96,004.00

Code No	Description	Unit	Rate Rs.
4337	1000 mm dia DI Sluice valve PN 1.0	each	6,34,164.00
4361	80 mm dia DI butterfly valve PN 1.0	each	4,389.00
4362	100 mm dia DI butterfly valve PN 1.0	each	5,200.00
4363	125 mm dia DI butterfly valve PN 1.0	each	7,150.00
4364	150 mm dia DI butterfly valve PN 1.0	each	8,126.00
4365	200 mm dia DI butterfly valve PN 1.0	each	14,628.00
4366	250 mm dia DI butterfly valve PN 1.0	each	19,824.00
4367	300 mm dia DI butterfly valve PN 1.0	each	24,372.00
4368	350 mm dia DI butterfly valve PN 1.0	each	37,380.00
4369	400 mm dia DI butterfly valve PN 1.0	each	49,404.00
4370	450 mm dia DI butterfly valve PN 1.0	each	52,980.00
4371	500 mm dia DI butterfly valve PN 1.0	each	54,924.00
4372	600 mm dia DI butterfly valve PN 1.0	each	89,376.00
4373	700 mm dia DI butterfly valve PN 1.0	each	1,54,632.00
4374	750 mm dia DI butterfly valve PN 1.0	each	1,79,988.00
4375	800 mm dia DI butterfly valve PN 1.0	each	1,90,128.00
4376	900 mm dia DI butterfly valve PN 1.0	each	2,47,920.00
4377	1000 mm dia DI butterfly valve PN 1.0	each	3,27,600.00
4441	80 mm dia DI Resilient Seated Sluice Valve PN 1.0 Manually operated	each	5,144.00
4442	100 mm dia DI Resilient Seated Sluice Valve PN 1.0 Manually operated	each	6,704.00
4443	125 mm dia DI Resilient Seated Sluice Valve PN 1.0 Manually operated	each	10,818.00
4444	150 mm dia DI Resilient Seated Sluice Valve PN 1.0 Manually operated	each	11,186.00
4445	200 mm dia DI Resilient Seated Sluice Valve PN 1.0 Manually operated	each	16,800.00
4446	250 mm dia DI Resilient Seated Sluice Valve PN 1.0 Manually operated	each	26,160.00
4447	300 mm dia DI Resilient Seated Sluice Valve PN 1.0 Manually operated	each	32,412.00
4448	350 mm dia DI Resilient Seated Sluice Valve PN 1.0 Manually operated	each	49,404.00
4449	400 mm dia DI Resilient Seated Sluice Valve PN 1.0 Manually operated	each	63,576.00
4450	450 mm dia DI Resilient Seated Sluice Valve PN 1.0 Manually operated	each	80,148.00

Code No	Description	Unit	Rate Rs.
	operated		
4451	500 mm dia DI Resilient Seated Sluice Valve PN 1.0 Manually operated	each	1,04,532.00
4452	600 mm dia DI Resilient Seated Sluice Valve PN 1.0 Manually operated	each	1,51,848.00
4461	80 mm dia DI Resilient Seated Sluice Valve PN 1.6 Manually operated	each	6,060.00
4462	100 mm dia DI Resilient Seated Sluice Valve PN 1.6 Manually operated	each	7,710.00
4463	125 mm dia DI Resilient Seated Sluice Valve PN 1.6 Manually operated	each	11,388.00
4464	150 mm dia DI Resilient Seated Sluice Valve PN 1.6 Manually operated	each	12,432.00
4465	200 mm dia DI Resilient Seated Sluice Valve PN 1.6 Manually operated	each	18,672.00
4466	250 mm dia DI Resilient Seated Sluice Valve PN 1.6 Manually operated	each	29,064.00
4467	300 mm dia DI Resilient Seated Sluice Valve PN 1.6 Manually operated	each	36,564.00
4468	350 mm dia DI Resilient Seated Sluice Valve PN 1.6 Manually operated	each	59,280.00
4469	400 mm dia DI Resilient Seated Sluice Valve PN 1.6 Manually operated	each	76,284.00
4470	450 mm dia DI Resilient Seated Sluice Valve PN 1.6 Manually operated	each	97,956.00
4471	500 mm dia DI Resilient Seated Sluice Valve PN 1.6 Manually operated	each	1,28,844.00
4472	600 mm dia DI Resilient Seated Sluice Valve PN 1.6 Manually operated	each	1,89,804.00
4481	700 mm dia DI Resilient Seated Sluice Valve PN 1.6 with gear	each	5,15,640.00
4482	800 mm dia DI Resilient Seated Sluice Valve PN 1.6 with gear	each	7,29,600.00
4483	900 mm dia DI Resilient Seated Sluice Valve PN 1.6 with gear	each	10,10,640.00
4484	1000 mm dia DI Resilient Seated Sluice Valve PN 1.6 with gear	each	13,24,980.00
4499	80mm diameter D/F DI Plunger valve (Flow Control Valve) PN 1.6 class	Each	2,03,040.00
4500	100mm diameter D/F DI Plunger valve (Flow Control Valve) PN 1.6 class	Each	2,28,000.00
4501	125mm diameter D/F DI Plunger valve (Flow Control Valve) PN 1.6 class	Each	2,59,200.00
4502	150mm diameter D/F DI Plunger valve (Flow Control Valve) PN 1.6	Each	2,91,600.00

Code No	Description	Unit	Rate Rs.
	class		
4503	200mm diameter D/F DI Plunger valve (Flow Control Valve) PN 1.6 class	Each	3,40,800.00
4504	250mm diameter D/F DI Plunger valve (Flow Control Valve) PN 1.6 class	Each	4,24,200.00
4505	300mm diameter D/F DI Plunger valve (Flow Control Valve) PN 1.6 class	Each	5,27,160.00
4506	350mm diameter D/F DI Plunger valve (Flow Control Valve) PN 1.6 class	Each	5,68,200.00
4507	400mm diameter D/F DI Plunger valve (Flow Control Valve) PN 1.6 class	Each	7,36,800.00
4508	450mm diameter D/F DI Plunger valve (Flow Control Valve) PN 1.6 class	Each	7,81,200.00
4509	500mm diameter D/F DI Plunger valve (Flow Control Valve) PN 1.6 class	Each	10,53,600.00
4510	600mm diameter D/F DI Plunger valve (Flow Control Valve) PN 1.6 class	Each	13,68,000.00
4511	700mm diameter D/F DI Plunger valve (Flow Control Valve) PN 1.6 class	Each	22,68,000.00
4512	800mm diameter D/F DI Plunger valve (Flow Control Valve) PN 1.6 class	Each	29,36,400.00
4513	900mm diameter D/F DI Plunger valve (Flow Control Valve) PN 1.6 class	Each	40,72,200.00
4514	1000mm diameter D/F DI Plunger valve (Flow Control Valve) PN 1.6 class	Each	42,28,800.00
4521	100mm diameter D/F DI Pressure Reducing Valve	Each	47,388.00
4522	150mm diameter D/F DI Pressure Reducing Valve	Each	63,696.00
4523	200mm diameter D/F DI Pressure Reducing Valve	Each	90,348.00
4524	250mm diameter D/F DI Pressure Reducing Valve	Each	1,29,804.00
4525	300mm diameter D/F DI Pressure Reducing Valve	Each	1,69,656.00
4526	350mm diameter D/F DI Pressure Reducing Valve	Each	2,79,504.00
4527	400mm diameter D/F DI Pressure Reducing Valve	Each	3,57,504.00
4581	Spur Gear box for operating valve size 80mm to 150mm	each	8,451.00
4582	Spur Gear box for operating valve size 200mm to 300mm	each	12,672.00
4583	Spur Gear box for operating valve size 350mm to 600mm	each	21,972.00
4584	Spur Gear box for operating valve size 700mm to 900mm	each	30,240.00
4585	Spur Gear box for operating valve 1000mm to 1200mm	each	50,700.00
4586	Electrical Actuator for operating valve of size 80mm to 150mm	each	47,388.00

