सत्यमेव जयते

GOVERNMENT OF INDIA

CENTRAL PUBLIC WORKS DEPARTMENT

ANALYSIS OF RATES FOR DELHI

(VOL. 2)

2012

CPWD

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FOREWORD

Central Public Works Department Analysis of Rates for Delhi is a very comprehensive and useful document forming basis for the rates of various items. It is based on scientific assessment of inputs of materials, labour and machinery in various items of work normally involved in a civil construction projects.

It was first compiled in the year 1950, followed by subsequent publication or revision in the years 1955, 1962, 1972, 1977, 1985, 1997, 2007. Since publication of Analysis of Rates for Delhi 2007, prices of labour and materials have registered substantial increase. Besides the increased cost, there has been a spurt of new construction materials and introduction of Green Building Concept of construction. This has necessitated revision of existing Analysis of Rates for Delhi 2007 to include the above changes. Accordingly, this Analysis of Rates for Delhi 2012 has been prepared.

The analysis of existing items has been updated in conformity with updated items of work in DSR 2012. Also, new analysis of rates for many newly introduced items in recently published DSR 2012 has been included in this Analysis of Rates for Delhi 2012.

Two new Sub Heads pertaining to Rain Water Harvesting & Tube wells, and Conservation of Heritage Buildings have been included in this Analysis of Rates for Delhi consisting of new analysis of rates for items in these Sub heads.

I wish to place on record the technical input and the effective coordination on the part of Shri Rakesh Misra, SPL DG (TD) and the efforts put in by Shri A.K. Sharma, CE (CSQ) and his team of officers in TAS unit in finalizing Analysis of Rates for Delhi 2012 in a record time.

I am sure that C.P.W.D. Analysis of Rates for Delhi 2012 shall be very useful document to various Central Govt. Ministries, Departments & Public Sector Undertakings.

New Delhi
May 2012

(S.K. MITTAL)
DIRECTOR GENERAL, CPWD

PREFACE

1.0 C.P.W.D. Analysis of Rates for Delhi 2012 is the revised edition of C.P.W.D. Analysis of Rates for Delhi 2007 (Reprint 2010).

2.0 Analysis of Rates for Delhi 2012 incorporates most of the analysis of items of Analysis of Rates for Delhi 2007 (Reprint 2010) with updated correction slips, including analysis of existing items and also corresponding new items introduced in DSR 2012.

3.0 Analysis of Rates for Delhi, 2012 is published in two volumes i.e. volume I & II as under:

Volume Number	Sub-head No.	Content/ Sub-head
One	00	Basic Rates
	01	Carriage of materials
	02	Earth Work
	03	Mortars
	04	Concrete Work
	05	Reinforced Cement Concrete
	06	Brick Work
	07	Stone Work
	08	Marble & Granite Work
	09	Wood and PVC Work
	10	Steel Work
	11	Flooring
	12	Roofing
Two	13	Finishing
	14	Repairs to Buildings
	15	Dismantling and Demolishing
	16	Road Work
	17	Sanitary Installations
	18	Water Supply
	19	Drainage
	20	Pile work
	21	Aluminium Work
	22	Water Proofing
	23	Horticulture and Landscaping
	24 (New)	Rain Water Harvesting & Tube wells
	25 (New)	Conservation of Heritage buildings.

4.0 Analysis of few existing items which are either obsolete or are not in use, have been deleted. Similarly, analysis of many items have been modified to correspond to items of DSR 2012. Several new analysis and sub item have been introduced in Analysis of Rates for Delhi 2012.

5.0 Items related to Green building concepts, Rain water harvesting & Conservation of Heritage Building have also being added in the Analysis of Rates for Delhi 2012.

6.0 Analysis of Rates for Delhi, 2012 is based on basic rates of labour & materials given in DSR 2012.

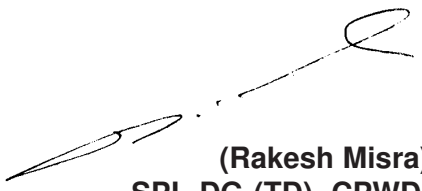
7.0 The nomenclatures of main items have been printed along with the analysis of first Sub item only to conserve the space and number of pages.

8.0 Sundries have been considered as 1.49 times based on Cost Index of Delhi as 149 as on 01.04.2011 over PAR 2007 as base 100.

9.0 A lot of effort has gone into the preparation of this Analysis of Rates. I convey my deep appreciation and sincere thanks to Shri A.K Sharma, CE. CSQ, Shri S. P. Chaudhary S.E. (TAS), Sh. R.K Saraswat EE I (TAS), Sh. Kamta Prasad EE II (TAS), Sh. R.K Vashisth AE, Sh. Chhabilal Singh AE, Sh. R.K Goel JE, Sh. Abhishek kumar JE, Sh. Ram Janam Chaudhary JE, Sh. Kashinath Ratha JE, Sh. Rakesh Kumar Estimator, Sh. Bahal Singh Estimator, and other officers and staff of TAS Unit for sincere efforts made in the preparation of document in such short time.

10.0 I also express my sincere thanks to Shri V.J. Reddy EE (P), Hydrabad Central Circle-II, who has contributed & helped in finalising the Analysis of Rates for Delhi 2012 in addition to his routine duties.

11.0 Due care has been taken to print the C.P.W.D. Analysis of Rates for Delhi as correctly as possible. It is, however possible that some errors might have crept in. **In case any error or omission is noticed, it may be brought to the notice of the Superintending Engineer (TAS), CPWD, Room no. 418, A-wing, Nirman Bhawan, New Delhi.**



(Rakesh Misra)
SPL DG (TD), CPWD,
Nirman Bhawan, New Delhi.

New Delhi
May, 2012

C O N T E N T S

Vol. 2

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Note: For Sub Heads 1 to 12 refer to Vol. 1

SUB HEAD : 13

FINISHING

13.1 12 mm cement plaster of mix:

13.1.1 1:4 (1 cement : 4 fine sand)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
	Cement mortar 1 : 4 (1 cement: 4 fine sand)				
3.4	Rate as per Item Number 3.4 of SH: Mortars	cum	0.144	2,971.80	427.94
0155	Mason (average)	day	0.67	287.00	192.29
0115	Coolie	day	0.75	247.00	185.25
0101	Bhisti	day	0.92	260.00	239.20
9999	Scaffolding and sundries.	L.S.	12.61	1.49	18.79
	TOTAL				1,063.47
	Add Water Charges @ 1%				10.63
	TOTAL				1,074.10
	Add CPOH @ 15%				161.11
	Cost of 10 sqm				1,235.21
	Cost of 1 sqm				123.52
	Say				123.50

13.1.2 1:6 (1 cement : 6 fine sand)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
	Cement mortar 1 : 6 (1 cement: 6 fine sand)				
3.6	Rate as per Item Number 3.6 of SH: Mortars	cum	0.144	2,311.70	332.88
	LABOUR:				
0155	Mason (average)	day	0.67	287.00	192.29
0115	Coolie	day	0.75	247.00	185.25
0101	Bhisti	day	0.92	260.00	239.20
9999	Scaffolding and sundries.	L.S.	12.61	1.49	18.79
	TOTAL				968.41
	Add Water Charges @ 1%				9.68
	TOTAL				978.09
	Add CPOH @ 15%				146.71
	Cost of 10 sqm				1,124.80
	Cost of 1 sqm				112.48
	Say				112.50

13.2 15 mm cement plaster on the rough side of single or half brick wall of mix:

13.2.1 1:4 (1 cement : 4 fine sand)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
	Cement mortar 1 : 4 (1 cement: 4 fine sand)				
3.4	Rate as per Item Number 3.4 of SH: Mortars	cum	0.172	2,971.80	511.15
	LABOUR:				
0155	Mason (average)	day	0.80	287.00	229.60
0115	Coolie	day	0.88	247.00	217.36
0101	Bhisti	day	0.99	260.00	257.40

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Scaffolding and sundries.	L.S.	12.61	1.49	18.79
	TOTAL				1,234.30
	Add Water Charges @ 1%				12.34
	TOTAL				1,246.64
	Add CPOH @ 15%				187.00
	Cost of 10 sqm				1,433.64
	Cost of 1 sqm				143.36
	Say				143.35

13.2.2 1:6 (1 cement : 6 fine sand)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
	Cement mortar 1 : 6 (1 cement: 6 fine sand)				
3.6	Rate as per Item Number 3.6 of SH: Mortars	cum	0.172	2,311.70	397.61
	LABOUR:				
0155	Mason (average)	day	0.80	287.00	229.60
0115	Coolie	day	0.88	247.00	217.36
0101	Bhisti	day	0.99	260.00	257.40
9999	Scaffolding and sundries.	L.S.	12.61	1.49	18.79
	TOTAL				1,120.76
	Add Water Charges @ 1%				11.21
	TOTAL				1,131.97
	Add CPOH @ 15%				169.80
	Cost of 10 sqm				1,301.77
	Cost of 1 sqm				130.18
	Say				130.20

13.3 20 mm cement plaster of mix:

13.3.1 1:4 (1 cement : 4 fine sand)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
	Cement mortar 1 : 4 (1 cement: 4 fine sand)				
3.4	Rate as per Item Number 3.4 of SH: Mortars	cum	0.224	2,971.80	665.68
	LABOUR:				
0155	Mason (average)	day	0.94	287.00	269.78
0115	Coolie	day	1.02	247.00	251.94
0101	Bhisti	day	1.10	260.00	286.00
9999	Scaffolding and sundries.	L.S.	12.61	1.49	18.79
	TOTAL				1,492.19
	Add Water Charges @ 1%				14.92
	TOTAL				1,507.11
	Add CPOH @ 15%				226.07
	Cost of 10 sqm				1,733.18
	Cost of 1 sqm				173.32
	Say				173.30

13.3.2 1:6 (1 cement : 6 fine sand)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
	Cement mortar 1 : 6 (1 cement: 6 fine sand)				
3.6	Rate as per Item Number 3.6 of SH: Mortars	cum	0.224	2,311.70	517.82
	LABOUR:				
0155	Mason (average)	day	0.94	287.00	269.78
0115	Coolie	day	1.02	247.00	251.94
0101	Bhisti	day	1.10	260.00	286.00
9999	Scaffolding and sundries.	L.S.	12.61	1.49	18.79
	TOTAL				1,344.33
	Add Water Charges @ 1%				13.44
	TOTAL				1,357.77
	Add CPOH @ 15%				203.67
	Cost of 10 sqm				1,561.44
	Cost of 1 sqm				156.14
	Say				156.15

13.4 12 mm cement plaster of mix:
13.4.1 1:4 (1 cement : 4 coarse sand)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
	Cement mortar 1:4 (1 cement : 4 coarse sand)				
3.9	Rate as per Item Number 3.9 of SH: Mortars	cum	0.144	3,485.40	501.90
	LABOUR:				
0155	Mason (average)	day	0.67	287.00	192.29
0115	Coolie	day	0.75	247.00	185.25
0101	Bhisti	day	0.92	260.00	239.20
9999	Scaffolding and sundries.	L.S.	12.61	1.49	18.79
	TOTAL				1,137.43
	Add Water Charges @ 1%				11.37
	TOTAL				1,148.80
	Add CPOH @ 15%				172.32
	Cost of 10 sqm				1,321.12
	Cost of 1 sqm				132.11
	Say				132.10

13.4.2 1:6 (1 cement : 6 coarse sand)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
	Cement mortar 1:6 (1 cement : 6 coarse sand)				
3.11	Rate as per Item Number 3.11 of SH: Mortars	cum	0.144	2,825.30	406.84
	LABOUR:				
0155	Mason (average)	day	0.67	287.00	192.29
0115	Coolie	day	0.75	247.00	185.25
0101	Bhisti	day	0.92	260.00	239.20

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Scaffolding and sundries.	L.S.	12.61	1.49	18.79
	TOTAL				1,042.37
	Add Water Charges @ 1%				10.42
	TOTAL				1,052.79
	Add CPOH @ 15%				157.92
	Cost of 10 sqm				1,210.71
	Cost of 1 sqm				121.07
	Say				121.05

13.5 15 mm cement plaster on rough side of single or half brick wall of mix:

13.5.1 1:4 (1 cement : 4 coarse sand)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
	Cement mortar 1:4 (1 cement : 4 coarse sand)				
3.9	Rate as per Item Number 3.9 of SH: Mortars	cum	0.172	3,485.40	599.49
	LABOUR:				
0155	Mason (average)	day	0.80	287.00	229.60
0115	Coolie	day	0.88	247.00	217.36
0101	Bhisti	day	0.99	260.00	257.40
9999	Scaffolding and sundries.	L.S.	12.61	1.49	18.79
	TOTAL				1,322.64
	Add Water Charges @ 1%				13.23
	TOTAL				1,335.87
	Add CPOH @ 15%				200.38
	Cost of 10 sqm				1,536.25
	Cost of 1 sqm				153.63
	Say				153.60

13.5.2 1:6 (1 cement : 6 coarse sand)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
	Cement mortar 1:6 (1 cement : 6 coarse sand)				
3.11	Rate as per Item Number 3.11 of SH: Mortars	cum	0.172	2,825.30	485.95
	LABOUR:				
0155	Mason (average)	day	0.80	287.00	229.60
0115	Coolie	day	0.88	247.00	217.36
0101	Bhisti	day	0.99	260.00	257.40
9999	Scaffolding and sundries.	L.S.	12.61	1.49	18.79
	TOTAL				1,209.10
	Add Water Charges @ 1%				12.09
	TOTAL				1,221.19
	Add CPOH @ 15%				183.18
	Cost of 10 sqm				1,404.37
	Cost of 1 sqm				140.44
	Say				140.45

13.6 20 mm cement plaster of mix:
13.6.1 1:4 (1 cement : 4 coarse sand)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
	Cement mortar 1:4 (1 cement : 4 coarse sand)				
3.9	Rate as per Item Number 3.9 of SH: Mortars	cum	0.224	3,485.40	780.73
	LABOUR:				
0155	Mason (average)	day	0.94	287.00	269.78
0115	Coolie	day	1.02	247.00	251.94
0101	Bhisti	day	1.10	260.00	286.00
9999	Scaffolding and sundries.	L.S.	12.61	1.49	18.79
	TOTAL				1,607.24
	Add Water Charges @ 1%				16.07
	TOTAL				1,623.31
	Add CPOH @ 15%				243.50
	Cost of 10 sqm				1,866.81
	Cost of 1 sqm				186.68
	Say				186.70

13.6.2 1:6 (1 cement : 6 coarse sand)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
	Cement mortar 1:6 (1 cement : 6 coarse sand)				
3.11	Rate as per Item Number 3.11 of SH: Mortars	cum	0.224	2,825.30	632.87
	LABOUR:				
0155	Mason (average)	day	0.94	287.00	269.78
0115	Coolie	day	1.02	247.00	251.94
0101	Bhisti	day	1.10	260.00	286.00
9999	Scaffolding and sundries.	L.S.	12.61	1.49	18.79
	TOTAL				1,459.38
	Add Water Charges @ 1%				14.59
	TOTAL				1,473.97
	Add CPOH @ 15%				221.10
	Cost of 10 sqm				1,695.07
	Cost of 1 sqm				169.51
	Say				169.50

13.7 12 mm cement plaster finished with a floating coat of neat cement of mix:
13.7.1 1:3 (1 cement : 3 fine sand)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
	Cement mortar 1:3 (1 cement : 3 fine sand)				
3.3	Rate as per Item Number 3.3 of SH: Mortars	cum	0.144	3,631.95	523.00
	LABOUR:				
0155	Mason (average)	day	0.67	287.00	192.29

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0115	Coolie	day	0.75	247.00	185.25
0101	Bhisti	day	0.92	260.00	239.20
9999	Scaffolding and sundries.	L.S.	12.61	1.49	18.79
0367	Portland Cement	tonne	0.02	5,000.00	100.00
2209	Carriage of cement	tonne	0.02	77.87	1.56
0155	Mason (average)	day	0.27	287.00	77.49
0115	Coolie	day	0.27	247.00	66.69
9999	Scaffolding and sundries.	L.S.	8.06	1.49	12.01
	TOTAL				1,416.28
	Add Water Charges @ 1%				14.16
	TOTAL				1,430.44
	Add CPOH @ 15%				214.57
	Cost of 10 sqm				1,645.01
	Cost of 1 sqm				164.50
	Say				164.50

13.7.2 1:4 (1 cement : 4 fine sand)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
	Cement mortar 1 : 4 (1 cement: 4 fine sand)				
3.4	Rate as per Item Number 3.4 of SH: Mortars	cum	0.144	2,971.80	427.94
	LABOUR:				
0155	Mason (average)	day	0.67	287.00	192.29
0115	Coolie	day	0.75	247.00	185.25
0101	Bhisti	day	0.92	260.00	239.20
9999	Scaffolding and sundries.	L.S.	12.61	1.49	18.79
0367	Portland Cement	tonne	0.02	5,000.00	100.00
2209	Carriage of cement	tonne	0.02	77.87	1.56
0155	Mason (average)	day	0.27	287.00	77.49
0115	Coolie	day	0.27	247.00	66.69
9999	Scaffolding and sundries.	L.S.	8.06	1.49	12.01
	TOTAL				1,321.22
	Add Water Charges @ 1%				13.21
	TOTAL				1,334.43
	Add CPOH @ 15%				200.16
	Cost of 10 sqm				1,534.59
	Cost of 1 sqm				153.46
	Say				153.45

13.8 15 mm cement plaster on rough side of single or halfbrick wall finished with a floating coat of neat cement of mix :

13.8.1 1:3 (1 cement : 3 fine sand)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
	Cement mortar 1:3 (1 cement : 3 fine sand)				
3.3	Rate as per Item Number 3.3 of SH: Mortars	cum	0.172	3,631.95	624.70
	LABOUR:				
0155	Mason (average)	day	0.80	287.00	229.60

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0115	Coolie	day	0.88	247.00	217.36
0101	Bhisti	day	0.99	260.00	257.40
9999	Scaffolding and sundries.	L.S.	12.61	1.49	18.79
0367	Portland Cement	tonne	0.02	5,000.00	100.00
2209	Carriage of cement	tonne	0.02	77.87	1.56
0155	Mason (average)	day	0.27	287.00	77.49
0115	Coolie	day	0.27	247.00	66.69
9999	Scaffolding and sundries.	L.S.	8.06	1.49	12.01
	TOTAL				1,605.60
	Add Water Charges @ 1%				16.06
	TOTAL				1,621.66
	Add CPOH @ 15%				243.25
	Cost of 10 sqm				1,864.91
	Cost of 1 sqm				186.49
	Say				186.50

13.8.2 1:4 (1 cement : 4 fine sand)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
	Cement mortar 1 : 4 (1 cement: 4 fine sand)				
3.4	Rate as per Item Number 3.4 of SH: Mortars	cum	0.172	2,971.80	511.15
	LABOUR:				
0155	Mason (average)	day	0.80	287.00	229.60
0115	Coolie	day	0.88	247.00	217.36
0101	Bhisti	day	0.99	260.00	257.40
9999	Scaffolding and sundries.	L.S.	12.61	1.49	18.79
0367	Portland Cement	tonne	0.02	5,000.00	100.00
2209	Carriage of cement	tonne	0.02	77.87	1.56
0155	Mason (average)	day	0.27	287.00	77.49
0115	Coolie	day	0.27	247.00	66.69
9999	Scaffolding and sundries.	L.S.	8.06	1.49	12.01
	TOTAL				1,492.05
	Add Water Charges @ 1%				14.92
	TOTAL				1,506.97
	Add CPOH @ 15%				226.05
	Cost of 10 sqm				1,733.02
	Cost of 1 sqm				173.30
	Say				173.30

13.9 cement plaster 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement.

13.9.1 12 mm cement plaster

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
	Cement mortar 1:3 (1 cement : 3 coarse sand)				
3.8	Rate as per Item Number 3.8 of SH: Mortars	cum	0.144	4,145.55	596.96

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	LABOUR:				
0155	Mason (average)	day	0.67	287.00	192.29
0115	Coolie	day	0.75	247.00	185.25
0101	Bhisti	day	0.92	260.00	239.20
9999	Scaffolding and sundries.	L.S.	12.61	1.49	18.79
0367	Portland Cement	tonne	0.02	5,000.00	100.00
2209	Carriage of cement	tonne	0.02	77.87	1.56
0155	Mason (average)	day	0.27	287.00	77.49
0115	Coolie	day	0.27	247.00	66.69
9999	Scaffolding and sundries.	L.S.	8.06	1.49	12.01
	TOTAL				1,490.24
	Add Water Charges @ 1%				14.90
	TOTAL				1,505.14
	Add CPOH @ 15%				225.77
	Cost of 10 sqm				1,730.91
	Cost of 1 sqm				173.09
	Say				173.10

13.9.2 20 mm cement plaster

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
	Cement mortar 1:3 (1 cement : 3 coarse sand)				
3.8	Rate as per Item Number 3.8 of SH: Mortars	cum	0.224	4,145.55	928.60
	LABOUR:				
0155	Mason (average)	day	0.94	287.00	269.78
0115	Coolie	day	1.02	247.00	251.94
0101	Bhisti	day	1.10	260.00	286.00
9999	Scaffolding and sundries.	L.S.	12.61	1.49	18.79
0367	Portland Cement	tonne	0.02	5,000.00	100.00
2209	Carriage of cement	tonne	0.02	77.87	1.56
0155	Mason (average)	day	0.27	287.00	77.49
0115	Coolie	day	0.27	247.00	66.69
9999	Scaffolding and sundries.	L.S.	8.06	1.49	12.01
	TOTAL				2,012.86
	Add Water Charges @ 1%				20.13
	TOTAL				2,032.99
	Add CPOH @ 15%				304.95
	Cost of 10 sqm				2,337.94
	Cost of 1 sqm				233.79
	Say				233.80

13.10 15 mm cement plaster 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement on the rough side of single or half brick wall.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
	Cement mortar 1:3 (1 cement : 3 coarse sand)				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
3.8	Rate as per Item Number 3.8 of SH: Mortars	cum	0.172	4,145.55	713.03
	LABOUR:				
0155	Mason (average)	day	0.80	287.00	229.60
0115	Coolie	day	0.88	247.00	217.36
0101	Bhisti	day	0.99	260.00	257.40
9999	Scaffolding and sundries.	L.S.	12.61	1.49	18.79
0367	Portland Cement	tonne	0.02	5,000.00	100.00
2209	Carriage of cement	tonne	0.02	77.87	1.56
0155	Mason (average)	day	0.27	287.00	77.49
0115	Coolie	day	0.27	247.00	66.69
9999	Scaffolding and sundries.	L.S.	8.06	1.49	12.01
	TOTAL				1,693.93
	Add Water Charges @ 1%				16.94
	TOTAL				1,710.87
	Add CPOH @ 15%				256.63
	Cost of 10 sqm				1,967.50
	Cost of 1 sqm				196.75
	Say				196.75

13.11 18 mm cement plaster in two coats under layer 12 mm thick cement plaster 1:5 (1 cement : 5 coarse sand) finished with a top layer 6mm thick cement plaster 1:6 (1 cement : 6 fine sand).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
	Under layer Cement mortar 1:5 (1 cement : 5 coarse sand)				
3.10	Rate as per Item Number 3.10 of SH: Mortars	cum	0.144	3,129.95	450.71
	Top layer Cement mortar 1:6 (1 cement : 6 fine sand)				
3.6	Rate as per Item Number 3.6 of SH: Mortars	cum	0.072	2,311.70	166.44
	LABOUR:				
0155	Mason (average)	day	1.21	287.00	347.27
0115	Coolie	day	1.29	247.00	318.63
0101	Bhisti	day	1.05	260.00	273.00
9999	Scaffolding and sundries.	L.S.	12.61	1.49	18.79
	TOTAL				1,574.84
	Add Water Charges @ 1%				15.75
	TOTAL				1,590.59
	Add CPOH @ 15%				238.59
	Cost of 10 sqm				1,829.18
	Cost of 1 sqm				182.92
	Say				182.90

13.12 18 mm cement plaster in two coats under layer 12 mm thick cement plaster 1:5 (1 cement : 5 coarse sand) and a top layer 6 mm thick cement plaster 1:3 (1 cement : 3 coarse sand) finished rough with sponge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
	Under layer Cement mortar 1:5 (1 cement : 5 coarse sand)				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
3.10	Rate as per Item Number 3.10 of SH: Mortars Top layer Cement mortar 1:3 (1 cement : 3 coarse sand)	cum	0.144	3,129.95	450.71
3.8	Rate as per Item Number 3.8 of SH: Mortars	cum	0.072	4,145.55	298.48
	LABOUR:				
0155	Mason (average)	day	1.21	287.00	347.27
0115	Coolie	day	1.29	247.00	318.63
0101	Bhisti	day	1.05	260.00	273.00
9999	Scaffolding and sundries.	L.S.	12.61	1.49	18.79
	TOTAL				1,706.88
	Add Water Charges @ 1%				17.07
	TOTAL				1,723.95
	Add CPOH @ 15%				258.59
	Cost of 10 sqm				1,982.54
	Cost of 1 sqm				198.25
	Say				198.25

13.13 12 mm cement plaster 1:2 (1 cement : 2 stone dust)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
	Cement mortar 1:2 (1 cement : 2 stone dust)				
3.12	Rate as per Item Number 3.12 of SH: Mortars	cum	0.144	4,678.60	673.72
	LABOUR:				
0155	Mason (average)	day	0.67	287.00	192.29
0115	Coolie	day	0.75	247.00	185.25
0101	Bhisti	day	0.92	260.00	239.20
9999	Scaffolding and sundries.	L.S.	12.61	1.49	18.79
	TOTAL				1,309.25
	Add Water Charges @ 1%				13.09
	TOTAL				1,322.34
	Add CPOH @ 15%				198.35
	Cost of 10 sqm				1,520.69
	Cost of 1 sqm				152.07
	Say				152.05

13.14 15 mm cement plaster 1:2 (1 cement : 2 stone dust) on the rough side of single or half brick wall.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
	Cement mortar 1:2 (1 cement : 2 stone dust)				
3.12	Rate as per Item Number 3.12 of SH: Mortars	cum	0.172	4,678.60	804.72
	LABOUR:				
0155	Mason (average)	day	0.80	287.00	229.60
0115	Coolie	day	0.88	247.00	217.36
0101	Bhisti	day	0.99	260.00	257.40
9999	Scaffolding and sundries.	L.S.	12.61	1.49	18.79

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	TOTAL				1,527.87
	Add Water Charges @ 1%				15.28
	TOTAL				1,543.15
	Add CPOH @ 15%				231.47
	Cost of 10 sqm				1,774.62
	Cost of 1 sqm				177.46
	Say				177.45

13.15 20 mm cement plaster 1:2 (1 cement : 2 stone dust)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
	Cement mortar 1:2 (1 cement : 2 stone dust)				
3.12	Rate as per Item Number 3.12 of SH: Mortars	cum	0.224	4,678.60	1,048.01
	LABOUR:				
0155	Mason (average)	day	0.94	287.00	269.78
0115	Coolie	day	1.02	247.00	251.94
0101	Bhisti	day	1.10	260.00	286.00
9999	Scaffolding and sundries.	L.S.	12.61	1.49	18.79
	TOTAL				1,874.52
	Add Water Charges @ 1%				18.75
	TOTAL				1,893.27
	Add CPOH @ 15%				283.99
	Cost of 10 sqm				2,177.26
	Cost of 1 sqm				217.73
	Say				217.75

13.16 6 mm cement plaster of mix:
13.16.1 1:3 (1 cement : 3 fine sand)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
	Cement mortar 1:3 (1 cement : 3 fine sand)				
3.3	Rate as per Item Number 3.3 of SH: Mortars	cum	0.072	3,631.95	261.50
	LABOUR:				
0155	Mason (average)	day	0.51	287.00	146.37
0115	Coolie	day	0.75	247.00	185.25
0101	Bhisti	day	0.92	260.00	239.20
9999	Extra for removing burrs, cleaning with wire brushes, pock making with pointed tool etc.	L.S.	13.39	1.49	19.95
9999	Scaffolding and sundries.	L.S.	11.70	1.49	17.43
	TOTAL				869.70
	Add Water Charges @ 1%				8.70
	TOTAL				878.40
	Add CPOH @ 15%				131.76
	Cost of 10 sqm				1,010.16
	Cost of 1 sqm				101.02
	Say				101.00

13.17 6 mm cement plaster 1:3 (1 cement : 3 fine sand) finished with a floating coat of neat cement and thick coat of Lime wash on top of walls when dry for bearing of R.C.C. slabs and beams.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
	Cement mortar 1:3 (1 cement : 3 fine sand)				
3.3	Rate as per Item Number 3.3 of SH: Mortars	cum	0.072	3,631.95	261.50
	LABOUR:				
0155	Mason (average)	day	0.51	287.00	146.37
0115	Coolie	day	0.75	247.00	185.25
0101	Bhisti	day	0.92	260.00	239.20
9999	Extra for removing burrs, cleaning with wire brushes, pock making with pointed tool etc. complete	L.S.	13.39	1.49	19.95
9999	Scaffolding and sundries.	L.S.	11.70	1.49	17.43
0367	Portland Cement	tonne	0.02	5,000.00	100.00
2209	Carriage of cement	tonne	0.02	77.87	1.56
0155	Mason (average)	day	0.27	287.00	77.49
0115	Coolie	day	0.27	247.00	66.69
9999	Scaffolding and sundries.	L.S.	8.06	1.49	12.01
0776	Satna lime	quintal	0.01	230.00	2.30
9999	Indigo gum etc.	L.S.	2.08	1.49	3.10
9999	Sundries, ladder etc.	L.S.	0.52	1.49	0.77
0141	White Washer	day	0.07	260.00	18.20
0115	Coolie	day	0.07	247.00	17.29
9999	Sundries	L.S.	2.73	1.49	4.07
	TOTAL				1,173.18
	Add Water Charges @ 1%				11.73
	TOTAL				1,184.91
	Add CPOH @ 15%				177.74
	Cost of 10 sqm				1,362.65
	Cost of 1 sqm				136.27
	Say				136.25

13.18 Neat cement punning

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	LABOUR:				
0367	Portland Cement	tonne	0.022	5,000.00	110.00
2209	Carriage of cement	tonne	0.022	77.87	1.71
0155	Mason (average)	day	0.27	287.00	77.49
0115	Coolie	day	0.27	247.00	66.69
9999	Scaffolding and sundries.	L.S.	8.06	1.49	12.01
	TOTAL				267.90
	Add Water Charges @ 1%				2.68
	TOTAL				270.58
	Add CPOH @ 15%				40.59
	Cost of 10 sqm				311.17
	Cost of 1 sqm				31.12
	Say				31.10

13.19 Rough cast plaster upto 10 m height above ground level with a mixture of sand and gravel or crushed stone from 6 mm to 10 mm nominal size, dashed over and including the fresh plaster in two layers, under layer 12 mm cement plaster 1:4 (1 cement : 4 coarse sand) and top layer 10 mm cement plaster 1:3 (1 cement : 3 fine sand) mixed with 10% finely grounded hydrated lime by volume of cement.

13.19.1 Ordinary cement finish using ordinary cement

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
	Under layer 12 mm thick cement plaster with cement mortar 1:4 (1 cement : 4 coarse sand)				
3.9	Rate as per Item Number 3.9 of SH: Mortars	cum	0.144	3,485.40	501.90
0155	Mason (average)	day	0.67	287.00	192.29
0115	Coolie	day	0.75	247.00	185.25
0101	Bhisti	day	0.92	260.00	239.20
9999	Scaffolding and sundries.	L.S.	9.88	1.49	14.72
	Top layer 10 mm thick cement plaster with cement mortar 1:3 (1 cement : 3 fine sand)				
3.3	Rate as per Item Number 3.3 of SH: Mortars	cum	0.12	3,631.95	435.83
0155	Mason (average)	day	0.61	287.00	175.07
0114	Beldar	day	0.69	247.00	170.43
0101	Bhisti	day	0.85	260.00	221.00
9999	Scaffolding and sundries.	L.S.	9.88	1.49	14.72
1179	Crushed stone 2.36 mm to 12.5 mm size	cum	0.10	915.00	91.50
0101	Bhisti	day	0.01	260.00	2.60
0777	Dry hydrated lime (factory made)	quintal	0.09	220.00	19.80
9999	Carriage of lime	L.S.	3.64	1.49	5.42
0155	Mason (average)	day	0.50	287.00	143.50
0114	Beldar	day	0.50	247.00	123.50
0101	Bhisti	day	0.10	260.00	26.00
9999	Scaffolding and sundries.	L.S.	9.88	1.49	14.72
0123	Mason (brick layer) 1 st class	day	0.25	301.00	75.25
0114	Beldar	day	0.25	247.00	61.75
	TOTAL				2,714.45
	Add Water Charges @ 1%				27.14
	TOTAL				2,741.59
	Add CPOH @ 15%				411.24
	Cost of 10 sqm				3,152.83
	Cost of 1 sqm				315.28
	Say				315.30

13.20 Pebble dash plaster upto 10 m height above ground level with a mixture of washed pebble or crushed stone 6 mm to 12.5 mm nominal size, dashed over and including fresh plaster in two layers under layer 12 mm cement plaster 1:4 (1 cement : 4 coarse sand) and top layer 10 mm cement plaster with cement mortar 1:3 (1 cement : 3 fine sand) mixed with 10% finely grounded hydrated lime by volume of cement.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
	Under layer 12mm thick cement plaster				
	Under layer 12 mm thick cement plaster				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	with cement mortar 1:4 (1 cement : 4 coarse sand)				
3.9	Rate as per Item Number 3.9 of SH: Mortars	cum	0.144	3,485.40	501.90
	LABOUR:				
0155	Mason (average)	day	0.67	287.00	192.29
0114	Beldar	day	0.75	247.00	185.25
0101	Bhisti	day	0.92	260.00	239.20
9999	Scaffolding and sundries.	L.S.	9.88	1.49	14.72
	Top layer 10mm thick cement plaster				
	Top layer 10 mm thick cement plaster with cement mortar 1:3 (1 cement : 3 fine sand)				
3.3	Rate as per Item Number 3.3 of SH: Mortars	cum	0.12	3,631.95	435.83
0155	Mason (average)	day	0.61	287.00	175.07
0114	Beldar	day	0.69	247.00	170.43
0101	Bhisti	day	0.85	260.00	221.00
9999	Scaffolding and sundries.	L.S.	9.88	1.49	14.72
1179	Crushed stone 2.36 mm to 12.5 mm size	cum	0.10	915.00	91.50
0101	Bhisti	day	0.01	260.00	2.60
0777	Dry hydrated lime (factory made)	quintal	0.09	220.00	19.80
9999	Carriage of lime	L.S.	3.64	1.49	5.42
0155	Mason (average)	day	0.50	287.00	143.50
0114	Beldar	day	0.50	247.00	123.50
0101	Bhisti	day	0.10	260.00	26.00
9999	Scaffolding and sundries.	L.S.	9.88	1.49	14.72
9999	Scaffolding and sundries.	L.S.	4.42	1.49	6.59
	TOTAL				2,584.04
	Add Water Charges @ 1%				25.84
	TOTAL				2,609.88
	Add CPOH @ 15%				391.48
	Cost of 10 sqm				3,001.36
	Cost of 1 sqm				300.14
	Say				300.15

13.21 Extra for providing and mixing water proofing material in cement plaster work in proportion recommended by the manufacturers.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 12 mm cement plaster 1:3 (1 cement:3 sand) = 10 sqm or 1.48 bags of cement used in the mix				
	Cement required for 10 sqm = 73.89 kg.				
	Water proofing material required @ 1 kg per 50 kg of cement = 1.48 kg				
1213	Water proofing materials	kilogram	1.48	25.00	37.00
9999	Sundries	L.S.	7.15	1.49	10.65
	TOTAL				47.65
	Add Water Charges @ 1%				0.48
	TOTAL				48.13
	Add CPOH @ 15%				7.22
	Cost of 1.48 per bag of 50kg				55.35
	per bag of 50 kg cement used in the mix.				37.40
	Say				37.40

13.22 Extra for plastering exterior walls of height more than 10 m from ground level for every additional height of 3 m or part thereof.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
9999	Scaffolding and sundries.	L.S.	53.82	1.49	80.19
	LABOUR:				
0155	Mason (average)	day	0.20	287.00	57.40
0115	Coolie	day	0.30	247.00	74.10
0101	Bhisti	day	0.10	260.00	26.00
9999	Sundries	L.S.	7.15	1.49	10.65
	TOTAL				248.34
	Add Water Charges @ 1%				2.48
	TOTAL				250.82
	Add CPOH @ 15%				37.62
	Cost of 10 sqm				288.44
	Cost of 1 sqm				28.84
	Say				28.85

13.23 Extra for plastering on circular work not exceeding 6 m in radius.

13.23.1 In one coat

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	LABOUR:				
0155	Mason (average)	day	0.20	287.00	57.40
0114	Beldar	day	0.20	247.00	49.40
9999	Sundries	L.S.	7.15	1.49	10.65
	TOTAL				117.45
	Add Water Charges @ 1%				1.17
	TOTAL				118.62
	Add CPOH @ 15%				17.79
	Cost of 10 sqm				136.41
	Cost of 1 sqm				13.64
	Say				13.65

13.23.2 In two coats

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	LABOUR:				
0155	Mason (average)	day	0.30	287.00	86.10
0114	Beldar	day	0.30	247.00	74.10
9999	Sundries	L.S.	13.39	1.49	19.95
	TOTAL				180.15
	Add Water Charges @ 1%				1.80
	TOTAL				181.95
	Add CPOH @ 15%				27.29
	Cost of 10 sqm				209.24
	Cost of 1 sqm				20.92
	Say				20.90

13.24 Extra for plastering done on moulding cornices or architraves including neat finish to line and level:

13.24.1 In one coat

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	LABOUR:				
0155	Mason (average)	day	3.00	287.00	861.00
0114	Beldar	day	2.00	247.00	494.00
0115	Coolie	day	1.00	247.00	247.00
0101	Bhisti	day	0.25	260.00	65.00
9999	Sundries	L.S.	13.39	1.49	19.95
	TOTAL				1,686.95
	Add Water Charges @ 1%				16.87
	TOTAL				1,703.82
	Add CPOH @ 15%				255.57
	Cost of 10 sqm				1,959.39
	Cost of 1 sqm				195.94
	Say				195.95

13.24.2 In two coats

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	LABOUR:				
0155	Mason (average)	day	5.00	287.00	1,435.00
0114	Beldar	day	3.00	247.00	741.00
0115	Coolie	day	2.00	247.00	494.00
0101	Bhisti	day	0.33	260.00	85.80
9999	Sundries	L.S.	13.39	1.49	19.95
	TOTAL				2,775.75
	Add Water Charges @ 1%				27.76
	TOTAL				2,803.51
	Add CPOH @ 15%				420.53
	Cost of 10 sqm				3,224.04
	Cost of 1 sqm				322.40
	Say				322.40

13.25 Extra for plastering :

13.25.1 Spherical ceiling

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	LABOUR:				
0155	Mason (average)	day	0.75	287.00	215.25
0114	Beldar	day	0.74	247.00	182.78
9999	Sundries	L.S.	26.91	1.49	40.10
	TOTAL				438.13
	Add Water Charges @ 1%				4.38
	TOTAL				442.51
	Add CPOH @ 15%				66.38
	Cost of 10 sqm				508.89
	Cost of 1 sqm				50.89
	Say				50.90

13.25.2 Groined ceiling

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	LABOUR:				
0155	Mason (average)	day	0.80	287.00	229.60
0114	Beldar	day	0.80	247.00	197.60
9999	Sundries	L.S.	34.06	1.49	50.75
	TOTAL				477.95
	Add Water Charges @ 1%				4.78
	TOTAL				482.73
	Add CPOH @ 15%				72.41
	Cost of 10 sqm				555.14
	Cost of 1 sqm				55.51
	Say				55.50

13.25.3 Flewing soffits

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	LABOUR:				
0155	Mason (average)	day	0.50	287.00	143.50
0114	Beldar	day	0.50	247.00	123.50
9999	Sundries	L.S.	13.39	1.49	19.95
	TOTAL				286.95
	Add Water Charges @ 1%				2.87
	TOTAL				289.82
	Add CPOH @ 15%				43.47
	Cost of 10 sqm				333.29
	Cost of 1 sqm				33.33
	Say				33.35

13.26 Providing and applying plaster of paris putty of 2 mm thickness over plastered surface to prepare the surface even and smooth complete.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
	Plaster of paris 10x0.002x1121 = 22.42kg				
	Add 2% wastage= 0.45kg				
	Total = 22.87kg				
	Say 23 kg				
0869	Plaster of Paris	kilogram	23.00	4.00	92.00
9999	Carriage of plaster of paris	L.S.	3.90	1.49	5.81
	LABOUR:				
0122	Mason (for plaster of paris work) 1 st class	day	0.91	301.00	273.91
0114	Beldar	day	0.91	247.00	224.77
9999	Scaffolding and sundries.	L.S.	83.98	1.49	125.13
	TOTAL				721.62
	Add Water Charges @ 1%				7.22
	TOTAL				728.84
	Add CPOH @ 15%				109.33
	Cost of 10 sqm				838.17
	Cost of 1 sqm				83.82
	Say				83.80