Code No	Description	Unit	Rate Rs.
4587	Electrical Actuator for operating valve of size 200mm to 300mm	each	63,432.00
4588	Electrical Actuator for operating valve of size 350mm to 600mm	each	91,656.00
4589	Electrical Actuator for operating valve of size 700mm to 900mm	each	1,43,136.00
4590	Electrical Actuator for operating valve of size 1000mm to 1200mm	each	2,02,800.00
4591	810 cum per hour Air Blowers coupled with suitable capacity 415V 3 phase 50Hz AC induction motor complete with base frame, suction air filter, silencer, pressure relief valve, delivery non return valve and with all required accessories	Set	2,55,132.00
4592	1600 cum per hour Air Blowers coupled with suitable capacity 415V 3 phase 50Hz AC induction motor complete with base frame, suction air filter, silencer, pressure relief valve, delivery non return valve and with all required accessories	Set	3,92,988.00
4593	2200 cum per hour Air Blowers coupled with suitable capacity 415V 3 phase 50Hz AC induction motor complete with base frame, suction air filter, silencer, pressure relief valve, delivery non return valve and with all required accessories	Set	4,28,040.00
4613	80 mm dia DI Resilient Seated Wafer Type Butterfly Valve Class PN 1.6	each	7,110.00
4614	100 mm dia DI Resilient Seated Wafer Type Butterfly Valve Class PN 1.6	each	8,640.00
4615	125 mm dia DI Resilient Seated Wafer Type Butterfly Valve Class PN 1.6	each	14,940.00
4616	150 mm dia DI Resilient Seated Wafer Type Butterfly Valve Class PN 1.6	each	16,200.00
4617	200 mm dia DI Resilient Seated Wafer Type Butterfly Valve Class PN 1.6	each	24,720.00
4618	250 mm dia DI Resilient Seated Wafer Type Butterfly Valve Class PN 1.6	each	32,100.00
4619	300 mm dia DI Resilient Seated Wafer Type Butterfly Valve Class PN 1.6	each	35,520.00
4641	80 mm dia DI Resilient Seated Butterfly Valve PN 1.0	each	6,440.00
4642	100 mm dia DI Resilient Seated Butterfly Valve PN 1.0	each	7,804.00
4643	125 mm dia DI Resilient Seated Butterfly Valve PN 1.0	each	10,242.00
4644	150 mm dia DI Resilient Seated Butterfly Valve PN 1.0	each	12,192.00
4645	200 mm dia DI Resilient Seated Butterfly Valve PN 1.0	each	19,824.00
4646	250 mm dia DI Resilient Seated Butterfly Valve PN 1.0	each	25,356.00
4647	300 mm dia DI Resilient Seated Butterfly Valve PN 1.0	each	35,748.00
4648	350 mm dia DI Resilient Seated Butterfly Valve PN 1.0	each	39,648.00
4649	400 mm dia DI Resilient Seated Butterfly Valve PN 1.0	each	55,572.00

Code No	Description	Unit	Rate Rs.
4650	450 mm dia DI Resilient Seated Butterfly Valve PN 1.0	each	69,744.00
4651	500 mm dia DI Resilient Seated Butterfly Valve PN 1.0	each	79,296.00
4652	600 mm dia DI Resilient Seated Butterfly Valve PN 1.0	each	96,984.00
4661	80 mm dia DI Resilient Seated Butterfly Valve PN 1.6	each	8,747.00
4662	100 mm dia DI Resilient Seated Butterfly Valve PN 1.6	each	11,945.00
4663	125 mm dia DI Resilient Seated Butterfly Valve PN 1.6	each	14,976.00
4664	150 mm dia DI Resilient Seated Butterfly Valve PN 1.6	each	17,100.00
4665	200 mm dia DI Resilient Seated Butterfly Valve PN 1.6	each	21,672.00
4666	250 mm dia DI Resilient Seated Butterfly Valve PN 1.6	each	27,960.00
4667	300 mm dia DI Resilient Seated Butterfly Valve PN 1.6	each	37,692.00
4668	350 mm dia DI Resilient Seated Butterfly Valve PN 1.6	each	53,136.00
4669	400 mm dia DI Resilient Seated Butterfly Valve PN 1.6	each	74,244.00
4670	450 mm dia DI Resilient Seated Butterfly Valve PN 1.6	each	91,404.00
4671	500 mm dia DI Resilient Seated Butterfly Valve PN 1.6	each	1,29,156.00
4672	600 mm dia DI Resilient Seated Butterfly Valve PN 1.6	each	1,65,720.00
4721	80 mm dia DI dual plate check valve PN 1.0	each	4,211.00
4722	100 mm dia DI dual plate check valve PN 1.0	each	5,200.00
4723	125 mm dia DI dual plate check valve PN 1.0	each	6,538.00
4724	150 mm dia DI dual plate check valve PN 1.0	each	8,126.00
4725	200 mm dia DI dual plate check valve PN 1.0	each	14,628.00
4726	250 mm dia DI dual plate check valve PN 1.0	each	19,824.00
4727	300 mm dia DI dual plate check valve PN 1.0	each	24,372.00
4728	350 mm dia DI dual plate check valve PN 1.0	each	37,380.00
4729	400 mm dia DI dual plate check valve PN 1.0	each	49,404.00
4730	450 mm dia DI dual plate check valve PN 1.0	each	52,980.00
4731	500 mm dia DI dual plate check valve PN 1.0	each	54,924.00
4732	600 mm dia DI dual plate check valve PN 1.0	each	89,376.00
4733	700 mm dia DI dual plate check valve PN 1.0	each	2,37,900.00
4734	750 mm dia DI dual plate check valve PN 1.0	each	2,76,900.00
4735	800 mm dia DI dual plate check valve PN 1.0	each	2,92,500.00
4736	900 mm dia DI dual plate check valve PN 1.0	each	3,81,420.00
4737	1000 mm dia DI dual plate check valve PN 1.0	each	4,68,000.00
4761	100mm diameter DI Resilient Seated Dual Plate Check Valves in accordance with EN 12334 of PN 1.0 rating	Each	4,275.00
4762	150mm diameter DI Resilient Seated Dual Plate Check Valves in	Each	6,942.00

Code No	Description	Unit	Rate Rs.
	accordance with EN 12334 of PN 1.0 rating		
4763	200mm diameter DI Resilient Seated Dual Plate Check Valves in accordance with EN 12334 of PN 1.0 rating	Each	10,834.00
4764	250mm diameter DI Resilient Seated Dual Plate Check Valves in accordance with EN 12334 of PN 1.0 rating	Each	17,856.00
4771	100mm diameter DI Resilient Seated Dual Plate Check Valves in accordance with EN 12334 of PN 1.6 rating	Each	4,702.00
4772	150mm diameter DI Resilient Seated Dual Plate Check Valves in accordance with EN 12334 of PN 1.6 rating	Each	7,637.00
4773	200mm diameter DI Resilient Seated Dual Plate Check Valves in accordance with EN 12334 of PN 1.6 rating	Each	11,918.00
4774	250mm diameter DI Resilient Seated Dual Plate Check Valves in accordance with EN 12334 of PN 1.6 rating	Each	19,644.00
4791	50 mm dia DI Kinetic Air Valve	each	7,020.00
4792	80 mm dia DI Kinetic Air Valve	each	7,800.00
4793	100 mm dia DI Kinetic Air Valve	each	11,700.00
4794	150 mm dia DI Kinetic Air Valve	each	26,004.00
4795	200 mm dia DI Kinetic Air Valve	each	28,020.00
4801	80 mm dia DI Duckfoot Bend	each	1,463.00
4802	100 mm dia DI Duckfoot Bend	each	1,797.00
4803	125 mm dia DI Duckfoot Bend	each	2,471.00
4804	150 mm dia DI Duckfoot Bend	each	3,263.00
4805	200 mm dia DI Duckfoot Bend	each	5,171.00
4806	250 mm dia DI Duckfoot Bend	each	9,000.00
4807	300 mm dia DI Duckfoot Bend	each	11,460.00
4808	350 mm dia DI Duckfoot Bend	each	18,456.00
4809	400 mm dia DI Duckfoot Bend	each	24,756.00
4821	80 mm dia DI Resilient Seated Swing type Non Return Valve Class PN 1.6	each	6,330.00
4822	100 mm dia DI Resilient Seated Swing type Non Return Valve Class PN 1.6	each	8,460.00
4823	125 mm dia DI Resilient Seated Swing type Non Return Valve Class PN 1.6	each	12,216.00
4824	150 mm dia DI Resilient Seated Swing type Non Return Valve Class PN 1.6	each	15,096.00
4825	200 mm dia DI Resilient Seated Swing type Non Return Valve Class PN 1.6	each	25,980.00
4826	250 mm dia DI Resilient Seated Swing type Non Return Valve Class	each	39,780.00