13.27 Extra for lining out plaster to imitate stone or concrete blocks walling.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	LABOUR:				
0155	Mason (average)	day	0.50	287.00	143.50
0114	Beldar	day	0.50	247.00	123.50
9999	Solution of lime putty	L.S.	1.82	1.49	2.71
	TOTAL				269.71
	Add Water Charges @ 1%				2.70
	TOTAL				272.41
	Add CPOH @ 15%				40.86
	Cost of 10 sqm				313.27
	Cost of 1 sqm				31.33
	Say				31.35

13.28 12 mm thick plain cement mortar bands in cement mortar 1:4 (1 cement : 4 fine sand) :

13.28.1 Flush Band

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre long and 10cm wide band				
	MATERIAL:				
	Cement mortar 1:4 (1 cement : 4 fine sand)				
3.4	Rate as per Item Number 3.4 of SH: Mortars	cum	0.014	2,971.80	41.61
	LABOUR:				
0155	Mason (average)	day	0.27	287.00	77.49
0115	Coolie	day	0.27	247.00	66.69
0101	Bhisti	day	0.05	260.00	13.00
9999	Sundries	L.S.	1.43	1.49	2.13
	TOTAL				200.92
	Add Water Charges @ 1%				2.01
	TOTAL				202.93
	Add CPOH @ 15%				30.44
	Cost of 10 metre long and 10cm wide band				233.37
	Cost of 1 cm per metre				2.33
	Say				2.35

13.28.2 Sunk Band

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre long and 10cm wide band				
	MATERIAL:				
	Cement mortar 1:4 (1 cement : 4 fine sand)				
3.4	Rate as per Item Number 3.4 of SH: Mortars	cum	0.014	2,971.80	41.61
	LABOUR:				
0155	Mason (average)	day	0.30	287.00	86.10
0115	Coolie	day	0.30	247.00	74.10
0101	Bhisti	day	0.05	260.00	13.00
9999	Sundries	L.S.	2.08	1.49	3.10

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	TOTAL				217.91
	Add Water Charges @ 1%				2.18
	TOTAL				220.09
	Add CPOH @ 15%				33.01
	Cost of 10 metre long and 10cm wide band				253.10
	Cost of 1 cm per metre				2.53
	Say				2.55

13.28.3 Raised Band

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre long and 10cm wide band				
	MATERIAL:				
	Cement mortar 1:4 (1 cement : 4 fine sand)				
3.4	Rate as per Item Number 3.4 of SH: Mortars	cum	0.014	2,971.80	41.61
	LABOUR:				
0155	Mason (average)	day	0.35	287.00	100.45
0115	Coolie	day	0.35	247.00	86.45
0101	Bhisti	day	0.05	260.00	13.00
9999	Sundries	L.S.	2.73	1.49	4.07
	TOTAL				245.58
	Add Water Charges @ 1%				2.46
	TOTAL				248.04
	Add CPOH @ 15%				37.21
	Cost of 10 metre long and 10cm wide band				285.25
	Cost of 1 cm per metre				2.85
	Say				2.85

13.28.4 Moulded Band

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre long and 10cm wide band				
	MATERIAL:				
	Cement mortar 1:4 (1 cement : 4 fine sand)				
3.4	Rate as per Item Number 3.4 of SH: Mortars	cum	0.014	2,971.80	41.61
	LABOUR:				
0155	Mason (average)	day	0.65	287.00	186.55
0115	Coolie	day	0.65	247.00	160.55
0101	Bhisti	day	0.05	260.00	13.00
9999	Sundries	L.S.	1.56	1.49	2.32
	TOTAL				404.03
	Add Water Charges @ 1%				4.04
	TOTAL				408.07
	Add CPOH @ 15%				61.21
	Cost of 10 metre long and 10cm wide band				469.28
	Cost of 1 cm per metre				4.69
	Say				4.70

13.29 18 mm thick plain cement mortar band in cement mortar 1:4 (1 cement : 4 fine sand):

13.29.1 Flush Band

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre long and 10cm wide band				
	MATERIAL:				
	Cement mortar 1:4 (1 cement : 4 fine sand)				
3.4	Rate as per Item Number 3.4 of SH: Mortars	cum	0.02	2,971.80	59.44
	LABOUR:				
0155	Mason (average)	day	0.32	287.00	91.84
0115	Coolie	day	0.32	247.00	79.04
0101	Bhisti	day	0.06	260.00	15.60
9999	Sundries	L.S.	2.08	1.49	3.10
	TOTAL				249.02
	Add Water Charges @ 1%				2.49
	TOTAL				251.51
	Add CPOH @ 15%				37.73
	Cost of 10 metre long and 10cm wide band				289.24
	Cost of 1 cm per metre				2.89
	Say				2.90

13.29.2 Sunk Band

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre long and 10cm wide band				
	MATERIAL:				
	Cement mortar 1:4 (1 cement : 4 fine sand)				
3.4	Rate as per Item Number 3.4 of SH: Mortars	cum	0.02	2,971.80	59.44
	LABOUR:				
0155	Mason (average)	day	0.36	287.00	103.32
0115	Coolie	day	0.36	247.00	88.92
0101	Bhisti	day	0.06	260.00	15.60
9999	Sundries	L.S.	2.73	1.49	4.07
	TOTAL				271.35
	Add Water Charges @ 1%				2.71
	TOTAL				274.06
	Add CPOH @ 15%				41.11
	Cost of 10 metre long and 10cm wide band				315.17
	Cost of 1 cm per metre				3.15
	Say				3.15

13.29.3 Raised Band

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre long and 10cm wide band				
	MATERIAL:				
	Cement mortar 1:4 (1 cement : 4 fine sand)				
3.4	Rate as per Item Number 3.4 of SH: Mortars	cum	0.02	2,971.80	59.44
	LABOUR:				
0155	Mason (average)	day	0.42	287.00	120.54
0115	Coolie	day	0.42	247.00	103.74

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0101	Bhisti	day	0.06	260.00	15.60
9999	Sundries	L.S.	4.42	1.49	6.59
	TOTAL				305.91
	Add Water Charges @ 1%				3.06
	TOTAL				308.97
	Add CPOH @ 15%				46.35
	Cost of 10 metre long and 10cm wide band				355.32
	Cost of 1 cm per metre				3.55
	Say				3.55

13.29.4 Moulded Band

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre long and 10cm wide band				
	MATERIAL:				
	Cement mortar 1:4 (1 cement : 4 fine sand)				
3.4	Rate as per Item Number 3.4 of SH: Mortars	cum	0.024	2,971.80	71.32
	LABOUR:				
0155	Mason (average)	day	0.86	287.00	246.82
0115	Coolie	day	0.86	247.00	212.42
0101	Bhisti	day	0.05	260.00	13.00
9999	Sundries	L.S.	2.73	1.49	4.07
	TOTAL				547.63
	Add Water Charges @ 1%				5.48
	TOTAL				553.11
	Add CPOH @ 15%				82.97
	Cost of 10 metre long and 10cm wide band				636.08
	Cost of 1 cm per metre				6.36
	Say				6.35

13.30 18 mm thick moulded cement mortar band in two coats under layer 12 mm thick with cement mortar 1:5 (1 cement : 5 coarse sand) top layer 6mm thick with cement mortar 1:4 (1 cement : 4 fine sand).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre long and 10cm wide band				
	MATERIAL:				
	Cement mortar 1:5 (1 cement : 5 coarse sand)				
3.10	Rate as per Item Number 3.10 of SH: Mortars	cum	0.014	3,129.95	43.82
	Cement mortar 1:4 (1 cement : 4 fine sand)				
3.4	Rate as per Item Number 3.4 of SH: Mortars	cum	0.01	2,971.80	29.72
	LABOUR:				
0155	Mason (average)	day	0.86	287.00	246.82
0115	Coolie	day	0.86	247.00	212.42
0101	Bhisti	day	0.05	260.00	13.00
9999	Sundries	L.S.	2.73	1.49	4.07
	TOTAL				549.85
	Add Water Charges @ 1%				5.50
	TOTAL				555.35
	Add CPOH @ 15%				83.30
	Cost of 10 metre long and 10cm wide band				638.65
	Cost of 1 cm per metre				6.39
	Say				6.40

13.31 Pointing on brick work or brick flooring with cement mortar 1:3 (1 cement : 3 fine sand) :

13.31.1 Flush / Ruled / Struck or weathered pointing

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
	Cement mortar 1:3 (1 cement : 3 fine sand)				
3.3	Rate as per Item Number 3.3 of SH: Mortars	cum	0.03	3,631.95	108.96
	LABOUR:				
0155	Mason (average)	day	0.50	287.00	143.50
0115	Coolie	day	0.60	247.00	148.20
0101	Bhisti	day	0.93	260.00	241.80
9999	Sundries	L.S.	7.15	1.49	10.65
9999	Scaffolding and racking out joints including sundries	L.S.	14.30	1.49	21.31
	TOTAL				674.42
	Add Water Charges @ 1%				6.74
	TOTAL				681.16
	Add CPOH @ 15%				102.17
	Cost of 10 sqm				783.33
	Cost of 1 sqm				78.33
	Say				78.35

13.31.2 Raised and cut pointing

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
	Cement mortar 1:3 (1 cement : 3 fine sand)				
3.3	Rate as per Item Number 3.3 of SH: Mortars	cum	0.046	3,631.95	167.07
	LABOUR:				
0155	Mason (average)	day	1.07	287.00	307.09
0115	Coolie	day	1.31	247.00	323.57
0101	Bhisti	day	1.00	260.00	260.00
9999	Sundries	L.S.	7.15	1.49	10.65
9999	Scaffolding and racking out joints including sundries	L.S.	16.12	1.49	24.02
	TOTAL				1,092.40
	Add Water Charges @ 1%				10.92
	TOTAL				1,103.32
	Add CPOH @ 15%				165.50
	Cost of 10 sqm				1,268.82
	Cost of 1 sqm				126.88
	Say				126.90

13.32 Pointing on tile brick work with cement mortar 1:3 (1 cement :3 fine sand):

13.32.1 Flush / Ruled / Struck or weathered pointing

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
	Cement mortar 1:3 (1 cement : 3 fine sand)				
3.3	Rate as per Item Number 3.3 of SH: Mortars	cum	0.046	3,631.95	167.07
9999	Sundries	L.S.	7.15	1.49	10.65

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	LABOUR:				
0155	Mason (average)	day	0.67	287.00	192.29
0115	Coolie	day	0.80	247.00	197.60
0101	Bhisti	day	1.28	260.00	332.80
9999	Scaffolding and racking out joints including sundries	L.S.	16.12	1.49	24.02
	TOTAL				924.43
	Add Water Charges @ 1%				9.24
	TOTAL				933.67
	Add CPOH @ 15%				140.05
	Cost of 10 sqm				1,073.72
	Cost of 1 sqm				107.37
	Say				107.35

13.33 Pointing on stone work with cement mortar 1:3 (1 cement : 3 fine sand) :

13.33.1 Flush / Ruled pointing

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
	Cement mortar 1:3 (1 cement : 3 fine sand)				
3.3	Rate as per Item Number 3.3 of SH: Mortars	cum	0.023	3,631.95	83.53
9999	Sundries	L.S.	7.15	1.49	10.65
	LABOUR:				
0155	Mason (average)	day	0.92	287.00	264.04
0115	Coolie	day	1.37	247.00	338.39
0101	Bhisti	day	0.93	260.00	241.80
9999	Scaffolding and racking out joints including sundries	L.S.	16.12	1.49	24.02
	TOTAL				962.43
	Add Water Charges @ 1%				9.62
	TOTAL				972.05
	Add CPOH @ 15%				145.81
	Cost of 10 sqm				1,117.86
	Cost of 1 sqm				111.79
	Say				111.80

13.33.2 Raised and cut pointing

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
	Cement mortar 1:3 (1 cement : 3 fine sand)				
3.3	Rate as per Item Number 3.3 of SH: Mortars	cum	0.038	3,631.95	138.01
9999	Sundries	L.S.	7.15	1.49	10.65
	LABOUR:				
0155	Mason (average)	day	2.00	287.00	574.00
0115	Coolie	day	2.96	247.00	731.12
0101	Bhisti	day	1.00	260.00	260.00
9999	Scaffolding and racking out joints including sundries	L.S.	16.12	1.49	24.02
	TOTAL				1,737.80
	Add Water Charges @ 1%				17.38
	TOTAL				1,755.18

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Add CPOH @ 15%				263.28
	Cost of 10 sqm				2,018.46
	Cost of 1 sqm				201.85
	Say				201.85

13.34 Raised and cut pointing on stone work in white cement mortar 1:3 (1 white cement : 3 marble dust)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
	White cement mortar 1:3 (1 white cement : 3 marble dust)				
3.16	Rate as per Item Number 3.16 of SH: Mortars	cum	0.038	7,587.15	288.31
9999	Sundries	L.S.	7.15	1.49	10.65
	LABOUR:				
0155	Mason (average)	day	2.00	287.00	574.00
0115	Coolie	day	2.96	247.00	731.12
0101	Bhisti	day	1.00	260.00	260.00
9999	Scaffolding and racking out joints including sundries	L.S.	16.12	1.49	24.02
	TOTAL				1,888.10
	Add Water Charges @ 1%				18.88
	TOTAL				1,906.98
	Add CPOH @ 15%				286.05
	Cost of 10 sqm				2,193.03
	Cost of 1 sqm				219.30
	Say				219.30

13.35 Pointing on stone slab ceiling with cement mortar 1:2 (1 cement : 2 fine sand):

13.35.1 Flush / Ruled pointing

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
	Cement mortar 1:2 (1 cement : 2 fine sand)				
3.2	Rate as per Item Number 3.2 of SH: Mortars	cum	0.015	4,407.85	66.12
	LABOUR:				
0155	Mason (average)	day	0.47	287.00	134.89
0115	Coolie	day	0.69	247.00	170.43
0101	Bhisti	day	0.59	260.00	153.40
9999	Scaffolding and racking out joints including	L.S.	16.12	1.49	24.02
	TOTAL				548.86
	Add Water Charges @ 1%				5.49
	TOTAL				554.35
	Add CPOH @ 15%				83.15
	Cost of 10 sqm				637.50
	Cost of 1 sqm				63.75
	Say				63.75

13.36 Extra for pointing on walls on the outside at height more than 10 m from ground level for every additional height of 3 m or part there of.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	LABOUR:				
9999	Scaffolding	L.S.	13.39	1.49	19.95
9999	Sundries	L.S.	13.39	1.49	19.95
	TOTAL				39.90
	Add Water Charges @ 1%				0.40
	TOTAL				40.30
	Add CPOH @ 15%				6.04
	Cost of 10 sqm				46.34
	Cost of 1 sqm				4.63
	Say				4.65

13.37 White washing with lime to give an even shade:

13.37.1 New work (three or more coats)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
0775	Dehradun white lime	quintal	0.03	410.00	12.30
9999	Carriage of lime	L.S.	0.91	1.49	1.36
	LABOUR:				
0141	White Washer	day	0.20	260.00	52.00
0115	Coolie	day	0.10	247.00	24.70
9999	Indigo gum etc.	L.S.	4.42	1.49	6.59
9999	Sundries ladders etc.	L.S.	2.73	1.49	4.07
	TOTAL				101.02
	Add Water Charges @ 1%				1.01
	TOTAL				102.03
	Add CPOH @ 15%				15.30
	Cost of 10 sqm				117.33
	Cost of 1 sqm				11.73
	Say				11.75

13.38 Satna lime wash on walls with one coat

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
0776	Satna lime	quintal	0.01	230.00	2.30
9999	Carriage of lime	L.S.	2.08	1.49	3.10
9999	Indigo gum etc.	L.S.	0.52	1.49	0.77
	LABOUR:				
0141	White Washer	day	0.08	260.00	20.80
0115	Coolie	day	0.04	247.00	9.88
9999	Sundries ladders etc.	L.S.	2.73	1.49	4.07
	TOTAL				40.92
	Add Water Charges @ 1%				0.41
	TOTAL				41.33
	Add CPOH @ 15%				6.20
	Cost of 10 sqm				47.53
	Cost of 1 sqm				4.75
	Say				4.75

13.39 Colour washing such as green, blue or buff to give an even shade:

13.39.1 New work (two or more coats) with a base coat of white washing with lime

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
0775	Dehradun white lime	quintal	0.03	410.00	12.30
9999	Carriage of lime	L.S.	8.06	1.49	12.01
9999	Add for colouring stuff	L.S.	0.91	1.49	1.36
	LABOUR:				
0141	White Washer	day	0.30	260.00	78.00
0115	Coolie	day	0.10	247.00	24.70
9999	Indigo gum etc.	L.S.	4.42	1.49	6.59
9999	Sundries ladders etc.	L.S.	2.73	1.49	4.07
	TOTAL				139.03
	Add Water Charges @ 1%				1.39
	TOTAL				140.42
	Add CPOH @ 15%				21.06
	Cost of 10 sqm				161.48
	Cost of 1 sqm				16.15
	Say				16.15

13.39.2 New work (two or more coats) with a base coat of whiting

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
0775	Dehradun white lime	quintal	0.03	410.00	12.30
9999	Carriage of lime	L.S.	8.06	1.49	12.01
9999	Add for colouring stuff	L.S.	0.91	1.49	1.36
	LABOUR:				
0141	White Washer	day	0.30	260.00	78.00
0115	Coolie	day	0.10	247.00	24.70
9999	Indigo gum etc.	L.S.	2.73	1.49	4.07
9999	Sundries ladders etc.	L.S.	2.73	1.49	4.07
	TOTAL				136.51
	Add Water Charges @ 1%				1.37
	TOTAL				137.88
	Add CPOH @ 15%				20.68
	Cost of 10 sqm				158.56
	Cost of 1 sqm				15.86
	Say				15.85

13.40 Distempering with dry distemper of approved brand and manufacture (two or more coats) of required shade on new work, over and including water thinnable priming coat to give an even shade :

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
0808	Water thinnable cement primer for interior wall surface, having VOC content less than 50 grams/ litre	litre	0.70	55.00	38.50
9999	Putty, glue etc.	L.S.	2.73	1.49	4.07
0815	Dry distemper	kilogram	1.50	35.00	52.50

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Carriage of material	L.S.	1.56	1.49	2.32
9999	Brushes, sand paper etc.	L.S.	7.15	1.49	10.65
	LABOUR:				
0131	Painter	day	0.80	273.00	218.40
0115	Coolie	day	0.40	247.00	98.80
9999	Sundries	L.S.	5.33	1.49	7.94
	TOTAL				433.18
	Add Water Charges @ 1%				4.33
	TOTAL				437.51
	Add CPOH @ 15%				65.63
	Cost of 10 sqm				503.14
	Cost of 1 sqm				50.31
	Say				50.30

13.41 Distempering with oil bound washable distemper of approved brand and manufacture to give an even shade :

13.41.1 New work (two or more coats) over and including priming coat with water thinnable cement primer

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
0808	Water thinnable cement primer for interior wall surface, having VOC content less than 50 grams/ litre	litre	0.70	55.00	38.50
9999	Brushes, putty etc.	L.S.	7.15	1.49	10.65
9999	Sundries including carriage	L.S.	8.06	1.49	12.01
0816	Oil bound washable distemper/ Acrylic distemper	kilogram	1.50	42.00	63.00
9999	Carriage of material	L.S.	4.42	1.49	6.59
9999	Brushes, sand paper and putty for filling holes	L.S.	11.70	1.49	17.43
	LABOUR:				
0131	Painter	day	1.00	273.00	273.00
0115	Coolie	day	0.50	247.00	123.50
9999	Sundries	L.S.	8.06	1.49	12.01
	TOTAL				556.69
	Add Water Charges @ 1%				5.57
	TOTAL				562.26
	Add CPOH @ 15%				84.34
	Cost of 10 sqm				646.60
	Cost of 1 sqm				64.66
	Say				64.65

13.42 Distempering with 1st quality acrylic washable distemper (ready mixed) of approved manufacturer, of required shade and colour complete as per manufacturer's specification.

13.42.1 - Two or more coats on new work

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
0816	Oil bound washable distemper/ Acrylic distemper	kilogram	1.50	42.00	63.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Carriage of material	L.S.	4.42	1.49	6.59
9999	Brushes, sand paper and putty for filling holes	L.S.	11.57	1.49	17.24
	LABOUR:				
0131	Painter	day	0.40	273.00	109.20
0114	Beldar	day	0.46	247.00	113.62
9999	Sundries	L.S.	8.06	1.49	12.01
	TOTAL				321.66
	Add Water Charges @ 1%				3.22
	TOTAL				324.88
	Add CPOH @ 15%				48.73
	Cost of 10 sqm				373.61
	Cost of 1 sqm				37.36
	Say				37.35

13.43 Applying one coat of water thinnable cement primer of approved brand and manufacture on wall surface :

13.43.1 Water thinnable cement primer

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
0808	Water thinnable cement primer for interior wall surface, having VOC content less than 50 grams/ litre	litre	0.70	55.00	38.50
9999	Brushes, putty etc.	L.S.	7.15	1.49	10.65
	LABOUR:				
0131	Painter	day	0.40	273.00	109.20
0115	Coolie	day	0.20	247.00	49.40
9999	Sundries including carriage	L.S.	8.06	1.49	12.01
	TOTAL				219.76
	Add Water Charges @ 1%				2.20
	TOTAL				221.96
	Add CPOH @ 15%				33.29
	Cost of 10 sqm				255.25
	Cost of 1 sqm				25.53
	Say				25.50

13.44 Finishing walls with water proofing cement paint of required shade:

13.44.1 New work (Two or more coats applied @ 3.84 kg/ 10 sqm)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
0851	Water proofing cement paint	kilogram	3.84	40.00	153.60
9999	Carriage of material	L.S.	1.56	1.49	2.32
	LABOUR:				
0131	Painter	day	0.46	273.00	125.58
0115	Coolie	day	0.23	247.00	56.81
0101	Bhisti	day	0.10	260.00	26.00
9999	Brushes, sand paper etc.	L.S.	7.15	1.49	10.65
9999	Sundries	L.S.	8.06	1.49	12.01

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	TOTAL				386.97
	Add Water Charges @ 1%				3.87
	TOTAL				390.84
	Add CPOH @ 15%				58.63
	Cost of 10 sqm				449.47
	Cost of 1 sqm				44.95
	Say				44.95

13.45 Finishing walls with textured exterior paint of required shade :

13.45.1 New work (Two or more coats applied @ 3.28 ltr/ 10 sqm) over and including priming coat of exterior primer applied @ 2.20 kg/ 10 sqm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
8507	Textured exterior paint	litre	3.28	198.00	649.44
0809	Exterior primer	kilogram	2.20	40.00	88.00
9999	Carriage of material	L.S.	1.56	1.49	2.32
	LABOUR:				
0131	Painter	day	0.60	273.00	163.80
0115	Coolie	day	0.30	247.00	74.10
0101	Bhisti	day	0.05	260.00	13.00
9999	Brushes, sand paper etc.	L.S.	7.02	1.49	10.46
9999	Sundries	L.S.	8.06	1.49	12.01
	TOTAL				1,013.13
	Add Water Charges @ 1%				10.13
	TOTAL				1,023.26
	Add CPOH @ 15%				153.49
	Cost of 10 sqm				1,176.75
	Cost of 1 sqm				117.68
	Say				117.70

13.46 Finishing walls with Acrylic Smooth exterior paint of required shade :

13.46.1 New work (Two or more coat applied @ 1.67 ltr/ 10 sqm over and including priming coat of exterior primer applied @ 2.20 kg/ 10 sqm)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
8505	Acrylic exterior paint	litre	1.67	130.00	217.10
0809	Exterior primer	kilogram	2.20	40.00	88.00
9999	Carriage of material	L.S.	1.56	1.49	2.32
	LABOUR:				
0131	Painter	day	0.60	273.00	163.80
0115	Coolie	day	0.30	247.00	74.10
0101	Bhisti	day	0.05	260.00	13.00
9999	Brushes, sand paper etc.	L.S.	7.15	1.49	10.65
9999	Sundries	L.S.	8.06	1.49	12.01
	TOTAL				580.98
	Add Water Charges @ 1%				5.81
	TOTAL				586.79
	Add CPOH @ 15%				88.02
	Cost of 10 sqm				674.81
	Cost of 1 sqm				67.48
	Say				67.50

13.47 Finishing walls with Premium Acrylic Smooth exterior paint with Silicone additives of required shade:

13.47.1 New work (Two or more coats applied @ 1.43 ltr/ 10 sqm over and including priming coat of exterior primer applied @ 2.20 kg/ 10 sqm)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
8506	Premium Acrylic exterior paint	litre	1.43	230.00	328.90
0809	Exterior primer	kilogram	2.20	40.00	88.00
9999	Carriage of material	L.S.	1.56	1.49	2.32
	LABOUR:				
0131	Painter	day	0.60	273.00	163.80
0115	Coolie	day	0.30	247.00	74.10
0101	Bhisti	day	0.05	260.00	13.00
9999	Brushes, sand paper etc.	L.S.	7.15	1.49	10.65
9999	Sundries	L.S.	8.06	1.49	12.01
	TOTAL				692.78
	Add Water Charges @ 1%				6.93
	TOTAL				699.71
	Add CPOH @ 15%				104.96
	Cost of 10 sqm				804.67
	Cost of 1 sqm				80.47
	Say				80.45

13.48 Finishing with Deluxe Multi surface paint system for interiors and exteriors using Primer as per manufacturers specifications :

13.48.1 Two or more coats applied on walls @ 1.25 ltr/10 sqm over and including one coat of special primer applied @ 0.75 ltr /10 sqm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
8504	Multi surface paint	litre	1.25	272.00	340.00
8509	Special Primer (C.W.)	litre	0.75	83.00	62.25
9999	Carriage of material	L.S.	1.56	1.49	2.32
	LABOUR:				
0131	Painter	day	0.60	273.00	163.80
0115	Coolie	day	0.30	247.00	74.10
0101	Bhisti	day	0.05	260.00	13.00
9999	Brushes, sand paper etc.	L.S.	7.02	1.49	10.46
9999	Sundries	L.S.	8.06	1.49	12.01
	TOTAL				677.94
	Add Water Charges @ 1%				6.78
	TOTAL				684.72
	Add CPOH @ 15%				102.71
	Cost of 10 sqm				787.43
	Cost of 1 sqm				78.74
	Say				78.75

13.48.2 Painting wood work with Deluxe Multi Surface Paint of required shade. Two or more coat applied @ 0.90 ltr/ 10 sqm over an under coat of primer applied @ 0.75 ltr/ 10 sqm of approved brand and manufacture

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
8504	Multi surface paint	litre	0.90	272.00	244.80
8509	Special Primer (C.W.)	litre	0.75	83.00	62.25
9999	Carriage of material	L.S.	1.56	1.49	2.32
	LABOUR:				
0131	Painter	day	0.60	273.00	163.80
0115	Coolie	day	0.30	247.00	74.10
0101	Bhisti	day	0.05	260.00	13.00
9999	Brushes, sand paper etc.	L.S.	7.02	1.49	10.46
9999	Sundries	L.S.	8.06	1.49	12.01
	TOTAL				582.74
	Add Water Charges @ 1%				5.83
	TOTAL				588.57
	Add CPOH @ 15%				88.29
	Cost of 10 sqm				676.86
	Cost of 1 sqm				67.69
	Say				67.70

13.48.3 Painting Steel work with Deluxe Multi Surface Paint to give an even shade. Two or more coat applied @ 0.90 ltr/ 10 sqm over an under coat of primer applied @ 0.80 ltr/ 10 sqm of approved brand and manufacture

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
8504	Multi surface paint	litre	0.90	272.00	244.80
8510	Metal Primer (U.G.)	litre	0.80	107.00	85.60
9999	Carriage of material	L.S.	1.56	1.49	2.32
	LABOUR:				
0131	Painter	day	0.60	273.00	163.80
0115	Coolie	day	0.30	247.00	74.10
0101	Bhisti	day	0.05	260.00	13.00
9999	Brushes, sand paper etc.	L.S.	7.02	1.49	10.46
9999	Sundries	L.S.	8.06	1.49	12.01
	TOTAL				606.09
	Add Water Charges @ 1%				6.06
	TOTAL				612.15
	Add CPOH @ 15%				91.82
	Cost of 10 sqm				703.97
	Cost of 1 sqm				70.40
	Say				70.40

13.49 Deleted

13.50 Applying priming coat:

13.50.1 With ready mixed pink or Grey primer of approved brand and manufacture on wood work (hard and soft wood)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
0823	Pink primer (for wood)	litre	0.75	85.00	63.75
9999	Putty	L.S.	2.73	1.49	4.07
9999	Carriage	L.S.	0.39	1.49	0.58
	LABOUR:				
0131	Painter	day	0.25	273.00	68.25
0115	Coolie	day	0.25	247.00	61.75
9999	Brushes, sand paper etc.	L.S.	5.33	1.49	7.94
9999	Sundries	L.S.	10.79	1.49	16.08
	TOTAL				222.42
	Add Water Charges @ 1%				2.22
	TOTAL				224.64
	Add CPOH @ 15%				33.70
	Cost of 10 sqm				258.34
	Cost of 1 sqm				25.83
	Say				25.85

13.50.2 With ready mixed aluminium primer of approved brand and manufacture on resinous wood and plywood

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
4201	Aluminium primer	litre	0.75	72.00	54.00
9999	Putty	L.S.	2.73	1.49	4.07
9999	Carriage	L.S.	0.39	1.49	0.58
	LABOUR:				
0131	Painter	day	0.25	273.00	68.25
0115	Coolie	day	0.25	247.00	61.75
9999	Brushes, sand paper etc.	L.S.	5.33	1.49	7.94
9999	Sundries	L.S.	10.79	1.49	16.08
	TOTAL				212.67
	Add Water Charges @ 1%				2.13
	TOTAL				214.80
	Add CPOH @ 15%				32.22
	Cost of 10 sqm				247.02
	Cost of 1 sqm				24.70
	Say				24.70

13.50.3 With ready mixed red oxide zinc chromate primer of approved brand and manufacture on steel galvanised iron/steel works

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
4202	Red oxide Zinc chromate primer	litre	0.54	68.00	36.72
9999	Carriage	L.S.	0.52	1.49	0.77
	LABOUR:				
0131	Painter	day	0.24	273.00	65.52

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0115	Coolie	day	0.24	247.00	59.28
9999	Brushes, sand paper including sundries	L.S.	10.79	1.49	16.08
	TOTAL				178.37
	Add Water Charges @ 1%				1.78
	TOTAL				180.15
	Add CPOH @ 15%				27.02
	Cost of 10 sqm				207.17
	Cost of 1 sqm				20.72
	Say				20.70

13.50.4 With ready mixed red oxide zinc chromate primer of approved brand and manufacture on steel work (second coat)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
4202	Red oxide Zinc chromate primer	litre	0.36	68.00	24.48
9999	Carriage	L.S.	0.39	1.49	0.58
	LABOUR:				
0131	Painter	day	0.12	273.00	32.76
0115	Coolie	day	0.12	247.00	29.64
9999	Brushes, sand paper including sundries	L.S.	7.15	1.49	10.65
	TOTAL				98.11
	Add Water Charges @ 1%				0.98
	TOTAL				99.09
	Add CPOH @ 15%				14.86
	Cost of 10 sqm				113.95
	Cost of 1 sqm				11.40
	Say				11.40

13.51 Painting with silicon & acrylic emulsion based water thinnable sealer of approved brand and manufacture on wet or patchy portion of plastered surfaces:

13.51.1 One coat

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
0801	Silicon and acrylic emulsion	litre	1.80	140.00	252.00
9999	Carriage of material	L.S.	0.52	1.49	0.77
9999	Putty etc.	L.S.	2.73	1.49	4.07
	LABOUR:				
0131	Painter	day	0.27	273.00	73.71
0115	Coolie	day	0.27	247.00	66.69
9999	Brushes, sand paper etc.	L.S.	5.33	1.49	7.94
9999	Sundries	L.S.	10.79	1.49	16.08
	TOTAL				421.26
	Add Water Charges @ 1%				4.21
	TOTAL				425.47
	Add CPOH @ 15%				63.82
	Cost of 10 sqm				489.29
	Cost of 1 sqm				48.93
	Say				48.95

13.51.2 Two coats

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
0801	Silicon and acrylic emulsion	litre	2.88	140.00	403.20
9999	Carriage of material	L.S.	0.52	1.49	0.77
9999	Putty etc.	L.S.	2.73	1.49	4.07
	LABOUR:				
0131	Painter	day	0.43	273.00	117.39
0115	Coolie	day	0.43	247.00	106.21
9999	Brushes, sand paper etc.	L.S.	8.53	1.49	12.71
9999	Sundries	L.S.	17.26	1.49	25.72
	TOTAL				670.07
	Add Water Charges @ 1%				6.70
	TOTAL				676.77
	Add CPOH @ 15%				101.52
	Cost of 10 sqm				778.29
	Cost of 1 sqm				77.83
	Say				77.85

13.52 Finishing with Epoxy paint (two or more coats) at all locations prepared and applied as per manufacturer's specifications including appropriate priming coat, preparation of surface, etc. complete.

13.52.1 On steel work

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
4202	Red oxide Zinc chromate primer	litre	0.75	68.00	51.00
9999	Putty	L.S.	2.73	1.49	4.07
9999	Carriage	L.S.	0.39	1.49	0.58
	LABOUR:				
0131	Painter	day	0.25	273.00	68.25
0115	Coolie	day	0.25	247.00	61.75
9999	Brushes, sand paper etc.	L.S.	5.46	1.49	8.14
9999	Sundries	L.S.	10.66	1.49	15.88
	EPOXY PAINTING				
	MATERIAL:				
7239	Epoxy paint	litre	1.25	315.00	393.75
9999	Carriage of material	L.S.	1.43	1.49	2.13
	LABOUR:				
0131	Painter	day	0.54	273.00	147.42
0115	Coolie	day	0.54	247.00	133.38
9999	Putty, brushes, sand paper etc.	L.S.	6.76	1.49	10.07
9999	Sundries	L.S.	8.06	1.49	12.01
	TOTAL				908.43
	Add Water Charges @ 1%				9.08
	TOTAL				917.51
	Add CPOH @ 15%				137.63
	Cost of 10 sqm				1,055.14
	Cost of 1 sqm				105.51
	Say				105.50

13.52.2 On concrete work

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	PRIMING COAT				
	MATERIAL:				
0821	Distemper primer	litre	0.84	80.00	67.20
9999	Putty	L.S.	13.52	1.49	20.14
9999	Carriage	L.S.	0.52	1.49	0.77
	LABOUR:				
0131	Painter	day	0.25	273.00	68.25
0115	Coolie	day	0.25	247.00	61.75
9999	Brushes, sand paper etc.	L.S.	2.73	1.49	4.07
9999	Sundries	L.S.	8.06	1.49	12.01
	EPOXY PAINTING				
	MATERIAL:				
7239	Epoxy paint	litre	1.21	315.00	381.15
9999	Materials for filling in holes and cracks	L.S.	6.76	1.49	10.07
9999	Carriage of material	L.S.	1.43	1.49	2.13
	LABOUR:				
0131	Painter	day	0.54	273.00	147.42
0115	Coolie	day	0.54	247.00	133.38
9999	Putty, brushes, sand paper etc.	L.S.	10.79	1.49	16.08
9999	Sundries	L.S.	6.76	1.49	10.07
	TOTAL				934.49
	Add Water Charges @ 1%				9.34
	TOTAL				943.83
	Add CPOH @ 15%				141.57
	Cost of 10 sqm				1,085.40
	Cost of 1 sqm				108.54
	Say				108.55

13.53 Painting on G.S. sheet with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade:

13.53.1 New work (two or more coats) including a coat of approved steel primer but excluding a coat of mordant solution.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	PRIMING COAT				
	MATERIAL:				
4202	Red oxide Zinc chromate primer	litre	0.36	68.00	24.48
9999	Carriage	L.S.	0.39	1.49	0.58
	LABOUR:				
0131	Painter	day	0.12	273.00	32.76
0114	Beldar	day	0.12	247.00	29.64
9999	Brushes, sand paper etc.	L.S.	7.15	1.49	10.65
	EPOXY PAINTING				
	MATERIAL:				
0834	Synthetic enamel paint in all shades except black or chocolate shade	litre	0.80	135.00	108.00
9999	Carriage	L.S.	1.43	1.49	2.13
	LABOUR:				
0131	Painter	day	0.54	273.00	147.42

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0115	Coolie	day	0.54	247.00	133.38
9999	Putty, brushes, sand paper etc.	L.S.	6.76	1.49	10.07
9999	Sundries	L.S.	8.06	1.49	12.01
	TOTAL				511.12
	Add Water Charges @ 1%				5.11
	TOTAL				516.23
	Add CPOH @ 15%				77.43
	Cost of 10 sqm				593.66
	Cost of 1 sqm				59.37
	Say				59.35

13.54 Applying a coat of mordant solution on G.S. sheet:

13.54.1 With a solution of 38 gms of copper acetate in a litre of soft water

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 25 sqm				
	MATERIAL:				
4203	Copper acetate	kilogram	0.038	270.00	10.26
9999	Soft water	L.S.	1.82	1.49	2.71
9999	Carriage	L.S.	0.91	1.49	1.36
	LABOUR:				
0131	Painter	day	0.60	273.00	163.80
0115	Coolie	day	0.60	247.00	148.20
9999	Brushes, sand paper etc.	L.S.	35.88	1.49	53.46
9999	Sundries	L.S.	35.88	1.49	53.46
	TOTAL				433.25
	Add Water Charges @ 1%				4.33
	TOTAL				437.58
	Add CPOH @ 15%				65.64
	Cost of 25 sqm				503.22
	Cost of 1 sqm				20.13
	Say				20.15

13.54.2 With a solution made of 13 gms of hydrochloric acid in a solution of 13 gms each of copper chloride, copper nitrate and ammonium chloride dissolved in a litre of soft water

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 25 sqm				
	MATERIAL:				
4204	Hydrochloric acid	kilogram	0.013	32.00	0.42
4205	Copper chloride	kilogram	0.013	272.00	3.54
4206	Copper nitrate	kilogram	0.013	200.00	2.60
4207	Ammonium chloride	kilogram	0.013	15.00	0.19
9999	Soft water	L.S.	1.82	1.49	2.71
9999	Carriage	L.S.	0.91	1.49	1.36
	LABOUR:				
0131	Painter	day	0.60	273.00	163.80
0115	Coolie	day	0.60	247.00	148.20
9999	Brushes, sand paper etc.	L.S.	35.88	1.49	53.46
9999	Sundries	L.S.	35.88	1.49	53.46

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	TOTAL				429.74
	Add Water Charges @ 1%				4.30
	TOTAL				434.04
	Add CPOH @ 15%				65.11
	Cost of 25 sqm				499.15
	Cost of 1 sqm				19.97
	Say				19.95

13.55 Painting (two or more coats) on rain water, soil, waste and vent pipes and fittings with black anticorrosive bitumastic paint of approved brand and manufacture, over and including a priming of ready mixed zinc chromate yellow primer on new work:

13.55.1 100 mm diameter pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 30 mtrs				
	Area=22/7x106.4mm x30m=10.032sqm				
	MATERIAL:				
4202	Red oxide Zinc chromate primer	litre	0.54	68.00	36.72
9999	Carriage	L.S.	0.52	1.49	0.77
	LABOUR:				
0131	Painter	day	0.24	273.00	65.52
0115	Coolie	day	0.24	247.00	59.28
9999	Brushes, sand paper etc.	L.S.	10.79	1.49	16.08
	MATERIAL:				
0828	Anticorrosive bituminous paint (black)	litre	0.95	85.00	80.75
9999	Carriage	L.S.	1.43	1.49	2.13
	LABOUR:				
0131	Painter	day	0.54	273.00	147.42
0115	Coolie	day	0.54	247.00	133.38
9999	Putty , sand paper etc.	L.S.	5.33	1.49	7.94
9999	Sundries	L.S.	8.06	1.49	12.01
9999	Wire brushes for cleaning	L.S.	5.33	1.49	7.94
9999	Extra for delays	L.S.	61.10	1.49	91.04
	TOTAL				660.98
	Add Water Charges @ 1%				6.61
	TOTAL				667.59
	Add CPOH @ 15%				100.14
	Cost of 30 metre				767.73
	Cost of 1 metre				25.59
	Say				25.60

13.55.2 150 mm diameter pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 30 mtrs				
	Area=22/7 x 0.15720 x 30 m = 14.82				
	MATERIAL:				
4202	Red oxide Zinc chromate primer	litre	0.80	68.00	54.40
	LABOUR:				
0131	Painter	day	0.36	273.00	98.28
0115	Coolie	day	0.36	247.00	88.92
9999	Brushes, sand paper etc.	L.S.	15.99	1.49	23.83
9999	Carriage	L.S.	0.91	1.49	1.36

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	MATERIAL:				
0828	Anticorrosive bituminous paint (black)	litre	1.41	85.00	119.85
9999	Carriage	L.S.	2.08	1.49	3.10
	LABOUR:				
0131	Painter	day	0.80	273.00	218.40
0115	Coolie	day	0.80	247.00	197.60
9999	Putty , sand paper etc.	L.S.	8.60	1.49	12.81
9999	Sundries	L.S.	11.96	1.49	17.82
9999	Wire brushes for cleaning	L.S.	7.15	1.49	10.65
9999	extra for delays	L.S.	94.12	1.49	140.24
	TOTAL				987.26
	Add Water Charges @ 1%				9.87
	TOTAL				997.13
	Add CPOH @ 15%				149.57
	Cost of 30 metre				1,146.70
	Cost of 1 metre				38.22
	Say				38.20

13.56 Painting (two or more coats) on rain water, soil, waste and vent pipes and fittings with synthetic enamel paint of approved brand and manufacture and required colour over a priming coat of approved steel primer on new work.