Code No	Description	Unit	Rate Rs.
	PN 1.6		
4827	300 mm dia DI Resilient Seated Swing type Non Return Valve Class PN 1.6	each	56,580.00
4828	350 mm dia DI Resilient Seated Swing type Non Return Valve Class PN 1.6	each	91,440.00
4829	400 mm dia DI Resilient Seated Swing type Non Return Valve Class PN 1.6	each	93,780.00
4830	450 mm dia DI Resilient Seated Swing type Non Return Valve Class PN 1.6	each	1,52,820.00
4831	500 mm dia DI Resilient Seated Swing type Non Return Valve Class PN 1.6	each	1,82,436.00
4832	600 mm dia DI Resilient Seated Swing type Non Return Valve Class PN 1.6	each	2,40,936.00
4841	40 mm dia DI, DF Temper proof Kinetic Air Valve Class PN 1.6	each	9,000.00
4842	50 mm dia DI, DF Temper proof Kinetic Air Valve Class PN 1.6	each	9,300.00
4843	80 mm dia DI, DF Temper proof Kinetic Air Valve Class PN 1.6	each	10,860.00
4844	100 mm dia DI, DF Temper proof Kinetic Air Valve Class PN 1.6	each	16,320.00
4845	150 mm dia DI, DF Temper proof Kinetic Air Valve Class PN 1.6	each	28,320.00
4846	200 mm dia DI, DF Temper proof Kinetic Air Valve Class PN 1.6	each	39,000.00
4851	50 mm dia DI, DF Single chamber 3 functions Kinetic Air Valve Class PN 1.6	each	12,600.00
4852	80 mm dia DI, DF Single chamber 3 functions Kinetic Air Valve Class PN 1.6	each	16,260.00
4853	100 mm dia DI, DF Single chamber 3 functions Kinetic Air Valve Class PN 1.6	each	21,840.00
4854	150 mm dia DI, DF Single chamber 3 functions Kinetic Air Valve Class PN 1.6	each	35,160.00
4855	200 mm dia DI, DF Single chamber 3 functions Kinetic Air Valve Class PN 1.6	each	44,160.00
4861	80 mm dia DI DF Diaphragm Type Flow Control/ Pressure Reducing Valve Pilot operated suitable for scada (PN 1.6)	each	78,000.00
4862	100 mm dia DI DF Diaphragm Type Flow Control/ Pressure Reducing Valve Pilot operated suitable for scada (PN 1.6)	each	86,280.00
4863	125 mm dia DI DF Diaphragm Type Flow Control/ Pressure Reducing Valve Pilot operated suitable for scada (PN 1.6)	each	1,02,600.00
4864	150 mm dia DI DF Diaphragm Type Flow Control/ Pressure Reducing Valve Pilot operated suitable for scada (PN 1.6)	each	1,11,600.00
4865	200 mm dia DI DF Diaphragm Type Flow Control/ Pressure Reducing Valve Pilot operated suitable for scada (PN 1.6)	each	1,30,656.00
4866	250 mm dia DI DF Diaphragm Type Flow Control/ Pressure	each	1,88,160.00

Code No	Description	Unit	Rate Rs.
	Reducing Valve Pilot operated suitable for scada (PN 1.6)		
4867	300 mm dia DI DF Diaphragm Type Flow Control/ Pressure Reducing Valve Pilot operated suitable for scada (PN 1.6)	each	2,61,600.00
4868	350 mm dia DI DF Diaphragm Type Flow Control/ Pressure Reducing Valve Pilot operated suitable for scada (PN 1.6)	each	3,57,600.00
4869	400 mm dia DI DF Diaphragm Type Flow Control/ Pressure Reducing Valve Pilot operated suitable for scada (PN 1.6)	each	6,34,920.00
4870	450 mm dia DI DF Diaphragm Type Flow Control/ Pressure Reducing Valve Pilot operated suitable for scada (PN 1.6)	each	8,77,200.00
4871	500 mm dia DI DF Diaphragm Type Flow Control/ Pressure Reducing Valve Pilot operated suitable for scada (PN 1.6)	each	10,54,956.00
4872	600 mm dia DI DF Diaphragm Type Flow Control/ Pressure Reducing Valve Pilot operated suitable for scada (PN 1.6)	each	15,45,120.00
4878	40 mm dia DI DF Diaphragm Type Flow Control Valve With Electrical Actuator suitable for SCADA (PN 1.6)	each	1,41,840.00
4879	50 mm dia DI DF Diaphragm Type Flow Control Valve With Electrical Actuator suitable for SCADA (PN 1.6)	each	1,44,240.00
4880	65 mm dia DI DF Diaphragm Type Flow Control Valve With Electrical Actuator suitable for SCADA (PN 1.6)	each	1,52,400.00
4881	80 mm dia DI DF Diaphragm Type Flow Control Valve With Electrical Actuator suitable for SCADA (PN 1.6)	each	1,62,300.00
4882	100 mm dia DI DF Diaphragm Type Flow Control Valve With Electrical Actuator suitable for SCADA (PN 1.6)	each	1,68,900.00
4883	125 mm dia DI DF Diaphragm Type Flow Control Valve With Electrical Actuator suitable for SCADA (PN 1.6)	each	1,71,000.00
4884	150 mm dia DI DF Diaphragm Type Flow Control Valve With Electrical Actuator suitable for SCADA (PN 1.6)	each	1,93,860.00
4885	200 mm dia DI DF Diaphragm Type Flow Control Valve With Electrical Actuator suitable for SCADA (PN 1.6)	each	2,23,380.00
4886	250 mm dia DI DF Diaphragm Type Flow Control Valve With Electrical Actuator suitable for SCADA (PN 1.6)	each	2,96,700.00
4887	300 mm dia DI DF Diaphragm Type Flow Control Valve With Electrical Actuator suitable for SCADA (PN 1.6)	each	4,05,960.00
4888	350 mm dia DI DF Diaphragm Type Flow Control Valve With Electrical Actuator suitable for SCADA (PN 1.6)	each	5,36,100.00
4889	400 mm dia DI DF Diaphragm Type Flow Control Valve With Electrical Actuator suitable for SCADA (PN 1.6)	each	6,23,580.00
4890	450 mm dia DI DF Diaphragm Type Flow Control Valve With Electrical Actuator suitable for SCADA (PN 1.6)	each	8,74,800.00
4891	500 mm dia DI DF Diaphragm Type Flow Control Valve With Electrical Actuator suitable for SCADA (PN 1.6)	each	10,14,000.00

Code No	Description	Unit	Rate Rs.
4892	600 mm dia DI DF Diaphragm Type Flow Control Valve With Electrical Actuator suitable for SCADA (PN 1.6)	each	13,96,800.00
4901	40 mm dia DI DF Solenoid operated Diaphragm Type Flow Control Valve suitable for SCADA (Class PN 1.6)	each	87,300.00
4902	50 mm dia DI DF Solenoid operated Diaphragm Type Flow Control Valve suitable for SCADA (Class PN 1.6)	each	92,520.00
4903	65 mm dia DI DF Solenoid operated Diaphragm Type Flow Control Valve suitable for SCADA (Class PN 1.6)	each	97,800.00
4904	80 mm dia DI DF Solenoid operated Diaphragm Type Flow Control Valve suitable for SCADA (Class PN 1.6)	each	1,05,000.00
4905	100 mm dia DI DF Solenoid operated Diaphragm Type Flow Control Valve suitable for SCADA (Class PN 1.6)	each	1,12,200.00
4906	125 mm dia DI DF Solenoid operated Diaphragm Type Flow Control Valve suitable for SCADA (Class PN 1.6)	each	1,16,400.00
4907	150 mm dia DI DF Solenoid operated Diaphragm Type Flow Control Valve suitable for SCADA (Class PN 1.6)	each	1,22,760.00
4908	200 mm dia DI DF Solenoid operated Diaphragm Type Flow Control Valve suitable for SCADA (Class PN 1.6)	each	1,47,000.00
4909	250 mm dia DI DF Solenoid operated Diaphragm Type Flow Control Valve suitable for SCADA (Class PN 1.6)	each	2,28,960.00
4910	300 mm dia DI DF Solenoid operated Diaphragm Type Flow Control Valve suitable for SCADA (Class PN 1.6)	each	3,03,360.00
4911	350 mm dia DI DF Solenoid operated Diaphragm Type Flow Control Valve suitable for SCADA (Class PN 1.6)	each	4,13,400.00
4912	400 mm dia DI DF Solenoid operated Diaphragm Type Flow Control Valve suitable for SCADA (Class PN 1.6)	each	5,02,800.00
4913	450 mm dia DI DF Solenoid operated Diaphragm Type Flow Control Valve suitable for SCADA (Class PN 1.6)	each	6,24,660.00
4914	500 mm dia DI DF Solenoid operated Diaphragm Type Flow Control Valve suitable for SCADA (Class PN 1.6)	each	8,90,160.00
4915	600 mm dia DI DF Solenoid operated Diaphragm Type Flow Control Valve suitable for SCADA (Class PN 1.6)	each	12,30,720.00
5011	Cleaning of external surface of MS pipe with sand blasting and or abrasive blasting at factory/ site complete	sqm	150.00
5012	Cleaning of internal surface of MS pipe with sand blasting and or abrasive blasting at factory/ site complete	sqm	162.00
5013	3 LPE (3 Layer Polyethylene) Coating to the External surface of MS pipes including field joint portion	sqm	720.00
5014	Two pack liquid epoxy (approved for drinking water) lining to internal surface of M.S. Pipe	sqm	270.00
5015	Applying 100% Solids, Rigid, DTM Polyurethane Coating (approved	sqm	300.00

Code No	Description	Unit	Rate Rs.
	for drinking water) to internal surface of M.S. Pipe		
5016	Cement mortar (1:1) lining to internal surface of M.S. Pipes upto 700 mm dia with mechanical devices	sqm	270.00
5017	Cement mortar (1:1) lining to internal surface of M.S. Pipes above 700 mm dia with mechanical devices	sqm	300.00
5021	100mm dia DI K-7 grade S&S pipe with internal high alumina cement mortar lining conforming to I.S. 8329	metre	910.00
5022	150mm dia DI K-7 grade S&S pipe with internal high alumina cement mortar lining conforming to I.S. 8329	metre	1,380.00
5023	200mm dia DI K-7 grade S&S pipe with internal high alumina cement mortar lining conforming to I.S. 8329	metre	1,800.00
5024	250mm dia DI K-7 grade S&S pipe with internal high alumina cement mortar lining conforming to I.S. 8329	metre	2,373.00
5025	300mm dia DI K-7 grade S&S pipe with internal high alumina cement mortar lining conforming to I.S. 8329	metre	2,999.00
5026	350mm dia DI K-7 grade S&S pipe with internal high alumina cement mortar lining conforming to I.S. 8329	metre	3,738.00
5027	400mm dia DI K-7 grade S&S pipe with internal high alumina cement mortar lining conforming to I.S. 8329	metre	4,478.00
5028	450mm dia DI K-7 grade S&S pipe with internal high alumina cement mortar lining conforming to I.S. 8329	metre	5,273.00
5029	500mm dia DI K-7 grade S&S pipe with internal high alumina cement mortar lining conforming to I.S. 8329	metre	6,207.00
5030	600mm dia DI K-7 grade S&S pipe with internal high alumina cement mortar lining conforming to I.S. 8329	metre	8,198.00
5031	700mm dia DI K-7 grade S&S pipe with internal high alumina cement mortar lining conforming to I.S. 8329	metre	11,093.00
5032	800mm dia DI K-7 grade S&S pipe with internal high alumina cement mortar lining conforming to I.S. 8329	metre	14,604.00
5033	900mm dia DI K-7 grade S&S pipe with internal high alumina cement mortar lining conforming to I.S. 8329	metre	17,736.00
5034	1000mm dia DI K-7 grade S&S pipe with internal high alumina cement mortar lining conforming to I.S. 8329	metre	21,168.00
5035	1100mm dia DI K-7 grade S&S pipe with internal high alumina cement mortar lining conforming to I.S. 8329	metre	27,732.00
5041	100mm dia DI K-9 Double Chambered Restrained Joint pipe conforming to I.S. 8329	metre	1,812.00
5042	150mm dia DI K-9 Double Chambered Restrained Joint pipe conforming to I.S. 8329	metre	2,576.00
5043	200mm dia DI K-9 Double Chambered Restrained Joint pipe conforming to I.S. 8329	metre	3,273.00

Code No	Description	Unit	Rate Rs.
5044	250mm dia DI K-9 Double Chambered Restrained Joint pipe conforming to I.S. 8329	metre	4,401.00
5045	300mm dia DI K-9 Double Chambered Restrained Joint pipe conforming to I.S. 8329	metre	5,601.00
5046	350mm dia DI K-9 Double Chambered Restrained Joint pipe conforming to I.S. 8329	metre	6,900.00
5047	400mm dia DI K-9 Double Chambered Restrained Joint pipe conforming to I.S. 8329	metre	8,387.00
5048	450mm dia DI K-9 Double Chambered Restrained Joint pipe conforming to I.S. 8329	metre	10,019.00
5049	500mm dia DI K-9 Double Chambered Restrained Joint pipe conforming to I.S. 8329	metre	11,952.00
5050	600mm dia DI K-9 Double Chambered Restrained Joint pipe conforming to I.S. 8329	metre	15,624.00
5051	700mm dia DI K-9 Double Chambered Restrained Joint pipe conforming to I.S. 8329	metre	20,604.00
5052	800mm dia DI K-9 Double Chambered Restrained Joint pipe conforming to I.S. 8329	metre	22,668.00
5053	900mm dia DI K-9 Double Chambered Restrained Joint pipe conforming to I.S. 8329	metre	24,816.00
5054	1000mm dia DI K-9 Double Chambered Restrained Joint pipe conforming to I.S. 8329	metre	30,300.00
5055	1100mm dia DI K-9 Double Chambered Restrained Joint pipe conforming to I.S. 8329	metre	35,736.00
5081	SS 304 32mm dia pipe with 1.5mm thickness	metre	400.00
5082	1000 mm wide Auto-glow Aluminium extruded strips	each	943.00
5083	Rollar Blinds of 38mm round Aluminium channel with fabric & telting with all necessary fixtures and fitting	sqm	1,456.00
5084	Vertical Blinds of 100mm regular fabric with powder coated aluminium channel with telting PVC chain & bottom weight plate with all necessary fixtures and fitting	sqm	663.00
5085	1000 gsm synthetic wool 50mm thick	sqm	324.00
5086	100% stain proof carpet 800+ gsm for acoustic purpose	sqm	920.00
5087	5mm thick foam underlay	sqm	83.00
5088	Auditorium chair as approved	each	3,894.00
5089	1.0mm thick laminates	sqm	525.00
5090	Fabric wrapped Compressed polyester fibre nonwoven 9mm panels	sqm	2,056.00
5091	Acoustical Panelling made from 12mm thick Agro wood strips of 50, 75, 100 mm	sqm	3,126.00

Code No	Description	Unit	Rate Rs.
5092	Gypsum Plain panels	sqm	496.00
5093	Compressed polyester fibre nonwoven 9mm panels	sqm	1,515.00
5094	Rigitone 8/18 perforated panels	sqm	303.00
5095	Fabric wrapped Compressed polyester fibre nonwoven 9 mm panels	sqm	2,773.00
5096	Wood- wool board 20mm panels	sqm	1,928.00
5097	Gypsum plain 12mm panels	sqm	1,105.00
5098	12mm wp Ply wood & 1.5mm laminate panels	sqm	3,137.00
5099	Acoustical Doors along with 150 x 150 mm teak wood frame, doors made from 50mm Teak wood frame 600 x600 c to c filled with 1000 Gsm synthetic wool 50mm thick and 3mm Tecsound from both sides, 12mm waterproof ply & veneer from both sides	each	16,054.00
5100	18mm Teakwood planks 100 x 800 having tongue & grove	sqm	4,783.00
5101	Hanger rod 0.5 mm thick, 1m long	each	9.69
5102	Adjustment clip	each	4.41
5103	Soffit cleat	each	2.64
5111	Main T ceiling sections 24x38x0.3 mm (in 3 m length)	metre	182.00
5112	Perimeter wall angle 21x21 mm (in 3 m length)	metre	113.00
5113	Intermediate cross T-section 24x25x0.30mm (in 3 m length)	metre	108.00
5114	Ceiling sections 22x37x1.6mm	metre	46.70
5115	Perimetre channel 45x15x0.9mm	metre	28.20
5116	Intermediate channel 25x25x0.55	metre	48.50
5117	Strap hanger (Ceiling angle) 25x25x0.55mm	metre	18.50
5118	Connecting clips 2.64mm dia 230mm long	each	5.28
5119	Nuts and bolts 6 mm dia (25mm)	Nos	18.51
5120	Soffit cleat	each	3.52
5121	Drive all screws 25 mm long	100 Nos	46.70
5122	Joint filler	kg	23.00
5123	Joint finisher	kg	25.60
5124	Joint tape	roll	130.00
5125	Galvanised Steel main Tee ceiling section Size	metre	131.00
5126	Galvanised Steel perimeter wall Angle Size 24x24x0.40 mm	metre	111.00
5127	Galvanised Steel intermediate cross T section Size 24 x 32 x 0.33 mm	metre	111.00
5129	Hanger rod 6mm thick G.I. fully threaded rods	metre	27.00
5130	Adjuster Size 80x25x2 mm	each	16.00
5131	12 mm thick tegular edge Glass Fibre Reinforced Gypsum false	sqm	846.00