13.56.1 100 mm diameter pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 30 mtrs				
	Area=22/7 x 106.40/1000 x 30 m = 10.032				
	MATERIAL:				
4202	Red oxide Zinc chromate primer	litre	0.54	68.00	36.72
9999	Carriage	L.S.	0.52	1.49	0.77
	LABOUR:				
0131	Painter	day	0.24	273.00	65.52
0115	Coolie	day	0.24	247.00	59.28
9999	Sundries	L.S.	10.79	1.49	16.08
	MATERIAL:				
0833	Synthetic enamel paint in black or chocolate shade	litre	1.16	130.00	150.80
9999	Carriage	L.S.	1.43	1.49	2.13
9999	Putty , sand paper etc.	L.S.	5.33	1.49	7.94
	LABOUR:				
0131	Painter	day	0.54	273.00	147.42
0115	Coolie	day	0.54	247.00	133.38
9999	Sundries	L.S.	6.76	1.49	10.07
9999	Wire brushes for cleaning	L.S.	11.96	1.49	17.82
9999	extra for delays	L.S.	66.43	1.49	98.98
	TOTAL				746.91
	Add Water Charges @ 1%				7.47
	TOTAL				754.38
	Add CPOH @ 15%				113.16
	Cost of 30 metre				867.54
	Cost of 1 metre				28.92
	Say				28.90

13.56.2 150 mm diameter pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 30 mtrs				
	Area=22/7 x157.2mm x30m =14.82sqm				
	MATERIAL:				
4202	Red oxide Zinc chromate primer	litre	0.80	68.00	54.40
9999	Carriage	L.S.	0.65	1.49	0.97
	LABOUR:				
0131	Painter	day	0.36	273.00	98.28
0115	Coolie	day	0.36	247.00	88.92
9999	Sundries	L.S.	15.99	1.49	23.83
	MATERIAL:				
0833	Synthetic enamel paint in black or chocolate shade	litre	1.72	130.00	223.60
9999	Carriage	L.S.	2.08	1.49	3.10
9999	Putty, sand paper etc.	L.S.	7.93	1.49	11.82
	LABOUR:				
0131	Painter	day	0.80	273.00	218.40
0115	Coolie	day	0.80	247.00	197.60
9999	Sundries	L.S.	10.01	1.49	14.91
9999	Wire brushes for cleaning	L.S.	17.81	1.49	26.54
9999	extra for delays	L.S.	101.40	1.49	151.09
	TOTAL				1,113.46
	Add Water Charges @ 1%				11.13
	TOTAL				1,124.59
	Add CPOH @ 15%				168.69
	Cost of 30 metre				1,293.28
	Cost of 1 metre				43.11
	Say				43.10

13.57 Painting with oil type wood preservative of approved brand and manufacture:
13.57.1 New work (two or more coats)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
0859	Oil type wood preservative	litre	1.00	70.00	70.00
9999	Carriage of material	L.S.	0.52	1.49	0.77
	LABOUR:				
0131	Painter	day	0.15	273.00	40.95
0115	Coolie	day	0.15	247.00	37.05
9999	Brushes etc.	L.S.	4.16	1.49	6.20
9999	Sundries	L.S.	3.90	1.49	5.81
	TOTAL				160.78
	Add Water Charges @ 1%				1.61
	TOTAL				162.39
	Add CPOH @ 15%				24.36
	Cost of 10 sqm				186.75
	Cost of 1 sqm				18.68
	Say				18.70

13.58 Providing and applying two coats of fire retardant paint on cleaned wood/ply surface @ 3.5 sqm per litre per coat including preparation of base surface as per recommendations of manufacturer to make the surface fire retardant.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
7240	Fire retardant paint	litre	5.70	350.00	1,995.00
9999	Carriage of material	L.S.	1.43	1.49	2.13
	LABOUR:				
0131	Painter	day	0.54	273.00	147.42
0114	Beldar	day	0.54	247.00	133.38
9999	Putty , brushes sand paper etc.	L.S.	6.76	1.49	10.07
9999	Sundries	L.S.	8.06	1.49	12.01
	TOTAL				2,300.01
	Add Water Charges @ 1%				23.00
	TOTAL				2,323.01
	Add CPOH @ 15%				348.45
	Cost of 10 sqm				2,671.46
	Cost of 1 sqm				267.15
	Say				267.15

13.59 Coal tarring two coats on new work using 0.16 litre and 0.12 litre coal tar per sqm in the first coat and second coat respectively.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
9999	Lime	L.S.	1.43	1.49	2.13
0324	Coal Tar	litre	2.80	25.00	70.00
9999	Carriage of material	L.S.	1.43	1.49	2.13
0771	Kerosene oil	litre	0.50	30.00	15.00
	LABOUR:				
0114	Beldar	day	0.43	247.00	106.21
9999	Brushes etc.	L.S.	5.33	1.49	7.94
9999	Sundries	L.S.	5.33	1.49	7.94
	TOTAL				211.35
	Add Water Charges @ 1%				2.11
	TOTAL				213.46
	Add CPOH @ 15%				32.02
	Cost of 10 sqm				245.48
	Cost of 1 sqm				24.55
	Say				24.55

13.60 Wall painting with acrylic emulsion paint of approved brand and manufacture to give an even shade:

13.60.1 Two or more coats on new work

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
0835	Plastic emulsion paint	litre	1.21	165.00	199.65
9999	Materials for filling in holes and cracks (putty etc.)	L.S.	6.76	1.49	10.07

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Carriage of material	L.S.	1.43	1.49	2.13
	LABOUR:				
0131	Painter	day	0.54	273.00	147.42
0115	Coolie	day	0.54	247.00	133.38
9999	Brushes, sand paper etc.	L.S.	10.79	1.49	16.08
9999	Sundries	L.S.	6.76	1.49	10.07
	TOTAL				518.80
	Add Water Charges @ 1%				5.19
	TOTAL				523.99
	Add CPOH @ 15%				78.60
	Cost of 10 sqm				602.59
	Cost of 1 sqm				60.26
	Say				60.25

13.61 Painting with synthetic enamel paint of approved brand and manufacture to give an even shade:

13.61.1 Two or more coats on new work

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
0833	Synthetic enamel paint in black or chocolate shade	litre	1.16	130.00	150.80
9999	Materials for filling in holes and cracks (putty etc.)	L.S.	5.33	1.49	7.94
9999	Carriage	L.S.	1.43	1.49	2.13
	LABOUR:				
0131	Painter	day	0.54	273.00	147.42
0115	Coolie	day	0.54	247.00	133.38
9999	Brushes, sand paper etc.	L.S.	6.76	1.49	10.07
9999	Sundries	L.S.	8.06	1.49	12.01
	TOTAL				463.75
	Add Water Charges @ 1%				4.64
	TOTAL				468.39
	Add CPOH @ 15%				70.26
	Cost of 10 sqm				538.65
	Cost of 1 sqm				53.87
	Say				53.85

13.62 Painting with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade:

13.62.1 Two or more coats on new work over an under coat of suitable shade with ordinary paint of approved brand and manufacture.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
0823	Pink primer (for wood)	litre	0.75	85.00	63.75
9999	Putty	L.S.	2.73	1.49	4.07
9999	Carriage	L.S.	0.39	1.49	0.58
	LABOUR:				
0131	Painter	day	0.25	273.00	68.25

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0115	Coolie	day	0.25	247.00	61.75
9999	Brushes, sand paper etc.	L.S.	5.33	1.49	7.94
9999	Sundries	L.S.	10.79	1.49	16.08
	MATERIAL:				
0833	Synthetic enamel paint in black or chocolate shade	litre	1.16	130.00	150.80
9999	Carriage of paint and material	L.S.	1.43	1.49	2.13
	LABOUR:				
0131	Painter	day	0.54	273.00	147.42
0115	Coolie	day	0.54	247.00	133.38
9999	Brushes, sand paper etc.	L.S.	6.76	1.49	10.07
9999	Sundries	L.S.	8.06	1.49	12.01
	TOTAL				678.23
	Add Water Charges @ 1%				6.78
	TOTAL				685.01
	Add CPOH @ 15%				102.75
	Cost of 10 sqm				787.76
	Cost of 1 sqm				78.78
	Say				78.80

13.63 Painting with aluminium paint of approved brand and manufacture to give an even shade.

13.63.1 Two or more coats on new work

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
0826	Aluminium paint	litre	0.80	115.00	92.00
9999	Carriage of paint and material	L.S.	1.43	1.49	2.13
9999	Putty etc.	L.S.	5.33	1.49	7.94
	LABOUR:				
0131	Painter	day	0.54	273.00	147.42
0115	Coolie	day	0.54	247.00	133.38
9999	Brushes, sand paper etc.	L.S.	6.76	1.49	10.07
9999	Sundries	L.S.	11.96	1.49	17.82
	TOTAL				410.76
	Add Water Charges @ 1%				4.11
	TOTAL				414.87
	Add CPOH @ 15%				62.23
	Cost of 10 sqm				477.10
	Cost of 1 sqm				47.71
	Say				47.70

13.64 Painting with acid proof paint of approved brand and manufacture of required colour to give an even shade:

13.64.1 Two or more coats on new work

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
0827	Acid proof paint (chocolate or black)	litre	1.16	105.00	121.80
9999	Carriage of paint	L.S.	1.43	1.49	2.13
9999	Putty	L.S.	5.33	1.49	7.94

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	LABOUR:				
0131	Painter	day	0.54	273.00	147.42
0115	Coolie	day	0.54	247.00	133.38
9999	Brushes, sand paper etc.	L.S.	6.76	1.49	10.07
9999	Sundries	L.S.	8.06	1.49	12.01
	TOTAL				434.75
	Add Water Charges @ 1%				4.35
	TOTAL				439.10
	Add CPOH @ 15%				65.86
	Cost of 10 sqm				504.96
	Cost of 1 sqm				50.50
	Say				50.50

13.65 Painting with black anti-corrosive bitumastic paint of approved brand and manufacture to give an even shade:

13.65.1 Two or more coats on new work

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
0828	Anticorrosive bituminous paint (black)	litre	0.95	85.00	80.75
9999	Carriage	L.S.	1.43	1.49	2.13
	LABOUR:				
0131	Painter	day	0.54	273.00	147.42
0115	Coolie	day	0.54	247.00	133.38
9999	Putty, brushes, sand paper etc.	L.S.	5.33	1.49	7.94
9999	Sundries	L.S.	8.06	1.49	12.01
	TOTAL				383.63
	Add Water Charges @ 1%				3.84
	TOTAL				387.47
	Add CPOH @ 15%				58.12
	Cost of 10 sqm				445.59
	Cost of 1 sqm				44.56
	Say				44.55

13.66 Floor painting with floor enamel paint of approved brand and manufacture of required colour to give an even shade:

13.66.1 Two or more coats on new work

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
0831	Floor enamel paint in all shades except green	litre	1.48	120.00	177.60
9999	Carriage	L.S.	1.43	1.49	2.13
9999	Putty etc.	L.S.	5.33	1.49	7.94
	LABOUR:				
0131	Painter	day	0.54	273.00	147.42
0115	Coolie	day	0.54	247.00	133.38
9999	Brushes, sand paper etc.	L.S.	6.76	1.49	10.07
9999	Sundries	L.S.	8.06	1.49	12.01

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	TOTAL				490.55
	Add Water Charges @ 1%				4.91
	TOTAL				495.46
	Add CPOH @ 15%				74.32
	Cost of 10 sqm				569.78
	Cost of 1 sqm				56.98
	Say				57.00

13.67 Varnishing with varnish of approved brand and manufacture:

13.67.1 Two or more coats of glue sizing with copal varnish over an under coat of flatting varnish

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
0856	Ordinary varnish	litre	0.70	65.00	45.50
0763	Glue	kilogram	0.07	65.00	4.55
0857	Superior copal varnish	litre	1.16	125.00	145.00
9999	Carriage	L.S.	1.43	1.49	2.13
9999	Putty for repair to holes etc.	L.S.	5.33	1.49	7.94
	LABOUR:				
0131	Painter	day	0.90	273.00	245.70
	(0.36+0.54=0.90)				
0115	Coolie	day	0.90	247.00	222.30
	(0.36+0.54=0.90)				
9999	Brushes, sand paper etc.	L.S.	6.76	1.49	10.07
9999	Sundries	L.S.	7.15	1.49	10.65
	TOTAL				693.84
	Add Water Charges @ 1%				6.94
	TOTAL				700.78
	Add CPOH @ 15%				105.12
	Cost of 10 sqm				805.90
	Cost of 1 sqm				80.59
	Say				80.60

13.67.2 Two or more coats glue sizing with spar varnish or an under coat of flatting varnish

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
0856	Ordinary varnish	litre	0.70	65.00	45.50
0763	Glue	kilogram	0.07	65.00	4.55
0858	Superior spar varnish	litre	1.26	125.00	157.50
9999	Carriage	L.S.	1.43	1.49	2.13
9999	Repair etc.	L.S.	2.73	1.49	4.07
	LABOUR:				
0131	Painter	day	0.90	273.00	245.70
	(0.36+0.54=0.90)				
0115	Coolie	day	0.90	247.00	222.30
	(0.36+0.54=0.90)				
9999	Brushes, sand paper etc.	L.S.	6.76	1.49	10.07
9999	Sundries	L.S.	7.15	1.49	10.65

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	TOTAL				702.47
	Add Water Charges @ 1%				7.02
	TOTAL				709.49
	Add CPOH @ 15%				106.42
	Cost of 10 sqm				815.91
	Cost of 1 sqm				81.59
	Say				81.60

13.68 French spirit polishing:

13.68.1 Two or more coats on new works including a coat of wood filler

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
1000	Spirit	litre	1.63	65.00	105.95
9999	Pigment	L.S.	7.15	1.49	10.65
0999	Shellac	kilogram	0.24	205.00	49.20
9999	Carriage of material	L.S.	2.73	1.49	4.07
9999	White woolen cloth, putty	L.S.	16.12	1.49	24.02
9999	Sand paper cotton etc.	L.S.	13.39	1.49	19.95
9999	Lineseed oil	L.S.	1.43	1.49	2.13
	LABOUR:				
0131	Painter	day	3.50	273.00	955.50
9999	Sundries	L.S.	8.06	1.49	12.01
	TOTAL				1,183.48
	Add Water Charges @ 1%				11.83
	TOTAL				1,195.31
	Add CPOH @ 15%				179.30
	Cost of 10 sqm				1,374.61
	Cost of 1 sqm				137.46
	Say				137.45

13.69 Polishing on wood work with ready mixed wax polish of approved brand and manufacture:

13.69.1 New work

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
0855	Wax polish (ready made)	kilogram	0.50	175.00	87.50
9999	Carriage	L.S.	0.39	1.49	0.58
	LABOUR:				
0131	Painter	day	0.80	273.00	218.40
0115	Coolie	day	0.80	247.00	197.60
9999	Soap, brushes, cloth etc.	L.S.	4.16	1.49	6.20
9999	Sundries	L.S.	7.15	1.49	10.65
	TOTAL				520.93
	Add Water Charges @ 1%				5.21
	TOTAL				526.14
	Add CPOH @ 15%				78.92
	Cost of 10 sqm				605.06
	Cost of 1 sqm				60.51
	Say				60.50

13.70 Floor polishing on masonry or concrete floors with wax polish of approved brand and manufacture.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
0855	Wax polish (ready made)	kilogram	0.10	175.00	17.50
	LABOUR:				
0131	Painter	day	0.40	273.00	109.20
0115	Coolie	day	0.40	247.00	98.80
9999	Acetic acid soap, cloth etc.	L.S.	5.33	1.49	7.94
9999	Sundries including carriage	L.S.	8.06	1.49	12.01
	TOTAL				245.45
	Add Water Charges @ 1%				2.45
	TOTAL				247.90
	Add CPOH @ 15%				37.18
	Cost of 10 sqm				285.08
	Cost of 1 sqm				28.51
	Say				28.50

13.71 Lettering with black Japan paint of approved brand and manufacture

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 letters of 15cm height				
	MATERIAL:				
0829	Black Japan paint	litre	0.56	90.00	50.40
9999	Carriage	L.S.	0.91	1.49	1.36
	LABOUR:				
0131	Painter	day	6.00	273.00	1,638.00
0115	Coolie	day	2.00	247.00	494.00
9999	Painting brushes, turpentine, stencil etc.	L.S.	13.39	1.49	19.95
9999	Sundries	L.S.	8.06	1.49	12.01
	TOTAL				2,215.72
	Add Water Charges @ 1%				22.16
	TOTAL				2,237.88
	Add CPOH @ 15%				335.68
	Cost of 100 letters of 15cm height				2,573.56
	Cost per letter per cm height				1.72
	Say				1.70

13.72 - Washed stone grit plaster on exterior walls height upto 10 metre above ground level, in two layers, under layer 12 mm cement plaster 1:4 (1 cement: 4 coarse sand), furrowing the under layer with scratching tool, applying cement slurry on the under layer @ 2 Kg of cement per square metre, top layer 15 mm cement plaster 1:1/2:2 (1 cement: 1/2 coarse sand : 2 stone chipping 10 mm nominal size), in panels with groove all around as per approved pattern including scrubbing and washing the top layer with brushes and water to expose the stone chippings ,complete as per specification and direction of Engineer-in- charge (payment for providing grooves shall be made separately).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm MATERIAL: Under layer 12 mm cement plaster with				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Cement mortar 1:4(1 cement: 4 coarse sand)				
3.9	Rate as per Item Number 3.9 of SH: Mortars	cum	0.144	3,485.40	501.90
	LABOUR:				
0155	Mason (average)	day	0.67	287.00	192.29
0114	Beldar	day	0.75	247.00	185.25
0101	Bhisti	day	0.92	260.00	239.20
9999	Scaffolding	L.S.	8.97	1.49	13.37
0367	Portland Cement	tonne	0.02	5,000.00	100.00
2209	Carriage of cement	tonne	0.02	77.87	1.56
0114	Beldar	day	0.25	247.00	61.75
	Top layer 15mm thick stone chipping plaster Quantity required = 0.172 cum including wastage				
	Preparation of cement concrete mix 1:1/2:2 (1 cement: 1/2 coarse sand : 2 stone chipping 10 mm nominal size)				
2911	Stone chippings/ screenings 10/ 11.2 mm nominal size	cum	0.14	1,050.00	147.00
2202	Carriage of stone aggregate below 40 mm nominal size	cum	0.14	87.60	12.26
0982	Coarse sand (zone III)	cum	0.04	1,120.00	44.80
2203	Carriage of coarse sand	cum	0.04	87.60	3.50
0367	Portland Cement	tonne	0.10	5,000.00	500.00
2209	Carriage of cement	tonne	0.10	77.87	7.79
0114	Beldar	day	0.10	247.00	24.70
0101	Bhisti	day	0.05	260.00	13.00
9999	Hire and running charges of mechanical mixer	L.S.	4.29	1.49	6.39
9999	Sundries	L.S.	2.08	1.49	3.10
	LABOUR:				
0123	Mason (brick layer) 1 st class	day	1.75	301.00	526.75
0114	Beldar	day	1.75	247.00	432.25
0101	Bhisti	day	0.30	260.00	78.00
9999	Scaffolding	L.S.	24.44	1.49	36.42
	Labour for washing				
0123	Mason (brick layer) 1 st class	day	1.00	301.00	301.00
0115	Coolie	day	0.50	247.00	123.50
9999	Sundries soft brushes etc.	L.S.	25.22	1.49	37.58
	TOTAL				3,593.36
	Add Water Charges @ 1%				35.93
	TOTAL				3,629.29
	Add CPOH @ 15%				544.39
	Cost of 10 sqm				4,173.68
	Cost of 1 sqm				417.37
	Say				417.35