Code No	Description	Unit	Rate Rs.
	ceiling tiles		
5132	6mm thick calcium silicate perforated ceiling tiles	sqm	370.00
5133	8mm thick calcium silicate perforated ceiling tiles	sqm	472.00
5134	6 mm thick calcium silicate board	sqm	215.00
5135	8 mm thick calcium silicate board	sqm	287.00
5140	GI in Plain Tegular edge Global white colour 0.5 mm thick with 8 mm drop, having galvanizing of 100 gms/sqm (both sides inclusive) and electro statically polyester powder coated of thickness 60 microns (minimum).	sqm	815.00
5141	GI perforated Tegular edge global white colour 0.5 mm thick with 8 mm drop 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)	sqm	881.00
5145	15mm thick Mineral Fibre Anti Bacterial tiles with Bioguard (Bevelled Tegular) EDGE TILES WITH 15 mm Exposed GRID. The tiles should have Humidity Resistance (RH) of 95% Light Reflectance 90%, Thermal Conductivity K =0.052-0.057 w/m K, Colour White with Anti Microbial coating on the face of the tile	sqm	755.00
5146	16mm thick Mineral Fibre Acoustical tiles with Bioguard (Bevelled Tegular) EDGE TILES WITH 15 mm Exposed GRID. The tiles should have Humidity Resistance (RH) of 99% NRC 0.5, Light Reflectance _>85%, Thermal Conductivity K =0.052-0.057 w/m K, Colour White	sqm	692.00
5147	300C Aluminium Panel with perforation of 2mm diameter and 5mm centre to centre to give 15% open area with Non woven textile 300 mm wide X 30 mm deep X 0.7 mm thick	metre	898.00
5148	Perforated Metal Ceiling Tile 600mm x 600mm x 0.7mm thick aluminium alloy 3105 with bevelled edge of 4.15mm width and height of 32mm and perforated to 1.5mm dia with open area of 23%.	each	811.00
5149	Un-perforated Metal Tile of 600mm x 600mm x 0.7mm thick aluminium alloy 3105 with bevelled edge of 4.15mm width height of 32mm.	each	645.00
5150	Antibacterial Un-perforated Metal Tile of 600mm x 600mm x 0.7mm thick aluminium alloy 3105 with bevelled edge of 4.15mm width height of 32mm.	each	899.00
5151	Perforated Metal Tile 600mm x 600mm x 0.5mm thick Galvanised Iron with bevelled edge of 4.15mm width height of 32mm, perforated to 1.5mm dia with open area of 23%.	each	686.00
5152	Un-perforated Metal Tile 600mm x 600mm x 0.5mm thick Galvanised Iron with bevelled edge of 4.15mm width height of 32mm.	each	617.00
5153	Torsion spring Plank 600mm x 1200mm x 0.7mm thick Aluminium	each	2,028.00

Code No	Description	Unit	Rate Rs.
	Alloy 3105 perforated to 1.5mm dia and 22% area.		
5154	Torsion spring Plank 600mm x 600mm x 0.7mm thick Aluminium Alloy 3105 perforated to 1.5mm dia and 22% area.	each	925.00
5155	Torsion spring Plank 600mm x 1200mm x 0.6mm thick GALVANISED IRON perforated to 1.5mm dia and 22% area.	each	1,456.00
5175	Pre-painted steel T Section 24x27x0.4mm	metre	40.00
5176	Pre-painted steel T Section 24x25x0.4mm	metre	36.00
5177	Pre-painted steel Flat Section 24x0.6mm	metre	15.00
5178	GI Stud section 48x35x0.55mm	metre	47.00
5179	GI track section 50x35x0.55mm	metre	50.00
5180	Prepainted steel L Section 19x19x0.4mm	metre	59.00
5181	Wooden screws with plastic rawl plugs 35mm x8mm	each	111.00
5182	G.I. Main Runner 15mm x 32mm x 0.33 mm thick	metre	122.00
5183	G.I. Cross Tee 15mm x 32mm x 0.33 mm thick	metre	77.00
5184	G.I. Cross Tee 15mm x 32mm x 0.33 mm thick	metre	38.00
5185	G.I. Angle 24mm x 24mm x 0.40 mm thick	metre	94.00
5186	Suspension Accessories	each	12.00
5187	Galvanised iron Hanger rod 6mm dia fully threaded upto 1000mm length	each	28.00
5188	Galvanised iron L-Shape level Adjuster of size 85x25x25x2mm	each	13.21
5191	300C Aluminium Carrier	metre	374.00
5192	M6 Threaded Rod with Nuts	each	79.00
5193	Suspension Clip	each	10.00
5194	Edge Profile	metre	94.00
5195	CLIP IN PROFILE	metre	104.00
5196	CLIP IN PROFILE CONNECTOR	each	13.00
5197	HOLD ON CLAMP WITH CLIPS	each	47.00
5198	RAIL CROSS CONNECTOR	each	36.00
5199	M6 Threaded Rods	each	45.85
5200	Main Tee 3600mm for Torsion System	metre	94.00
5201	Cross Tee 1200mm for Torsion System	each	78.00
5202	Torsion Springs	each	44.10
5203	Torsion Spring Brackets	each	44.00
5211	Earthen pots 8" ht	each	15.90
5212	8mm thick laminated floor	sqm	1,481.00
5213	89 mm wide having both side laminations	metre	555.00

Code No	Description	Unit	Rate Rs.
5214	1 mm thick PVC sheet confirming to IS 3462	sqm	333.00
5215	1.5 mm thick PVC sheet confirming to IS 3462	sqm	393.00
5216	2 mm thick PVC sheet confirming to IS 3462	sqm	444.00
5217	Rubber adhesive	kg	159.00
5218	Stainless steel (Grade-304)hollow section round/square tubes	kg	220.00
5219	Stainless steel bolts/square bar and plates	kg	106.00
5221	Aluminium grill (size 7.5mm x 6mm and opening of size 102mm x 99mm)	sqm	555.00
5222	Aluminium H & Y section for fixing aluminium grill	metre	46.70
5223	Anodising AC 15 of aluminium sections	sqm	417.00
5224	Powder coating of aluminium sections	sqm	463.00
5225	Polyester Powder coating of aluminium sections	sqm	555.00
5226	Drapery rod (20 gauge, 25.4 mm diameter) made of MS with PVC coating	metre	166.00
5227	Bracket for Drapery rod 25.4mm dia made of MS with PVC coating/ painting	each	9.00
5228	Curtain rings for Drapery rod 25.4mm dia made of MS with PVC coating/ painted	each	2.20
5229	Sun control film	sqm	278.00
5231	Multi Rib Proofing /Cladding Sheet thickness 0.50mm TCT(Total Coated thickness) high tensile Zinc aluminium alloy	sqm	357.00
5232	Multi Rib Proofing /Cladding Sheet thickness 0.60mm TCT(Total Coated thickness) high tensile Zinc aluminium alloy	sqm	411.00
5233	Multi Rib Proofing /Cladding Sheet thickness 0.80mm TCT(Total Coated thickness) high tensile Zinc aluminium alloy	sqm	518.00
5234	Prefabricated Insulated PPGL sandwich panels for wall/ roof of total thickness 55mm exclusive of crest height of top corrugation made of 0.50mm (+/-0.04mm) thick PPGL (Pre Painted Galvalume Sheet with AZ coating) metal sheet on both sides of rigid polyurethane insulation.	sqm	1,313.00
5235	Prefabricated Insulated PPGL sandwich panels for wall/ roof of total thickness 65mm exclusive of crest height of top corrugation made of 0.50mm (+/-0.04mm) thick PPGL (Pre Painted Galvalume Sheet with AZ coating) metal sheet on both sides of rigid polyurethane insulation.	sqm	1,313.00
5236	Prefabricated Insulated PPGL sandwich panels for wall/ roof of total thickness 105mm exclusive of crest height of top corrugation made of 0.50mm (+/-0.04mm) thick PPGL (Pre Painted Galvalume Sheet with AZ coating) metal sheet on both sides of rigid polyurethane insulation.	sqm	1,485.00

Code No	Description	Unit	Rate Rs.
5237	Factory-readymade structural reinforced prefabricated insulated cement wall panel of thickness 65mm made of 6mm (+/-0.6mm) thick asbestos-free fiber cement sheet/ cement bonded particle board as per is:14276:1995 on both sides of rigid PUR insulation.	sqm	1,313.00
5238	Factory-readymade structural reinforced prefabricated insulated cement wall panel of thickness 75mm made of 6mm (+/-0.6mm) thick asbestos-free fiber cement sheet/ cement bonded particle board as per is:14276:1995 on both sides of rigid PUR insulation.	sqm	1,379.00
5239	Factory-readymade structural reinforced prefabricated insulated cement wall panel of thickness 65mm made of min 4mm (+/- 0.5mm) thick laminated wood based medium density fiber board sheet on both sides of rigid PUR insulation.	sqm	1,379.00
5240	Factory-readymade structural reinforced prefabricated insulated cement wall panel of thickness 75mm made of min 4mm (+/- 0.5mm) thick laminated wood based medium density fiber board sheet on both sides of rigid PUR insulation.	sqm	1,454.00
5241	Prefabricated Insulated PPGL sandwich panels for door, wall and roof of thickness 32mm made of 0.50mm (+/-0.04mm) thick pre-coated PPGL (Pre Painted Galvalume Sheet with AZ coating) metal sheet on both sides of rigid PUR insulation.	sqm	1,811.00
5242	Prefabricated Insulated PPGL sandwich panels for door, wall and roof of thickness 50mm made of 0.50mm (+/-0.04mm) thick pre-coated PPGL (Pre Painted Galvalume Sheet with AZ coating) metal sheet on both sides of rigid PUR insulation.	sqm	1,943.00
5243	U-track for mounting panels with floor made from minimum 1.15 mm thick PPGL sheet with flange height of minimum 35 mm and width as per thickness of panel used.	metre	176.00
5244	Corner angle flashings of equal shape for covering various corners and open sides of panels made from 0.5mm thick pre-coated PPGL sheet in size 50x50mm.	metre	132.00
5245	Corner angle flashings of equal shape for covering various corners and open sides of panels made from 0.5mm thick pre-coated PPGL sheet in size 100x100mm.	metre	176.00
5246	Ridge flashings of roof panels made from 0.5mm thick pre-coated PPGL sheet in size 200x200mm.	metre	176.00
5247	Front side flashing for roof panels (corrugated trapezoidal shape) shall be made from 0.5mm thick pre-coated PPGL sheet.	metre	176.00
5248	End cap for closing ends of roof panels made from 0.5mm thick PPGL sheet.	metre	132.00
5249	Door/ Window Frame made out of min 1.15mm thick press steel sheet.	metre	176.00
5250	U or L shape panel end caps suitable for thickness of panel used, with 30mm flange. It should be made from 0.5mm Pre coated PPGL sheet.	metre	73.00

Code No	Description	Unit	Rate Rs.
5251	6mm thick Cement Bonded Particle Board (as per IS 14276)	sqm	177.00
5252	10mm thick Cement Bonded Particle Board (as per IS 14276)	sqm	780.00
5253	10mm thick Factory Laminated Cement Bonded Particle Board	sqm	1,061.00
5254	Bath room / Toilet door shutter with 16mm Factory Laminated Cement Bonded Particle Board BISON Lam (IS 14276) with all-round U lipping of PPS section of size 12mm X 18mmX 12mmX0.6mm necessary hardware 12mm dia X200mm long aluminium aldop, 2 nos 125mm long handles and 3 no 304 grade Patee Hinges	sqm	1,757.00
5255	CC M-20 Grade Solid Rectangular Block mechanically casted of size 400x200x200mm, 400x200x150mm, 400x200x100, 225x200x100	cum	5,366.00
5256	CC M-20 Grade Hollow Rectangular Block mechanically casted of size 400x200x200mm, 400x200x100	cum	4,159.00
5261	Needle punched and mechanically bonded non-woven Geotextile indigenously manufactured from high quality Polypropylene stable fibres	sqm	104.00
5421	80 mm dia DI Resilient Seated Sluice Valve PN 1.0 Electrically operated	each	5,144.00
5422	100 mm dia DI Resilient Seated Sluice Valve PN 1.0 Electrically operated	each	6,704.00
5423	125 mm dia DI Resilient Seated Sluice Valve PN 1.0 Electrically operated	each	10,818.00
5424	150 mm dia DI Resilient Seated Sluice Valve PN 1.0 Electrically operated	each	11,186.00
5425	200 mm dia DI Resilient Seated Sluice Valve PN 1.0 Electrically operated	each	16,800.00
5426	250 mm dia DI Resilient Seated Sluice Valve PN 1.0 Electrically operated	each	26,160.00
5427	300 mm dia DI Resilient Seated Sluice Valve PN 1.0 Electrically operated	each	32,412.00
5428	350 mm dia DI Resilient Seated Sluice Valve PN 1.0 Electrically operated	each	49,404.00
5429	400 mm dia DI Resilient Seated Sluice Valve PN 1.0 Electrically operated	each	63,576.00
5430	450 mm dia DI Resilient Seated Sluice Valve PN 1.0 Electrically operated	each	80,148.00
5431	500 mm dia DI Resilient Seated Sluice Valve PN 1.0 Electrically operated	each	1,04,532.00
5432	600 mm dia DI Resilient Seated Sluice Valve PN 1.0 Electrically operated	each	1,51,848.00
5441	80 mm dia DI Resilient Seated Sluice Valve PN 1.6	each	6,060.00

Code No	Description	Unit	Rate Rs.
5442	Electrically operated 100 mm dia DI Resilient Seated Sluice Valve PN 1.6	each	7,710.00
5443	Electrically operated 125 mm dia DI Resilient Seated Sluice Valve PN 1.6	each	11,760.00
5444	Electrically operated 150 mm dia DI Resilient Seated Sluice Valve PN 1.6	each	13,080.00
5445	Electrically operated 200 mm dia DI Resilient Seated Sluice Valve PN 1.6	each	20,400.00
5446	Electrically operated 250 mm dia DI Resilient Seated Sluice Valve PN 1.6	each	34,440.00
5447	Electrically operated 300 mm dia DI Resilient Seated Sluice Valve PN 1.6	each	43,860.00
5448	Electrically operated 350 mm dia DI Resilient Seated Sluice Valve PN 1.6	each	82,800.00
5449	Electrically operated 400 mm dia DI Resilient Seated Sluice Valve PN 1.6	each	1,08,360.00
5450	Electrically operated 450 mm dia DI Resilient Seated Sluice Valve PN 1.6	each	1,44,900.00
5451	Electrically operated 500 mm dia DI Resilient Seated Sluice Valve PN 1.6	each	1,86,840.00
5452	Electrically operated 600 mm dia DI Resilient Seated Sluice Valve PN 1.6	each	2,75,160.00
5461	100 mm dia DI D/F resilient seated short body Butterfly valves Class PN 1.6, Manually Operated	each	12,000.00
5462	150 mm dia DI D/F resilient seated short body Butterfly valves Class PN 1.6, Manually Operated	each	24,000.00
5463	200 mm dia DI D/F resilient seated short body Butterfly valves Class PN 1.6, Manually Operated	each	36,000.00
5464	250 mm dia DI D/F resilient seated short body Butterfly valves Class PN 1.6, Manually Operated	each	48,000.00