13.73 Forming groove of uniform size in the top layer of washed stone grit plaster as per approved pattern using wooden battens, nailed to the under layer, including removal of wooden battens, repair to the edges of panels and finishing the groove complete as per specifications and direction of the Engineer-in-Charge :

13.73.1 15 mm wide and 15 mm deep groove

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 30 mtrs MATERIAL: Second class kail wood in plank 30 x0.015 x0.015m=6.75cudm Wastage@ 10%= 0.68 Total = 7.43 cudm Assuming that the battens shall become unserviceable after using 5 times Cost for using once = 7.43 / 5 = 1.48				
1198	Second class kail wood in planks	10 cudm	1.48	250.00	37.00
9999	Carriage of wood	L.S.	0.39	1.49	0.58
	Labour for making battens				
0112	Carpenter 2nd class	day	0.15	273.00	40.95
0114	Beldar	day	0.15	247.00	37.05
9999	Sundries	L.S.	2.86	1.49	4.26
	Labour for nailing the battens to under layer and finishing and repairing grooves				
0123	Mason (brick layer) 1 st class	day	0.70	301.00	210.70
0114	Beldar	day	0.70	247.00	172.90
9999	Nails and cement mortar	L.S.	71.76	1.49	106.92
	TOTAL				610.36
	Add Water Charges @ 1%				6.10
	TOTAL				616.46
	Add CPOH @ 15%				92.47
	Cost of 30 metre				708.93
	Cost of 1 metre				23.63
	Say				23.65

13.73.2 20 mm wide and 15 mm deep groove

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 30 mtrs MATERIAL: Second class kail wood in plank 30 x0.02 x0.015m =9.00 cudm Wastage® 10%= 0.90 Total = 9.90 cudm Assuming that the battens shall become unserviceable after using 5 times Cost for using once = 9.9 / 5 = 1.98 cudm				
1198	Second class kail wood in planks	10 cudm	1.98	250.00	49.50
9999	Carriage of wood	L.S.	0.52	1.49	0.77
	Labour for making battens				
0112	Carpenter 2nd class	day	0.15	273.00	40.95
0114	Beldar	day	0.15	247.00	37.05
9999	Sundries	L.S.	2.86	1.49	4.26
	Labour for nailing the battens to under layer and finishing and repairing grooves				
0123	Mason (brick layer) 1 st class	day	0.70	301.00	210.70
0114	Beldar	day	0.70	247.00	172.90
9999	Nails and cement mortar	L.S.	71.76	1.49	106.92

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	TOTAL				623.05
	Add Water Charges @ 1%				6.23
	TOTAL				629.28
	Add CPOH @ 15%				94.39
	Cost of 30 metre				723.67
	Cost of 1 metre				24.12
	Say				24.10

13.74 Extra for washed grit plaster on exterior walls of height more than 10 m from ground level for every additional height of 3 m or part thereof.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
9999	Scaffolding	L.S.	215.28	1.49	320.77
0123	Mason (brick layer) 1 st class	day	0.30	301.00	90.30
0114	Beldar	day	0.30	247.00	74.10
0101	Bhisti	day	0.15	260.00	39.00
9999	Sundries	L.S.	28.60	1.49	42.61
	TOTAL				566.78
	Add Water Charges @ 1%				5.67
	TOTAL				572.45
	Add CPOH @ 15%				85.87
	Cost of 10 sqm				658.32
	Cost of 1 sqm				65.83
	Say				65.85

13.75 Extra for washed stone grit plaster on circular work not exceeding 6 m in radius (in two coats).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	LABOUR:				
0123	Mason (brick layer) 1 st class	day	0.50	301.00	150.50
0114	Beldar	day	0.50	247.00	123.50
9999	Sundries	L.S.	53.82	1.49	80.19
	TOTAL				354.19
	Add Water Charges @ 1%				3.54
	TOTAL				357.73
	Add CPOH @ 15%				53.66
	Cost of 10 sqm				411.39
	Cost of 1 sqm				41.14
	Say				41.15

13.76 Forming groove of uniform size from 12x12 mm and upto 25x15 mm in the top layer of washed stone grit plastered surface as per approved pattern, including providing and fixing aluminum channels of appropriate size and thickness (not less than 2 mm), nailed to the under layer with rust proof screws and nails and finishing the groove complete as per specifications and direction of the Engineer-in-Charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 30 mtrs				
	MATERIAL:				
	Aluminium channel section 15 x 15 x 2 mm weight 0.221 kg/mtr				
	Qty = 30 + 5% wastage = 31.5 m @ 0.221 kg/m = 6.96 kg.				
7306	Aluminium T or L sections	kilogram	6.96	220.00	1,531.20
9999	Carriage	L.S.	38.98	1.49	58.08
	LABOUR:				
	For fixing				
0117	Assistant Fitter or 2nd class Fitter	day	0.46	273.00	125.58
0114	Beldar	day	0.15	247.00	37.05
9999	Sundries	L.S.	2.86	1.49	4.26
9999	Nails and cement mortar	L.S.	71.76	1.49	106.92
	TOTAL				1,863.09
	Add Water Charges @ 1%				18.63
	TOTAL				1,881.72
	Add CPOH @ 15%				282.26
	Cost of 30 metre				2,163.98
	Cost of 1 metre				72.13
	Say				72.15

13.77 Extra for using white cement in place of ordinary cement in the top layer of the item of washed stone grit plaster.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
	Add for				
0368	White Cement	tonne	0.10	12,000.00	1,200.00
	Deduct for ordinary cement				
0367	Portland Cement	tonne	-0.10	5,000.00	-500.00
	TOTAL				700.00
	Add Water Charges @ 1%				7.00
	TOTAL				707.00
	Add CPOH @ 15%				106.05
	Cost of 10 sqm				813.05
	Cost of 1 sqm				81.31
	Say				81.30

13.78 Providing and applying 12 mm thick (average) premixed formulated one coat gypsum lightweight plaster having additives and light weight aggregates as vermiculite / periite 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.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm MATERIAL: Premixed super white gypsum plaster @ 16.14kg /sqm = 161.40 + 5% wastage = 161.40+8.07= 169.47 kg				
0868	Premixed super white gypsum plaster. LABOUR:	kg	169.47	7.00	1,186.29
0155	Mason (average)	day	1.20	287.00	344.40
0115	Coolie	day	1.20	247.00	296.40
9999	Scaffolding and sundries	L.S.	12.61	1.49	18.79
	TOTAL				1,845.88
	Add Water Charges @ 1%				18.46
	TOTAL				1,864.34
	Add CPOH @ 15%				279.65
	Cost of 10 sqm				2,143.99
	Cost of 1 sqm				214.40
	Say				214.40

13.79 Extra for addition of synthetic polyester triangular fibre of length 6 mm, effective diameter 10-40 microns and specific gravity of 1.34 to 1.40 in cement plaster/mortar by using 125 gms of synthetic polyester triangular fibre for 50 kg cement used in cement mortar as per directions of Engineer-in-Charge

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for per bag of 50 kgs of cement used in mortar MATERIAL				
8733	Synthetic ployster triangular fibre of length 6 mm, effective diameter 10-40 microns and specific gravity of 1.34 to 1.40 including labour for mixing	kg	0.125	365.00	45.62
	TOTAL				45.62
	Add Water Charges @ 1%				0.46
	TOTAL				46.08
	Add CPOH @ 15%				6.91
	Cost per bag of 50kg of cement				52.99
	Say				53.00

13.80 Providing and applying white cement based putty of average thickness 1 mm, of approved brand and manufacturer, over the plastered wall surface to prepare the surface even and smooth complete.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm MATERIAL:				
0824	White cement based putty	kg	14.58	23.50	342.63

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	10x0.001x1429 = 14.29kg Add 2% wastage= 0.29kg Total = 14.58kg Say 14.58 kg				
9999	Carriage of plaster of paris	L.S.	3.90	1.49	5.81
	LABOUR:				
0122	Mason (for plaster of paris work) 1 st class	day	0.45	301.00	135.45
0114	Beldar	day	0.45	247.00	111.15
9999	Scaffolding and sundries	L.S.	40.00	1.49	59.60
	TOTAL				654.64
	Add Water Charges @ 1%				6.55
	TOTAL				661.19
	Add CPOH @ 15%				99.18
	Cost of 10 sqm				760.37
	Cost of 1 sqm				76.04
	Say				76.05

13.81 Distempering with 1st quality acrylic distemper, having VOC (Volatile Organic Compound) content less than 50 grams/ litre, of approved brand and manufacture, including applying additional coats wherever required, to achieve even shade and colour.

13.81.1 One coat

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
0802	Acrylic distemper 1st quality , having VOC content less than 50 grams/ litre	Kg	0.62	38.00	23.56
9999	Brushes, putty etc.	L.S.	0.52	1.49	0.77
9999	Sundries including carriage	L.S.	10.79	1.49	16.08
	LABOUR:				
0131	Painter	day	0.33	273.00	90.09
0115	Coolie	day	0.17	247.00	41.99
9999	Sundries	L.S.	7.15	1.49	10.65
	TOTAL				183.14
	Add Water Charges @ 1%				1.83
	TOTAL				184.97
	Add CPOH @ 15%				27.75
	Cost of 10 sqm				212.72
	Cost of 1 sqm				21.27
	Say				21.25

13.81.2 Two coats

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
0802	Acrylic distemper 1st quality , having VOC content less than 50 grams/ litre	Kg	0.99	38.00	37.62
9999	Brushes, putty etc.	L.S.	11.57	1.49	17.24
9999	Sundries including carriage	L.S.	4.42	1.49	6.59

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	LABOUR:				
0131	Painter	day	0.40	273.00	109.20
0115	Coolie	day	0.46	247.00	113.62
9999	Sundries	L.S.	8.06	1.49	12.01
	TOTAL				296.28
	Add Water Charges @ 1%				2.96
	TOTAL				299.24
	Add CPOH @ 15%				44.89
	Cost of 10 sqm				344.13
	Cost of 1 sqm				34.41
	Say				34.40

13.82 Wall painting with acrylic emulsion paint, having VOC (Volatile Organic Compound) content less than 50 grams/ litre, of approved brand and manufacture, including applying additional coats wherever required, to achieve even shade and colour.

13.82.1 One coat

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
0803	Acrylic emulsion , having VOC content less than 50 grams/ litre	litre	0.53	200.00	106.00
9999	Material for filling in holes and cracks (putty) etc.	L.S.	0.52	1.49	0.77
9999	Carriage of material	L.S.	5.33	1.49	7.94
	LABOUR:				
0131	Painter	day	0.36	273.00	98.28
0115	Coolie	day	0.36	247.00	88.92
9999	Brushes, sand paper etc.	L.S.	8.06	1.49	12.01
9999	Sundries	L.S.	6.76	1.49	10.07
	TOTAL				323.99
	Add Water Charges @ 1%				3.24
	TOTAL				327.23
	Add CPOH @ 15%				49.08
	Cost of 10 sqm				376.31
	Cost of 1 sqm				37.63
	Say				37.65

13.82.2 Two coats

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
0803	Acrylic emulsion , having VOC content less than 50 grams/ litre	litre	0.84	200.00	168.00
9999	Carriage of material	L.S.	6.76	1.49	10.07
9999	Brushes, putty etc.	L.S.	1.43	1.49	2.13
	LABOUR:				
0131	Painter	day	0.54	273.00	147.42
0115	Coolie	day	0.54	247.00	133.38
9999	Brushes, sand paper etc.	L.S.	10.79	1.49	16.08
9999	Sundries	L.S.	6.76	1.49	10.07
	TOTAL				487.15
	Add Water Charges @ 1%				4.87
	TOTAL				492.02
	Add CPOH @ 15%				73.80
	Cost of 10 Sqm				565.82
	Cost of 1 Sqm				56.58
	Say				56.60

13.83 Wall painting with premium acrylic emulsion paint of interior grade, having VOC (Volatile Organic Compound) content less than 50 grams/ litre. of approved brand and manufacture, including applying additional coats wherever required to achieve even shade and colour.

13.83.1 One coat

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
0804	Premium acrylic emulsion of interior grade, having VOC content less than 50 grams/ litre	litre	0.38	350.00	133.00
9999	Material for filling in holes and cracks (putty) etc.	L.S.	0.52	1.49	0.77
9999	Carriage of material	L.S.	5.33	1.49	7.94
	LABOUR:				
0131	Painter	day	0.36	273.00	98.28
0115	Coolie	day	0.36	247.00	88.92
9999	Brushes, sand paper etc.	L.S.	8.06	1.49	12.01
9999	Sundries	L.S.	6.76	1.49	10.07
	TOTAL				350.99
	Add Water Charges @ 1%				3.51
	TOTAL				354.50
	Add CPOH @ 15%				53.18
	Cost of 10 sqm				407.68
	Cost of 1 sqm				40.77
	Say				40.75

13.83.2 Two coats

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
0804	Premium acrylic emulsion of interior grade, having VOC content less than 50 grams/ litre	litre	0.60	350.00	210.00
9999	Material for filling in holes and cracks (putty) etc.	L.S.	6.76	1.49	10.07
9999	Carriage of material	L.S.	1.43	1.49	2.13
	LABOUR:				
0131	Painter	day	0.54	273.00	147.42
0115	Coolie	day	0.54	247.00	133.38
9999	Brushes, sand paper etc.	L.S.	10.79	1.49	16.08
9999	Sundries	L.S.	6.76	1.49	10.07
	TOTAL				529.15
	Add Water Charges @ 1%				5.29
	TOTAL				534.44
	Add CPOH @ 15%				80.17
	Cost of 10 Sqm				614.61
	Cost of 1 Sqm				61.46
	Say				61.45

13.84 Painting with synthetic enamel paint, having VOC (Volatile Organic Compound) content less than 150 grams/ litre, of approved brand and manufacture, including applying additional coats wherever required to achieve even shade and colour.

13.84.1 One coat

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for				
	MATERIAL:				
0805	Synthetic enamel paint , having VOC (Volatile Organic Compound) content less than 150 grams/ litre	litre	0.53	180.00	95.40

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Material for filling in holes and cracks (putty) etc.	L.S.	0.52	1.49	0.77
	LABOUR:				
0131	Painter	day	0.36	273.00	98.28
0115	Coolie	day	0.36	247.00	88.92
9999	Putty	L.S.	2.73	1.49	4.07
9999	Brushes, sand paper etc.	L.S.	5.33	1.49	7.94
9999	Sundries	L.S.	8.06	1.49	12.01
	TOTAL				307.39
	Add Water Charges @ 1%				3.07
	TOTAL				310.46
	Add CPOH @ 15%				46.57
	Cost of 10 sqm				357.03
	Cost of 1 sqm				35.70
	Say				35.70

13.84.2 Two coats

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
0805	Synthetic enamel paint , having VOC (Volatile Organic Compound) content less than 150 grams/ litre	litre	0.84	180.00	151.20
9999	Carriage of material	L.S.	1.43	1.49	2.13
9999	Material for filling in holes and cracks (putty) etc.	L.S.	5.33	1.49	7.94
	LABOUR:				
0131	Painter	day	0.54	273.00	147.42
0115	Coolie	day	0.54	247.00	133.38
9999	Brushes, sand paper etc.	L.S.	6.76	1.49	10.07
9999	Sundries	L.S.	8.06	1.49	12.01
	TOTAL				464.15
	Add Water Charges @ 1%				4.64
	TOTAL				468.79
	Add CPOH @ 15%				70.32
	Cost of 10 Sqm				539.11
	Cost of 1 Sqm				53.91
	Say				53.90

13.85 Applying priming coats with primer of approved brand and manufacture, having low VOC (Volatile Organic Compound) content.

13.85.1 With ready mixed pink or grey primer on wood work (hard and soft wood) having VOC content less than 50 grams/ litre

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
0806	Ready mixed pink or grey primer on wood work (hard and soft wood) having VOC content less than 50 grams/ litre	litre	0.75	103.00	77.25
9999	Putty	L.S.	2.73	1.49	4.07
9999	Carriage of material	L.S.	0.39	1.49	0.58

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	LABOUR:				
0131	Painter	day	0.25	273.00	68.25
0115	Coolie	day	0.25	247.00	61.75
9999	Brushes, sand paper etc.	L.S.	5.33	1.49	7.94
9999	Sundries	L.S.	10.79	1.49	16.08
	TOTAL				235.92
	Add Water Charges @ 1%				2.36
	TOTAL				238.28
	Add CPOH @ 15%				35.74
	Cost of 10 sqm				274.02
	Cost of 1 sqm				27.40
	Say				27.40

13.85.2 With ready mixed red oxide zinc chromatic on steel / iron works having VOC content less than 250 grams/litre

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
0807	Ready mixed red oxide zinc chromatic on steel/ iron work, having VOC content less than 250 grams/ litre	litre	0.54	125.00	67.50
9999	Carriage of materials	L.S.	0.52	1.49	0.77
	LABOUR:				
0131	Painter	day	0.24	273.00	65.52
0115	Coolie	day	0.24	247.00	59.28
9999	Brushes, sand paper etc.	L.S.	10.79	1.49	16.08
	TOTAL				209.15
	Add Water Charges @ 1%				2.09
	TOTAL				211.24
	Add CPOH @ 15%				31.69
	Cost of 10 sqm				242.93
	Cost of 1 sqm				24.29
	Say				24.30

13.85.3 With water thinnable cement primer on wall surface having VOC content less than 50 grams/litre

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
0808	Water thinnable cement primer for interior wall surface, having VOC content less than 50 grams/ litre	litre	0.70	55.00	38.50
9999	Carriage of materials	L.S.	8.06	1.49	12.01
	LABOUR:				
0131	Painter	day	0.40	273.00	109.20
0115	Coolie	day	0.20	247.00	49.40
9999	Brushes, sand paper, putty etc.	L.S.	7.15	1.49	10.65
	TOTAL				219.76
	Add Water Charges @ 1%				2.20
	TOTAL				221.96
	Add CPOH @ 15%				33.29
	Cost of 10 sqm				255.25
	Cost of 1 sqm				25.53
	Say				25.50

SUB HEAD : 14.0

REPAIRS TO BUILDINGS

14.1 Repairs to plaster of thickness 12 mm to 20 mm in patches of area 2.5 sq meters and under, including cutting the patch in proper shape, raking out joints and preparing and plastering the surface of the walls complete, including disposal of rubbish to the dumping ground within 50 metres lead:

14.1.1 With cement mortar 1:4 (1 cement : 4 fine sand)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
	Cement mortar 1:4 (1 cement: 4 fine sand)				
3.4	Rate as per Item Number 3.4 of SH: Mortars	cum	0.183	2,971.80	543.84
0155	Mason (average)	day	1.21	287.00	347.27
0115	Coolie	day	1.29	247.00	318.63
0114	Beldar	day	0.54	247.00	133.38
0101	Bhisti	day	0.92	260.00	239.20
9999	Scaffolding and sundries	L.S.	15.21	1.49	22.66
	TOTAL				1,604.98
	Add Water Charges @ 1%				16.05
	TOTAL				1,621.03
	Add CPOH @ 15%				243.15
	Cost of 10 sqm				1,864.18
	Cost of 1 sqm				186.42
	Say				186.40

14.1.2 With cement mortar 1:4 (1 cement : 4 coarse sand)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
	Cement mortar 1:4 (1 cement: 4 coarse sand)				
3.9	Rate as per Item Number 3.9 of SH: Mortars	cum	0.183	3,485.40	637.83
	LABOUR:				
0155	Mason (average)	day	1.21	287.00	347.27
0115	Coolie	day	1.29	247.00	318.63
0114	Beldar	day	0.54	247.00	133.38
0101	Bhisti	day	0.92	260.00	239.20
9999	Scaffolding and sundries	L.S.	15.21	1.49	22.66
	TOTAL				1,698.97
	Add Water Charges @ 1%				16.99
	TOTAL				1,715.96
	Add CPOH @ 15%				257.39
	Cost of 10 sqm				1,973.35
	Cost of 1 sqm				197.34
	Say				197.35