Code No	Description	Unit	Rate Rs.
5465	300 mm dia DI D/F resilient seated short body Butterfly valves Class PN 1.6, Manually Operated	each	60,000.00
5466	350 mm dia DI D/F resilient seated short body Butterfly valves Class PN 1.6, Manually Operated	each	72,000.00
5467	400 mm dia DI D/F resilient seated short body Butterfly valves Class PN 1.6, Manually Operated	each	84,000.00
5468	450 mm dia DI D/F resilient seated short body Butterfly valves Class PN 1.6, Manually Operated	each	96,000.00
5469	500 mm dia DI D/F resilient seated short body Butterfly valves Class PN 1.6, Manually Operated	each	1,08,000.00
5470	600 mm dia DI D/F resilient seated short body Butterfly valves Class PN 1.6, Manually Operated	each	1,20,000.00
5471	700 mm dia DI D/F resilient seated short body Butterfly valves Class PN 1.6, Manually Operated	each	1,32,000.00
5472	800 mm dia DI D/F resilient seated short body Butterfly valves Class PN 1.6, Manually Operated	each	1,44,000.00
5473	900 mm dia DI D/F resilient seated short body Butterfly valves Class PN 1.6, Manually Operated.	each	1,56,000.00
5474	1000 mm dia DI D/F resilient seated short body Butterfly valves Class PN 1.6, Manually Operated.	each	1,68,000.00
5481	100 mm dia DI D/F resilient seated short body Butterfly valves Class PN 1.6, Manually operated with gear	each	14,400.00
5482	150 mm dia DI D/F resilient seated short body Butterfly valves Class PN 1.6, Manually operated with gear	each	26,400.00
5483	200 mm dia DI D/F resilient seated short body Butterfly valves Class PN 1.6, Manually operated with gear	each	38,400.00
5484	250 mm dia DI D/F resilient seated short body Butterfly valves Class PN 1.6, Manually operated with gear	each	50,400.00
5485	300 mm dia DI D/F resilient seated short body Butterfly valves Class PN 1.6, Manually operated with gear	each	63,600.00
5486	350 mm dia DI D/F resilient seated short body Butterfly valves Class PN 1.6, Manually operated with gear	each	75,600.00
5487	400 mm dia DI D/F resilient seated short body Butterfly valves Class PN 1.6, Manually operated with gear	each	87,600.00
5488	450 mm dia DI D/F resilient seated short body Butterfly valves Class PN 1.6, Manually operated with gear	each	99,600.00
5489	500 mm dia DI D/F resilient seated short body Butterfly valves Class PN 1.6, Manually operated with gear	each	1,11,600.00
5490	600 mm dia DI D/F resilient seated short body Butterfly valves Class PN 1.6, Manually operated with gear	each	1,24,800.00
5491	700 mm dia DI D/F resilient seated short body Butterfly valves Class	each	1,36,800.00

Code No	Description	Unit	Rate Rs.
	PN 1.6, Manually operated with gear		
5492	800 mm dia DI D/F resilient seated short body Butterfly valves Class PN 1.6, Manually operated with gear.	each	1,48,800.00
5493	900 mm dia DI D/F resilient seated short body Butterfly valves Class PN 1.6, Manually operated with gear.	each	1,60,800.00
5494	1000 mm dia DI D/F resilient seated short body Butterfly valves Class PN 1.6, Manually operated with gear.	each	1,72,800.00
5501	700 mm dia DI D/F resilient seated short body Butterfly valves Class PN 1.0, Motorised Operated	each	1,32,000.00
5502	800 mm dia DI D/F resilient seated short body Butterfly valves Class PN 1.0, Motorised Operated	each	1,44,000.00
5503	900 mm dia DI D/F resilient seated short body Butterfly valves Class PN 1.0, Motorised Operated	each	1,56,000.00
5504	1000 mm dia DI D/F resilient seated short body Butterfly valves Class PN 1.0, Motorised Operated	each	1,68,000.00
5511	700 mm dia DI D/F resilient seated short body Butterfly valves Class PN 1.6, Motorised Operated	each	1,32,000.00
5512	800 mm dia DI D/F resilient seated short body Butterfly valves Class PN 1.6, Motorised Operated	each	1,44,000.00
5513	900 mm dia DI D/F resilient seated short body Butterfly valves Class PN 1.6, Motorised Operated	each	1,56,000.00
5514	1000 mm dia DI D/F resilient seated short body Butterfly valves Class PN 1.6, Motorised Operated	each	1,68,000.00
5521	80 mm dia DI Resilient Seated Dual Plate check Valve Class PN 1.6	each	8,747.00
5522	100 mm dia DI Resilient Seated Dual Plate check Valve Class PN 1.6	each	8,820.00
5523	125 mm dia DI Resilient Seated Dual Plate check Valve Class PN 1.6	each	14,976.00
5524	150 mm dia DI Resilient Seated Dual Plate check Valve Class PN 1.6	each	18,888.00
5525	200 mm dia DI Resilient Seated Dual Plate check Valve Class PN 1.6	each	22,800.00
5526	250 mm dia DI Resilient Seated Dual Plate check Valve Class PN 1.6	each	35,280.00
5527	300 mm dia DI Resilient Seated Dual Plate check Valve Class PN 1.6	each	37,692.00
5528	350 mm dia DI Resilient Seated Dual Plate check Valve Class PN 1.6	each	53,136.00
5529	400 mm dia DI Resilient Seated Dual Plate check Valve Class PN 1.6	each	74,244.00
5530	450 mm dia DI Resilient Seated Dual Plate check Valve Class PN	each	91,404.00

Code No	Description	Unit	Rate Rs.
	1.6		
5531	500 mm dia DI Resilient Seated Dual Plate check Valve Class PN 1.6	each	1,29,156.00
5532	600 mm dia DI Resilient Seated Dual Plate check Valve Class PN 1.6	each	1,22,400.00
5541	80 mm dia Stain less steel AISI 304 Expansion bellows of 10/16 bar rating	each	4,920.00
5542	100 mm dia Stain less steel AISI 304 Expansion bellows of 10/16 bar rating	each	5,370.00
5543	125 mm dia Stain less steel AISI 304 Expansion bellows of 10/16 bar rating	each	6,240.00
5544	150 mm dia Stain less steel AISI 304 Expansion bellows of 10/16 bar rating	each	7,410.00
5545	200 mm dia Stain less steel AISI 304 Expansion bellows of 10/16 bar rating	each	9,556.00
5546	250 mm dia Stain less steel AISI 304 Expansion bellows of 10/16 bar rating	each	12,149.00
5547	300 mm dia Stain less steel AISI 304 Expansion bellows of 10/16 bar rating	each	13,200.00
5548	350 mm dia Stain less steel AISI 304 Expansion bellows of 10/16 bar rating	each	16,200.00
5549	400 mm dia Stain less steel AISI 304 Expansion bellows of 10/16 bar rating	each	23,760.00
5550	450 mm dia Stain less steel AISI 304 Expansion bellows of 10/16 bar rating	each	24,701.00
5551	500 mm dia Stain less steel AISI 304 Expansion bellows of 10/16 bar rating	each	34,451.00
5552	600 mm dia Stain less steel AISI 304 Expansion bellows of 10/16 bar rating	each	44,909.00
5553	700 mm dia Stain less steel AISI 304 Expansion bellows of 10/16 bar rating	each	66,000.00
5554	800 mm dia Stain less steel AISI 304 Expansion bellows of 10/16 bar rating	each	84,000.00
5555	900 mm dia Stain less steel AISI 304 Expansion bellows of 10/16 bar rating	each	1,01,760.00
5556	1000 mm dia Stain less steel AISI 304 Expansion bellows of 10/16 bar rating	each	1,29,780.00
5581	Placing HDPE pipe in place of old damaged RCC/CI/PVC by Pneumatic Pipe Bursting process including making of bursting tool entry pits and all related civil works - Upto 200 mm	metre	8,780.00
5582	Placing HDPE pipe in place of old damaged RCC/CI/PVC by	metre	9,640.00

Code No	Description	Unit	Rate Rs.
	Pneumatic Pipe Bursting process including making of bursting tool entry pits and all related civil works - 225-250 mm		
5583	Placing HDPE pipe in place of old damaged RCC/CI/PVC by Pneumatic Pipe Bursting process including making of bursting tool entry pits and all related civil works - 300-350 mm	metre	10,200.00
5584	Placing HDPE pipe in place of old damaged RCC/CI/PVC by Pneumatic Pipe Bursting process including making of bursting tool entry pits and all related civil works - 350-400 mm	metre	13,500.00
5585	Placing HDPE pipe in place of old damaged RCC/CI/PVC by Pneumatic Pipe Bursting process including making of bursting tool entry pits and all related civil works - 450-500 mm	metre	17,300.00
5586	Placing HDPE pipe in place of old damaged RCC/CI/PVC by Pneumatic Pipe Bursting process including making of bursting tool entry pits and all related civil works - 600-700 mm	metre	18,300.00
8888	Percentage	%	1.00
9999	LS Provision	LS	1.00

D – HORTICULTURE SUPPLY ITEMS

Note: These basic prices/rates are inclusive of material price, freight, loading & unloading, GST, contractor's profit but exclusive of over heads etc.

Code No	Description	Unit	Rate Rs.
8001	Supply of Cement pot / Plastic pot 300 mm size at site/ store i/c all complete	Each	156.00
8002	Supply of Cement pot / Plastic pot 350 mm size at site/ store i/c all complete	Each	225.00
8003	Supply of Cement pot / Plastic pot 375 mm size at site/ store i/c all complete	Each	275.00
8004	Supply of Cement pot / Plastic pot 450 mm size at site/ store i/c all complete	Each	483.00
8005	Supply of Cement pot / Plastic pot 525 mm size at site/ store i/c all complete	Each	851.00
8006	Supply of Earthen pot 150 mm size at site/ store i/c all complete	Each	19.00
8007	Supply of Earthen pot 225 mm size at site/ store i/c all complete	Each	31.00
8008	Supply of Earthen pot 300 mm size at site/ store i/c all complete	Each	45.00
8009	Supply of Earthen pot 350 mm size at site/ store i/c all complete	Each	130.00
8010	Supply of Earthen pot 225 mm size(Kundi shape) at site/ store i/c all complete	Each	31.00
8011	Supply of Earthen pot 300 mm size(Kundi shape) at site/ store i/c all complete	Each	47.00
8012	Supply of Earthen pot 350 mm size(Kundi shape) at site/ store i/c all complete	Each	130.00
8013	Supply of 300 mm size Hand Lawn Mower(Roller Type) at site/ store i/c all complete	Each	4,492.00
8014	Supply of 350 mm size Hand Lawn Mower(Roller Type) at site/ store i/c all complete	Each	4,991.00
8015	Supply of 300 mm Electric Lawn Mower at site/ store i/c all complete	Each	18,716.00
8016	Supply of 350 mm Electric Lawn Mower at site/ store i/c all complete	Each	20,796.00
8017	Supply of 400 mm Electric Lawn Mower at site/ store i/c all complete	Each	22,875.00
8018	Supply of 450 mm Electric Lawn Mower at site/ store i/c all complete	Each	25,995.00
8019	Supply of 500 mm Electric Lawn Mower at site/ store i/c all complete	Each	29,114.00
8020	Supply of Electric Lawn Mower surfex 16 EL at site/ store i/c all complete	Each	31,193.00
8021	Supply of Electric Lawn Mower surfex 18 EL at site/ store i/c all complete	Each	37,432.00
8022	Supply of Electric Lawn Mower surfex 21 EL at site/ store i/c all	Each	41,591.00

Code No	Description	Unit	Rate Rs.
	complete		
8023	Supply of Merigold Garland A Class (Big flowers) 2 feet long at site/ store i/c all complete	Each	78.00
8024	Supply of Merigold Garland B Class (Small flowers) 1.5 feet long at site/ store i/c all complete	Each	52.00
8025	Supply of Green Garland (Ashok Leaf) 2 feet long at site/ store i/c all complete	Each	16.00
8026	Supply of Rose Garland 1.5 feet long at site/ store i/c all complete	Each	130.00
8027	Supply of Jalusi Garland (VIP A Class) Double fold at site/ store i/c all complete	Each	520.00
8028	Supply of Jalusi Garland (VIP B Class) Single fold at site/ store i/c all complete	Each	416.00
8029	Supply of Mogra Garland 1.5 feet long at site/ store i/c all complete	Each	130.00
8030	Supply of Kunj Garland 1.0 feet long at site/ store i/c all complete	Each	156.00
8031	Supply of Rose petal's at site/ store i/c all complete	kg	416.00
8032	Supply of Merigold petal's at site/ store i/c all complete	kg	260.00
8033	Supply of chrysanthemum petal's at site/ store i/c all complete	kg	312.00
8034	Supply of Chandni flower at site/ store i/c all complete	kg	312.00
8035	Supply of Mogra Flower at site/ store i/c all complete	kg	468.00
8036	Supply of Kunj Flower at site/ store i/c all complete	kg	494.00
8037	Supply of cut flower 'Tata Rose' at site/ store i/c all complete	Each	16.00
8038	Supply of cut flower 'Carnation' at site/ store i/c all complete	Each	19.00
8039	Supply of cut flower 'Gladioli' at site/ store i/c all complete	Each	21.00
8040	Supply of cut flower 'Tube rose single' at site/ store i/c all complete	Each	12.00
8041	Supply of cut flower 'Tube rose double' at site/ store i/c all complete	Each	16.00
8042	Supply of cut flower 'Ilium Asiatic' at site/ store i/c all complete	Each	78.00
8043	Supply of cut flower 'Ilium Oriental' at site/ store i/c all complete	Each	130.00
8044	Supply of cut flower 'An thorium' at site/ store i/c all complete	Each	78.00
8045	Supply of cut flower 'Arched Mix' at site/ store i/c all complete	Each	42.00
8046	Supply of cut flower 'Gerbera' at site/ store i/c all complete	Each	21.00
8047	Supply of cut flower 'Dasy' at site/ store i/c all complete	Each	26.00
8048	Supply of cut flower 'Chrysanthemum' at site/ store i/c all complete	Each	21.00
8049	Supply of cut flower 'Candytuft' at site/ store i/c all complete	Each	4.00
8050	Supply of cut flower 'Aster' at site/ store i/c all complete	Each	6.00
8051	Supply of cut flower 'Lotus' at site/ store i/c all complete	Each	42.00
8052	Supply of Chemical Fertilizers 'Urea' at site/ store i/c all complete	Bag	279.00

Code No	Description	Unit	Rate Rs.
8053	Supply of Chemical Fertilizers 'DAP' at site/ store i/c all complete	Bag	938.00
8054	Supply of Chemical Fertilizers 'Super Phosphate' at site/ store i/c all complete	Bag	296.00
8055	Supply of Chemical Fertilizers 'Muriate of Potash' at site/ store i/c all complete	Bag	445.00
8056	Supply of Chemical Fertilizers 'Straw Meal' at site/ store i/c all complete	Bag	889.00
8057	Supply of Insecticides & Pesticides 'Methyl Parathion 2%. 50 kg bag' at site/ store i/c all complete	Bag	494.00
8058	Supply of Insecticides & Pesticides 'Karathion (Liquid). 250ml packing' at site/ store i/c all complete	Each	494.00
8059	Supply of Insecticides & Pesticides 'Metacid (Liquid).' at site/ store i/c all complete	Litre	365.00
8060	Supply of Insecticides & Pesticides 'Roger (Liquid).' at site/ store i/c all complete	Litre	277.00
8061	Supply of Insecticides & Pesticides 'Cholorophyriphos 20 Ec.' at site/ store i/c all complete	Litre	321.00
8062	Supply of Insecticides & Pesticides 'Bauiston 50 %. 100 grams packing' at site/ store i/c all complete	Litre	99.00
8063	Supply of Garden Tool 'Spade weighing 1.5 kg. with Handle.' at site/ store i/c all complete	Each	123.00
8064	Supply of Garden Tool 'Khurpa weighing 500 gm with Handle.' at site/ store i/c all complete	Each	69.00
8065	Supply of Garden Tool 'Gurvana weighing 800 gm. with Handle' at site/ store i/c all complete	Each	79.00
8066	Supply of Garden Tool 'Hedge Shear (kamani Steel)' at site/ store i/c all complete	Each	494.00
8067	Supply of Garden Tool 'Secateur' at site/ store i/c all complete	Each	198.00
8068	Supply of Garden Tool 'Garden Rack with Handle.' at site/ store i/c all complete	Each	123.00
8069	Supply of Garden Tool 'Pick - Axe.' at site/ store i/c all complete	Each	119.00
8070	Supply of P.V.C. hose pipe 50 mm dia at site/ store i/c all complete	Metre	119.00
8071	Supply of P.V.C. hose pipe 38 m dia at site/ store i/c all complete	Metre	99.00
8072	Supply of P.V.C. hose pipe 25 mm dia at site/ store i/c all complete	Metre	59.00
8073	Supply of P.V.C. hose pipe 17 mm dia at site/ store i/c all complete	Metre	49.00
8074	Supply of P.V.C. hose pipe 12.5 mm dia at site/ store i/c all complete	Metre	38.00