14.2 Fixing chowkhats in existing opening including embedding chowkhats in floors or walls cutting masonry for holdfasts, embedding hold fasts in cement concrete blocks of size 15 x 10 x 10 cm, with cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size), painting two coats of approved wood preservative to sides of chowkhats and making good the damages to walls and floors as required complete, including disposal of rubbish to the dumping ground within 50 meters lead :

14.2.1 Door chowkhats

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
0295	Stone Aggregate (Single size) : 20 mm nominal size	cum	0.021	1,050.00	22.05
0297	Stone Aggregate (Single size) : 10 mm nominal size	cum	0.0072	1,050.00	7.56
2202	Carriage of stone aggregate below 40 mm nominal size	cum	0.0282	87.60	2.47
0982	Coarse sand (zone III)	cum	0.0141	1,120.00	15.79
2203	Carriage of coarse sand	cum	0.0141	87.60	1.24
0367	Portland Cement	tonne	0.0066	5,000.00	33.00
2209	Carriage of cement	tonne	0.0066	77.87	0.51
0114	Beldar	day	0.027	247.00	6.67
0115	Coolie	day	0.0195	247.00	4.82
0130	Mistry	day	0.0084	301.00	2.53
0123	Mason (brick layer) 1 st class	day	0.0018	301.00	0.54
0124	Mason (brick layer) 2nd class	day	0.0018	273.00	0.49
0128	Mate	day	0.0012	260.00	0.31
9999	Scaffolding	L.S.	1.43	1.49	2.13
9999	Hire and running charges of mechanical mixer	L.S.	0.78	1.49	1.16
9999	Sundries	L.S.	0.39	1.49	0.58
	Cement mortar 1:6 (1 cement: 6 fine sand)				
3.6	Rate as per Item Number 3.6 of SH: Mortars	cum	0.01	2,311.70	23.12
9999	Cement concrete 1:2:4 filled in chase cut	L.S.	24.18	1.49	36.03
9999	Painting two coats of coaltar	L.S.	13.52	1.49	20.14
9999	Disposal of mulba	L.S.	1.82	1.49	2.71
0155	Mason (average)	day	0.50	287.00	143.50
0114	Beldar	day	0.75	247.00	185.25
9999	Sundries	L.S.	2.73	1.49	4.07
	TOTAL				516.67
	Add Water Charges @ 1%				5.17
	TOTAL				521.84
	Add CPOH @ 15%				78.28
	Cost of each				600.12
	Say				600.10

14.2.2 Window chowkhats

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
0295	Stone Aggregate (Single size) : 20 mm nominal size	cum	0.014	1,050.00	14.70
0297	Stone Aggregate (Single size) : 10 mm nominal size	cum	0.0048	1,050.00	5.04
2202	Carriage of stone aggregate below 40 mm nominal size	cum	0.0188	87.60	1.65
0982	Coarse sand (zone III)	cum	0.0094	1,120.00	10.53
2203	Carriage of coarse sand	cum	0.0094	87.60	0.82
0367	Portland Cement	tonne	0.0044	5,000.00	22.00
2209	Carriage of cement	tonne	0.0044	77.87	0.34
0114	Beldar	day	0.018	247.00	4.45

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0115	Coolie	day	0.013	247.00	3.21
0130	Mistry	day	0.0056	301.00	1.69
0123	Mason (brick layer) 1 st class	day	0.0012	301.00	0.36
0124	Mason (brick layer) 2nd class	day	0.0012	273.00	0.33
0128	Mate	day	0.0008	260.00	0.21
9999	Scaffolding and sundries	L.S.	0.91	1.49	1.36
9999	Hire and running charges of mechanical mixer	L.S.	0.52	1.49	0.77
9999	Sundries	L.S.	0.26	1.49	0.39
	Cement mortar 1:6 (1 cement: 6 fine sand)				
3.6	Rate as per Item Number 3.6 of SH: Mortars	cum	0.006	2,311.70	13.87
9999	Cement concrete 1:2:4	L.S.	9.88	1.49	14.72
9999	Painting two coats of coaltar	L.S.	0.91	1.49	1.36
0155	Mason (average)	day	0.33	287.00	94.71
0114	Beldar	day	0.50	247.00	123.50
	TOTAL				316.01
	Add Water Charges @ 1%				3.16
	TOTAL				319.17
	Add CPOH @ 15%				47.88
	Cost of each				367.05
	Say				367.05

14.2.3 Clerestory window chowkhats

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
0295	Stone Aggregate (Single size) : 20 mm nominal size	cum	0.007	1,050.00	7.35
0297	Stone Aggregate (Single size) : 10 mm nominal size	cum	0.0024	1,050.00	2.52
2202	Carriage of stone aggregate below 40 mm nominal size	cum	0.0094	87.60	0.82
0982	Coarse sand (zone III)	cum	0.0047	1,120.00	5.26
2203	Carriage of coarse sand	cum	0.0047	87.60	0.41
0367	Portland Cement	tonne	0.0022	5,000.00	11.00
2209	Carriage of cement	tonne	0.0022	77.87	0.17
0114	Beldar	day	0.009	247.00	2.22
0115	Coolie	day	0.0065	247.00	1.61
0130	Mistry	day	0.0028	301.00	0.84
0123	Mason (brick layer) 1 st class	day	0.0006	301.00	0.18
0124	Mason (brick layer) 2nd class	day	0.0006	273.00	0.16
0128	Mate	day	0.0004	260.00	0.10
9999	Scaffolding and sundries	L.S.	0.52	1.49	0.77
9999	Hire and running charges of mechanical mixer	L.S.	0.26	1.49	0.39
9999	Sundries	L.S.	0.13	1.49	0.19
	Cement mortar 1:6 (1 cement: 6 fine sand)				
3.6	Rate as per Item Number 3.6 of SH: Mortars	cum	0.003	2,311.70	6.94
9999	Cement concrete 1:2:4 filled in chase cut	L.S.	8.06	1.49	12.01
9999	Painting two coats of coaltar	L.S.	0.91	1.49	1.36
0155	Mason (average)	day	0.17	287.00	48.79
0114	Beldar	day	0.50	247.00	123.50

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries	L.S.	2.73	1.49	4.07
	TOTAL				230.66
	Add Water Charges @ 1%				2.31
	TOTAL				232.97
	Add CPOH @ 15%				34.95
	Cost of each				267.92
	Say				267.90

14.3 Fixing chowkhat in existing opening in brick / RCC wall with dash fasteners / chemical fasteners of appropriate size (3 nos on each vertical member of door chowkhat and 2 nos on each vertical member of window chowkhats), including cost of dash fasteners / chemical fastener.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1chowkhat				
0114	Beldar	day	0.027	247.00	6.67
0115	Coolie	day	0.0195	247.00	4.82
0130	Mistry	day	0.0084	301.00	2.53
0128	Mate	day	0.0012	260.00	0.31
9999	Disposal of mulba	L.S.	1.82	1.49	2.71
7019	Dash fastener / Chemical fastner	each	6.00	13.00	78.00
9999	Hire charges of drill machine, scaffolding and sundries	L.S.	12.22	1.49	18.21
	TOTAL				113.25
	Add Water Charges @ 1%				1.13
	TOTAL				114.38
	Add CPOH @ 15%				17.16
	Cost of each				131.54
	Say				131.55

14.4 Making the opening in brick masonry including dismantling in floor or walls by cutting masonry and making good the damages to walls,flooring and jambs complete, to match existing surface i/c disposal of mulba / rubbish to the nearest municipal dumping ground.

14.4.1 For door / window / clerestory window

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one opening of size 0.90x2.10m = 1.89 sqm				
	Cement mortar 1:6 (1 cement: 6 fine sand)				
3.6	Rate as per Item Number 3.6 of SH: Mortars	cum	0.01	2,311.70	23.12
9999	Cement concrete 1:2:4 filled in chase cut	L.S.	24.57	1.49	36.61
0124	Mason (brick layer) 2nd class	day	0.50	273.00	136.50
0114	Beldar	day	1.20	247.00	296.40
0115	Coolie	day	0.40	247.00	98.80
9999	Scaffolding and sundries	L.S.	3.50	1.49	5.22
	TOTAL				596.65
	Add Water Charges @ 1%				5.97
	TOTAL				602.62
	Add CPOH @ 15%				90.39
	Cost of 1.89 sqm				693.01
	Cost of 1 sqm				366.67
	Say				366.65

14.5 Renewing glass panes, with putty and nails wherever necessary including racking out the old putty :

14.5.1 Float glass panes of thickness 4 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 glasses area each 0.10 sqm				
	MATERIAL:				
2406	Float glass sheet of nominal thickness 4 mm (weight not less than 10 kg/sqm) 1.00 sqm + 10% wastage= 1.10 Sqm	sqm	1.10	310.00	341.00
9999	Carriage including sundries	L.S.	1.82	1.49	2.71
0863	Putty for wood work	kilogram	0.68	30.00	20.40
9999	Painting or varnishing or beerwaxing	L.S.	5.33	1.49	7.94
9999	Sundries Nails etc.	L.S.	6.76	1.49	10.07
0119	Glazier	day	0.23	273.00	62.79
0114	Beldar	day	0.23	247.00	56.81
9999	Sundries such as Rag, cootton etc.	L.S.	1.43	1.49	2.13
	TOTAL				503.85
	Add Water Charges @ 1%				5.04
	TOTAL				508.89
	Add CPOH @ 15%				76.33
	Cost of 1 sqm				585.22
	Say				585.20

14.5.2 Float glass panes of thickness 5.5 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 glasses area each 0.10 sqm				
	MATERIAL:				
2407	Float glass sheet of nominal thickness 5.5 mm (weight not less than 13.50 kg/sqm) 1.00 sqm + 10% wastage= 1.10 Sqm	sqm	1.10	450.00	495.00
9999	Carriage including sundries	L.S.	1.82	1.49	2.71
0863	Putty for wood work	kilogram	0.68	30.00	20.40
9999	Painting or varnishing or beerwaxing	L.S.	5.33	1.49	7.94
9999	Sundries Nails etc.	L.S.	6.76	1.49	10.07
0119	Glazier	day	0.23	273.00	62.79
0114	Beldar	day	0.23	247.00	56.81
9999	Sundries such as Rag, cootton etc.	L.S.	1.43	1.49	2.13
	TOTAL				657.85
	Add Water Charges @ 1%				6.58
	TOTAL				664.43
	Add CPOH @ 15%				99.66
	Cost of 1 sqm				764.09
	Say				764.10

14.6 Renewing glass panes, with wooden fillets wherever necessary :

14.6.1 Float glass panes of thickness 4 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 glasses area each 0.10 sqm				
	MATERIAL:				
2406	Float glass sheet of nominal thickness 4 mm (weight not less than 10 kg/sqm) 1.00 sqm + 10% wastage= 1.10 Sqm	sqm	1.10	310.00	341.00
1189	Second class teak wood in scantling	10 cudm	0.25	640.00	16.00
1194	Second class deodar wood in planks	10 cudm	0.25	480.00	12.00
1196	First class kail wood in planks	10 cudm	0.25	300.00	7.50
9999	Painting or varnishing or beerwaxing	L.S.	4.42	1.49	6.59
9999	Sundries Nails etc.	L.S.	2.73	1.49	4.07
0112	Carpenter 2nd class	day	0.20	273.00	54.60
0119	Glazier	day	0.25	273.00	68.25
0114	Beldar	day	0.45	247.00	111.15
9999	Sundries such as Rag, cootton etc.	L.S.	1.82	1.49	2.71
	TOTAL				623.87
	Add Water Charges @ 1%				6.24
	TOTAL				630.11
	Add CPOH @ 15%				94.52
	Cost of 1 sqm				724.63
	Say				724.65

14.6.2 Float glass panes of thickness 5.5 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 glasses area each 0.10 sqm				
	MATERIAL:				
2407	Float glass sheet of nominal thickness 5.5 mm (weight not less than 13.50 kg/sqm) 1.00 sqm + 10% wastage= 1.10 Sqm	sqm	1.10	450.00	495.00
1189	Second class teak wood in scantling	10 cudm	0.25	640.00	16.00
1194	Second class deodar wood in planks	10 cudm	0.25	480.00	12.00
1196	First class kail wood in planks	10 cudm	0.25	300.00	7.50
9999	Painting or varnishing or beerwaxing	L.S.	4.42	1.49	6.59
9999	Sundries Nails etc.	L.S.	2.73	1.49	4.07
0112	Carpenter 2nd class	day	0.20	273.00	54.60
0119	Glazier	day	0.25	273.00	68.25
0114	Beldar	day	0.45	247.00	111.15
9999	Sundries such as Rag, cootton etc.	L.S.	1.82	1.49	2.71
	TOTAL				777.87
	Add Water Charges @ 1%				7.78
	TOTAL				785.65
	Add CPOH @ 15%				117.85
	Cost of 1 sqm				903.50
	Say				903.50

14.7 Renewing glass panes and refixing existing wooden fillets:

14.7.1 Float glass panes of thickness 4 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 glasses area each 0.10 sqm				
	MATERIAL:				
2406	Float glass sheet of nominal thickness 4 mm (weight not less than 10 kg/sqm) 1.00 sqm + 10% wastage= 1.10 Sqm	sqm	1.10	310.00	341.00
9999	Carriage of glasspanes and other materials	L.S.	2.73	1.49	4.07
9999	Sundries Nails etc.	L.S.	9.88	1.49	14.72
9999	Methylated spirit	L.S.	5.33	1.49	7.94
0119	Glazier	day	0.30	273.00	81.90
0114	Beldar	day	0.30	247.00	74.10
9999	Sundries	L.S.	1.43	1.49	2.13
	TOTAL				525.86
	Add Water Charges @ 1%				5.26
	TOTAL				531.12
	Add CPOH @ 15%				79.67
	Cost of 1 sqm				610.79
	Say				610.80

14.7.2 Float glass panes of thickness 5.5 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 glasses area each 0.10 sqm				
	MATERIAL:				
2407	Float glass sheet of nominal thickness 5.5 mm (weight not less than 13.50 kg/sqm) 1.00 sqm + 10% wastage= 1.10 Sqm	sqm	1.10	450.00	495.00
9999	Carriage of glasspanes and other materials	L.S.	2.73	1.49	4.07
9999	Sundries Nails etc.	L.S.	9.88	1.49	14.72
9999	Methylated spirit	L.S.	5.33	1.49	7.94
0119	Glazier	day	0.30	273.00	81.90
0114	Beldar	day	0.30	247.00	74.10
9999	Sundries	L.S.	1.43	1.49	2.13
	TOTAL				679.86
	Add Water Charges @ 1%				6.80
	TOTAL				686.66
	Add CPOH @ 15%				103.00
	Cost of 1 sqm				789.66
	Say				789.65

14.8 Supplying and fixing new wooden fillets wherever necessary:

14.8.1 2nd class teak wood fillets

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metres length				
	MATERIAL:				
1190	Second class teak wood in planks 10.00x0.01x0.01 = 1.00 cudm Add 15% wastage = 0.15 cudm Total = 1.15 cudm	10 cudm	1.15	720.00	82.80

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Nails	L.S.	26.91	1.49	40.10
	LABOUR:				
0112	Carpenter 2nd class	day	0.25	273.00	68.25
0114	Beldar	day	0.25	247.00	61.75
9999	Sundries	L.S.	2.73	1.49	4.07
	TOTAL				256.97
	Add Water Charges @ 1%				2.57
	TOTAL				259.54
	Add CPOH @ 15%				38.93
	Cost of 10 metre				298.47
	Cost of 1 metre				29.85
	Say				29.85

14.8.2 Hallock wood fillets

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metres length				
	MATERIAL:				
2466	Hollock wood in scantling 10.00x0.01x0.01 = 1.00 cudm Add 15% wastage = 0.15 cudm Total = 1.15 cudm	10 cudm	1.15	310.00	35.65
9999	Nails	L.S.	26.91	1.49	40.10
	LABOUR:				
0112	Carpenter 2nd class	day	0.25	273.00	68.25
0114	Beldar	day	0.25	247.00	61.75
9999	Sundries	L.S.	2.73	1.49	4.07
	TOTAL				209.82
	Add Water Charges @ 1%				2.10
	TOTAL				211.92
	Add CPOH @ 15%				31.79
	Cost of 10 metre				243.71
	Cost of 1 metre				24.37
	Say				24.35

14.9 Renewal of old putty of glass panes (length).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 13 metres length				
	MATERIAL:				
0863	Putty for wood work	kilogram	0.68	30.00	20.40
9999	Nails	L.S.	7.15	1.49	10.65
9999	Spirit	L.S.	2.73	1.49	4.07
	LABOUR:				
0112	Carpenter 2nd class	day	0.30	273.00	81.90
0114	Beldar	day	0.30	247.00	74.10
9999	Sundries	L.S.	1.43	1.49	2.13
	TOTAL				193.25
	Add Water Charges @ 1%				1.93
	TOTAL				195.18
	Add CPOH @ 15%				29.28
	Cost of 13 metre				224.46
	Cost of 1 metre				17.27
	Say				17.25

14.10 Refixing old glass panes with putty and nails.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 sqm				
	MATERIAL:				
0863	Putty for wood work	kilogram	0.68	30.00	20.40
9999	Spirit	L.S.	2.73	1.49	4.07
9999	Nails	L.S.	7.15	1.49	10.65
	LABOUR:				
0119	Glazier	day	0.30	273.00	81.90
0114	Beldar	day	0.30	247.00	74.10
9999	Sundries	L.S.	1.43	1.49	2.13
	TOTAL				193.25
	Add Water Charges @ 1%				1.93
	TOTAL				195.18
	Add CPOH @ 15%				29.28
	Cost of 1 sqm				224.46
	Say				224.45

14.11 Fixing old glass panes with wooden fillets (excluding cost of fillets).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 sqm				
	MATERIAL:				
0119	Glazier	day	0.30	273.00	81.90
0114	Beldar	day	0.30	247.00	74.10
9999	Sundries	L.S.	1.43	1.49	2.13
9999	Nails	L.S.	3.90	1.49	5.81
	TOTAL				163.94
	Add Water Charges @ 1%				1.64
	TOTAL				165.58
	Add CPOH @ 15%				24.84
	Cost of 1 sqm				190.42
	Say				190.40

14.12 Providing and fixing 16 mm M.S. Fan clamps of standard shape and size in existing R.C.C. slab, including cutting chase, anchoring clamp to reinforcement bar, including cleaning, refilling, making good the chase with matching concrete, plastering and painting the exposed portion of the clamps complete.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for each fan clamp				
	MATERIAL:				
	M.S.bar 16mm dia = 40cm (including wastage) @ 1.58 kg/m = 0.632 kg				
1003	Mild steel round bar above 12 mm dia	quintal	0.00632	4,000.00	25.28
9999	Cement concrete	L.S.	13.52	1.49	20.14
	Cement concrete 1:2:4 (1 Cement: 2 Coarse sand : 4 graded stone aggregate 20mm nominal size) mortar for rendering or plastering				
9999	Painting two or more coats to exposed portion of the clamp including priming coat	L.S.	7.15	1.49	10.65

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	LABOUR:				
	Labour for fixing				
0102	Blacksmith 1 st class	day	0.03	301.00	9.03
0124	Mason (brick layer) 2nd class	day	0.12	273.00	32.76
0114	Beldar	day	0.25	247.00	61.75
9999	Sundries	L.S.	2.73	1.49	4.07
	TOTAL				163.68
	Add Water Charges @ 1%				1.64
	TOTAL				165.32
	Add CPOH @ 15%				24.80
	Cost of each				190.12
	Say				190.10

14.13 Regrading 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.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
	(i) Dismantling tiles/bricks in cement mortar including removing mud plaster and cleaning the tiles/bricks				
	LABOUR:				
0155	Mason (average)	day	0.54	287.00	154.98
0114	Beldar	day	0.54	247.00	133.38
	(ii) Preparing the surface, for mud phuska to proper slope, relaying mud plaster gobri leeping				
0155	Mason (average)	day	0.27	287.00	77.49
	25mm thick mud plaster including gobri leaping				
	MATERIAL:				
	Mud mortar				
3.18	Rate as per Item Number 3.18 of SH: Mortars	cum	0.24	301.10	72.26
0308	Bhusa	quintal	0.084	375.00	31.50
	Gobri mortar				
3.18	Rate as per Item Number 3.18 of SH: Mortars	cum	0.12	301.10	36.13
	LABOUR:				
0114	Beldar	day	0.25	247.00	61.75
	(iii) relaying tiles/bricks including Cement mortar 1:3 (1 Cement: 3 fine sand) for grouting				
3.3	Rate as per Item Number 3.3 of SH: Mortars	cum	0.061	3,631.95	221.55
0155	Mason (average)	day	1.20	287.00	344.40
0114	Beldar	day	1.50	247.00	370.50
0101	Bhisti	day	1.00	260.00	260.00
9999	Disposal of mulba	L.S.	5.33	1.49	7.94

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries	L.S.	2.73	1.49	4.07
	TOTAL				1,775.95
	Add Water Charges @ 1%				17.76
	TOTAL				1,793.71
	Add CPOH @ 15%				269.06
	Cost of 10 sqm				2,062.77
	Cost of 1 sqm				206.28
	Say				206.30

14.14 Replacing sand stone slabs in roofing, laid in cement mortar 1:4 (1 cement : 4 coarse sand), including necessary repairs and cement pointing with same mortar complete, including disposal of rubbish to dumping ground within 50 metres of lead:

14.14.1 Red / white sand stone slabs 30 to 50 mm thick

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
	Dismantling existing stone, slabs roofing 1x10.00 sqmx0.05m = 0.50 cum				
0114	Beldar	day	0.885	247.00	218.60
0115	Coolie	day	0.375	247.00	92.62
9999	Sundries	L.S.	4.03	1.49	6.00
9999	Cleaning the suface including necessary repairs	L.S.	40.43	1.49	60.24
1174	Red sand stone slab 45 mm to 50 mm thick (un-dressed)	sqm	11.00	165.00	1,815.00
2216	Carriage of stone blocks white & red sand stone & kota stone slab	tonne	1.41	77.87	109.80
	Cement mortar 1:4(1 cement: 4 coarse sand)				
3.9	Rate as per Item Number 3.9 of SH: Mortars	cum	0.0105	3,485.40	36.60
	Cement mortar 1:3 (1 cement :3 fine sand)				
3.3	Rate as per Item Number 3.3 of SH: Mortars	cum	0.0075	3,631.95	27.24
0155	Mason (average)	day	1.69	287.00	485.03
0100	Bandhani	day	2.03	260.00	527.80
0115	Coolie	day	1.69	247.00	417.43
0101	Bhisti	day	0.34	260.00	88.40
9999	Sundries	L.S.	16.12	1.49	24.02
2264	Carriage of rubbish	cum	0.50	87.60	43.80
	TOTAL				3,952.58
	Add Water Charges @ 1%				39.53
	TOTAL				3,992.11
	Add CPOH @ 15%				598.82
	Cost of 10 sqm				4,590.93
	Cost of 1 sqm				459.09
	Say				459.10

14.15 Renewing wooden battens in roofs, including making good the holes in wall and painting with oil type wood preservative of approved brand and manufacture complete, including removal of rubbish to the dumping ground within 50 metres lead:

14.15.1 Sal wood battens

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 300 cudm or 0.3 cum MATERIAL: Consider 10 battens i.e. 300 cudm 3 metres long of 100x100mm 10x3x0.1x0.1 = 0.3cum =300cudm Add wastage @ 2%= 6 cudm Total = 306.00 cudm				
1199	Sal wood in scantling	10 cudm	306.00	500.00	15,300.00
2204	Carriage of timber	cum	0.306	100.11	30.63
	LABOUR: Taking out the existing battens and refixing new one including supporting the roof				
0112	Carpenter 2nd class	day	0.50	273.00	136.50
0114	Beldar	day	2.00	247.00	494.00
9999	Disposal of mulba	L.S.	5.33	1.49	7.94
9999	Making good the holes including sundries	L.S.	80.73	1.49	120.29
0859	Oil type wood preservative	litre	1.22	70.00	85.40
0131	Painter	day	0.183	273.00	49.96
0115	Coolie	day	0.183	247.00	45.20
9999	Carriage	L.S.	0.78	1.49	1.16
9999	Brushes	L.S.	5.07	1.49	7.55
9999	Sundries	L.S.	4.81	1.49	7.17
	TOTAL				16,285.80
	Add Water Charges @ 1%				162.86
	TOTAL				16,448.66
	Add CPOH @ 15%				2,467.30
	Cost of 0.3 cum				18,915.96
	Cost of 1 cum				63,053.20
	Say				63,053.20

14.16 Renewing wooden beams in roofs including making good the holes in walls and painting with oil type wood preservative of approved brand and manufacture complete, including removal of rubbish to the dumping ground within 50 metres lead:

14.16.1 Not exceeding 4.00 metres in length

14.16.1.1 Sal wood beams

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 300 cudm or 0.3 cum Consider one beam i.e. 300 cudm. 0.25 x 0.30m x 4.0m (long) = 0.30 cum Add wastage @ 2% (0.006 cum) = 0.306 cum = 306 cudm (i) Propping the roof MATERIAL: 100mm diameter ballies 4m long 10 Nos. 100x100mm salwood battens 1.0 metre long 5 Nos.x 1.0x0.1 x0.1 =0.05cum = 50 cudm. These materials can be used for 16 times Hence qty for one operation 1/16 = 3.125 cudm				
1199	Sal wood in scantling	10 cudm	3.125	500.00	156.25

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
2204	Carriage of timber	cum	0.0228	100.11	2.28
	LABOUR:				
0112	Carpenter 2nd class	day	0.25	273.00	68.25
0114	Beldar	day	0.25	247.00	61.75
	(ii) Taking out the existing beams etc.				
	LABOUR:				
0155	Mason (average)	day	0.13	287.00	37.31
0100	Bandhani	day	0.50	260.00	130.00
0114	Beldar	day	0.33	247.00	81.51
	(iii) Renewal				
	(a) Materials and Labour				
1199	Sal wood in scantling	10 cudm	306.00	500.00	15,300.00
2204	Carriage of timber	cum	0.306	100.11	30.63
0112	Carpenter 2nd class	day	1.00	273.00	273.00
0100	Bandhani	day	0.50	260.00	130.00
0114	Beldar	day	1.00	247.00	247.00
	Painting with				
0859	Oil type wood preservative =(4x1.1) +(2.0x0.25x0.30) =4.4 + 0.15 = 4.55sqm	litre	0.455	70.00	31.85
0131	Painter	day	0.07	273.00	19.11
0115	Coolie	day	0.07	247.00	17.29
9999	Sundries	L.S.	0.13	1.49	0.19
9999	Carriage	L.S.	1.82	1.49	2.71
9999	Brushes	L.S.	1.82	1.49	2.71
9999	Making good the holes	L.S.	20.67	1.49	30.80
9999	Sundries	L.S.	26.91	1.49	40.10
0302	Safeda ballies 125 mm diameter	metre	2.50	37.00	92.50
	TOTAL				16,755.24
	Add Water Charges @ 1%				167.55
	TOTAL				16,922.79
	Add CPOH @ 15%				2,538.42
	Cost of 0.3 cum				19,461.21
	Cost of 1 cum				64,870.70
	Say				64,870.70

14.16.1.2 Hollock wood beams

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 300 cudm or 0.3 cum				
	Consider one beam i.e.				
	0.25 x 0.30m x 4.0m (long) = 0.30 cum				
	Add wastage @ 2% (0.006 cum) = 0.306 cum =306cudm				
	(i) Propping the roof				
	MATERIAL:				
	100mm diameter bailies 4m long 10 Nos.				
	100x100mm Hallock wood Ballens 1.0 metre long 5 Nos.x 1.0x0.1x0.1 =0.05cum = 50 cudm.				
	These materials can be used for 16 times hence qty for one operation 1/16 = 3.125				
2466	Hollock wood in scantling	10 cudm	3.125	310.00	96.88
2204	Carriage of timber	cum	0.0228	100.11	2.28
	LABOUR:				
0112	Carpenter 2nd class	day	0.25	273.00	68.25
0114	Beldar	day	0.25	247.00	61.75
	(ii) Taking out the existing beams etc.				
0155	Mason (average)	day	0.13	287.00	37.31

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0100	Bandhani	day	0.50	260.00	130.00
0114	Beldar	day	0.33	247.00	81.51
	(iii) Renewal				
	(a) Materials and Labour				
2466	Hollock wood in scantling	10 cudm	306.00	310.00	9,486.00
2204	Carriage of timber	cum	0.306	100.11	30.63
0112	Carpenter 2nd class	day	1.00	273.00	273.00
0100	Bandhani	day	0.50	260.00	130.00
0114	Beldar	day	1.00	247.00	247.00
	Painting with oil preservative				
	(4x1.1)+ (2.0x0.25x0.30) =4.4+ 0.15 =4.55 sqm				
0859	Oil type wood preservative	litre	0.455	70.00	31.85
0131	Painter	day	0.07	273.00	19.11
0115	Coolie	day	0.07	247.00	17.29
9999	Sundries	L.S.	0.13	1.49	0.19
9999	Carriage	L.S.	1.82	1.49	2.71
9999	Brushes	L.S.	1.82	1.49	2.71
9999	Making good the holes	L.S.	20.67	1.49	30.80
9999	Sundries	L.S.	26.91	1.49	40.10
0302	Safeda ballies 125 mm diameter	metre	2.50	37.00	92.50
	TOTAL				10,881.87
	Add Water Charges @ 1%				108.82
	TOTAL				10,990.69
	Add CPOH @ 15%				1,648.60
	Cost of 0.3 cum				12,639.29
	Cost of 1 cum				42,130.97
	Say				42,131.00

14.16.2 Above 4.00 metres and upto 5.00 metres length

14.16.2.1 Sal wood beams

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 375 cudm or 0.375 cum				
	Consider one beam i.e. 375 cudm.				
	0.25 x 0.30m x 5.0m (long) = 0.375 cum				
	Add wastage @ 2% (0.008 cum) = 0.383 cum =383 cudm				
	(i) Propping the roof				
	MATERIAL:				
	125mm diameter ballies 5m long 12 Nos				
	100x100mm salwood battens 1.0 metre long 6 Nos. x 1.0x0.1 x0. 1 =60 cudm.				
	These materials can be used for 16 times hence qty for one operation 1/16 = 3.75 cudm				
1199	Sal wood in scantling	10 cudm	3.75	500.00	187.50
2204	Carriage of timber	cum	0.0498	100.11	4.99
	LABOUR:				
0112	Carpenter 2nd class	day	0.25	273.00	68.25
0114	Beldar	day	0.25	247.00	61.75
	(ii) Taking out the existing beams etc				
	LABOUR:				
0155	Mason (average)	day	0.25	287.00	71.75
0100	Bandhani	day	0.63	260.00	163.80
0114	Beldar	day	0.50	247.00	123.50
	(iii) Renewal				
	Materials and Labour				
1199	Sal wood in scantling	10 cudm	383.00	500.00	19,150.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
2204	Carriage of timber	cum	0.383	100.11	38.34
0112	Carpenter 2nd class	day	1.00	273.00	273.00
0100	Bandhani	day	1.00	260.00	260.00
0114	Beldar	day	2.00	247.00	494.00
	Painting with oil preservative (2x5x0.25)+3.0 + 2.0x0.25x0.30 = 5.5 + 0.15 = 5.65 sqm				
0859	Oil type wood preservative	litre	0.565	70.00	39.55
0131	Painter	day	0.08	273.00	21.84
0115	Coolie	day	0.08	247.00	19.76
9999	Sundries	L.S.	0.26	1.49	0.39
9999	Carriage	L.S.	2.34	1.49	3.49
9999	Brushes	L.S.	2.21	1.49	3.29
9999	Making good the holes	L.S.	20.67	1.49	30.80
9999	Sundries	L.S.	33.15	1.49	49.39
0302	Safeda ballies 125 mm diameter	metre	3.75	37.00	138.75
	TOTAL				21,204.14
	Add Water Charges @ 1%				212.04
	TOTAL				21,416.18
	Add CPOH @ 15%				3,212.43
	Cost of 0.375 cum				24,628.61
	Cost of 1 cum				65,676.29
	Say				65,676.30

14.16.2.2 Hollock wood beams

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 375 cudm or 0.375 cum Consider one beam i.e. 375 cudm. 0.25 x 0.30m x 5.0m (long) = 0.375 cum Add wastage @ 2% (0.008 cum) = 0.383 cum =383 cudm (i) Propping the roof MATERIAL: 125mm diameter ballies 5m long 12 Nos 100x100mm salwood battens 1.0 metre long 6 Nos. x 1.0x0.1 x0. 1 =60 cudm. These materials can be used for 16 times hence qty for one operation 1/16 = 3.75 cudm				
2466	Hollock wood in scantling	10 cudm	3.75	310.00	116.25
2204	Carriage of timber	cum	0.0375	100.11	3.75
	LABOUR:				
0112	Carpenter 2nd class	day	0.25	273.00	68.25
0114	Beldar	day	0.25	247.00	61.75
	(ii) Taking out the existing beams etc				
0155	Mason (average)	day	0.25	287.00	71.75
0100	Bandhani	day	0.63	260.00	163.80
0114	Beldar	day	0.50	247.00	123.50
	(iii) Renewal Materials and Labour				
2466	Hollock wood in scantling	10 cudm	383.00	310.00	11,873.00
2204	Carriage of timber	cum	0.383	100.11	38.34
0112	Carpenter 2nd class	day	1.00	273.00	273.00
0100	Bandhani	day	1.00	260.00	260.00
0114	Beldar	day	2.00	247.00	494.00
	Painting with oil preservative (2x5x0.25)+3.0 + 2.0x0.25x0.30 = 5.5 + 0.15 = 5.65 sqm				
0859	Oil type wood preservative	litre	0.565	70.00	39.55
0131	Painter	day	0.08	273.00	21.84

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0115	Coolie	day	0.08	247.00	19.76
9999	Sundries	L.S.	0.26	1.49	0.39
9999	Carriage	L.S.	2.34	1.49	3.49
9999	Brushes	L.S.	2.21	1.49	3.29
9999	Making good the holes	L.S.	20.67	1.49	30.80
9999	Sundries	L.S.	33.15	1.49	49.39
0302	Safeda ballies 125 mm diameter	metre	3.75	37.00	138.75
	TOTAL				13,854.65
	Add Water Charges @ 1%				138.55
	TOTAL				13,993.20
	Add CPOH @ 15%				2,098.98
	Cost of 0.375 cum				16,092.18
	Cost of 1 cum				42,912.48
	Say				42,912.50

14.17 Raking out joints in lime or cement mortar and preparing the surface for re-pointing or replastering, including disposal of rubbish to the dumping ground within 50 metres lead.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	LABOUR:				
0114	Beldar	day	0.53	247.00	130.91
0115	Coolie	day	0.08	247.00	19.76
0101	Bhisti	day	0.07	260.00	18.20
9999	Sundries	L.S.	1.43	1.49	2.13
	TOTAL				171.00
	Add Water Charges @ 1%				1.71
	TOTAL				172.71
	Add CPOH @ 15%				25.91
	Cost of 10 sqm				198.62
	Cost of 1 sqm				19.86
	Say				19.85

14.18 Flush pointing with cement mortar 1:3 (1 cement : 3 fine sand) mixed with 2% of integral water proofing compound by weight of cement for flat tile bricks on top of mud phaska:

14.18.1 With F.P.S. brick tiles

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
	Cement mortar 1:3 (1 cement: 3 fine sand)				
3.3	Rate as per Item Number 3.3 of SH: Mortars	cum	0.015	3,631.95	54.48
1213	Water proofing materials	kilogram	0.153	25.00	3.82
	2% of wt. of cement				
	LABOUR:				
0115	Coolie	day	0.36	247.00	88.92
0124	Mason (brick layer) 2nd class	day	0.36	273.00	98.28
0101	Bhisti	day	0.36	260.00	93.60
9999	Sundries	L.S.	18.85	1.49	28.09
	TOTAL				367.19
	Add Water Charges @ 1%				3.67
	TOTAL				370.86
	Add CPOH @ 15%				55.63
	Cost of 10 sqm				426.49
	Cost of 1 sqm				42.65
	Say				42.65

14.18.2 With modular brick tiles

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
	Cement mortar 1:3 (1 cement: 3 fine and)				
3.3	Rate as per Item Number 3.3 of SH: Mortars	cum	0.017	3,631.95	61.74
1213	Water proofing materials	kilogram	0.173	25.00	4.32
	2% of wt. of cement				
	LABOUR:				
0115	Coolie	day	0.36	247.00	88.92
0124	Mason (brick layer) 2nd class	day	0.36	273.00	98.28
0101	Bhisti	day	0.36	260.00	93.60
9999	Sundries	L.S.	18.85	1.49	28.09
	TOTAL				374.95
	Add Water Charges @ 1%				3.75
	TOTAL				378.70
	Add CPOH @ 15%				56.80
	Cost of 10 sqm				435.50
	Cost of 1 sqm				43.55
	Say				43.55

14.19 Taking out wind ties from roof including cutting out rusted bolts, nuts etc. and removing materials to any distance within compound and stacking.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 30 mtrs of weight 63 kgs				
	MATERIAL:				
	M.S. Flats 40x6mm @ 1.9kg./m = 30x1.9 = 57 kg. (A)				
	J' hook bolts @ 30cm centre to centre = 101 Nos. x 0.15 m = 15.15 m @ 0.40kg./m = 6.06kg (B)				
	Total (A+B) = 63.06 kg Say 63.00 kgs				
	LABOUR:				
0103	Blacksmith 2nd class	day	0.09	273.00	24.57
0100	Bandhani	day	0.06	260.00	15.60
0114	Beldar	day	0.16	247.00	39.52
	TOTAL				79.69
	Add Water Charges @ 1%				0.80
	TOTAL				80.49
	Add CPOH @ 15%				12.07
	Cost of 63 kg				92.56
	Cost of 1 kg				1.47
	Say				1.45

14.20 Fixing of old wind tie with new fittings including painting two or more coats with anticorrosive bitumastic paint of approved brand & manufacturer over and including priming coat of ready mixed zinc chromate yellow primer of approved brand.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 20.2 m wind tie				
	MATERIAL:				
1023	Galvanised steel J or L hooks 8 mm dia @ 30 cm center to center = 68 Nos	10 nos	68.00	90.00	612.00
1208	Bitumen washer	100 nos	68.00	25.00	17.00
1209	G.I. plain washer thick	100 nos	68.00	32.00	21.76
9999	Carriage of bolts, nuts and washers etc.	L.S.	1.17	1.49	1.74

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	LABOUR:				
0102	Blacksmith 1 st class	day	0.34	301.00	102.34
0114	Beldar	day	0.34	247.00	83.98
9999	Sundries	L.S.	13.91	1.49	20.73
	Applying priming coat with ready mixed zinc chromate yellow primer				
	20.2x2x(0.04+0.006) = 1.86 sqm				
13.50.3	Rate as per Item Number 13.50.3 of SH: Finishing	sqm	1.86	20.70	38.50 (A)
	Painting with ready mixed black anti corrosive bitumastic paint				
13.65.1	Rate as per Item Number 13.65.1 of SH: Finishing	sqm	1.86	44.55	82.86 (A)
	TOTAL				980.91
	Add Water Charges @ 1% except on A i.e on (980.91 - 121.36 =) 859.55				8.60
	TOTAL				989.51
	Add CPOH @ 15% except on A i.e on (989.51 - 121.36 =) 868.15				130.22
	Cost of 20.2 metre				1,119.73
	Cost of 1 metre				55.43
	Say				55.45

14.21 Renewing bottom rail and/or top runner of collapsible gate including making good all damages and applying priming coat of zinc chromate yellow primer of approved brand and manufacture.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for gate of size 1.52x2.4m (weight 11.55 kg)				
	MATERIAL:				
	M.S. Tee 40x40x6 mm Top rail = 1.725 m				
	Bottom rail = 1.570 m				
	Total = 3.295 m say 3.30 m @ 3.5 kg/m = 11.55 kg				
	Add 10% wastage = 1.155 kg				
	Total = 12.705 kg = 0.1270 q say 0.13 q				
1007	Structural steel such as tees, angles channels and R.S. joists	quintal	0.13	4,250.00	552.50
2205	Carriage of steel	tonne	0.013	77.87	1.01
	Taking out collapsible gate including frame				
15.12.2	Rate as per Item Number 15.12.2 of SH: Dismantling and demolishing	each	1.00	139.85	139.85 (A)
	Refixing of collapsible gate including mending good the demaged floor, wall etc.frame				
	Cement concrete 1:3:6 (1 cement: 3 coarse sand : 6 graded stone aggregate 20 mm nominal size)				
4.2.5	Rate as per Item Number 4.2.5 of SH: Concrete work	cum	0.03	4,782.35	143.47 (A)
	Cement mortar, 1:6 (1 cement: 6 fine sand)				
3.6	Rate as per Item Number 3.6 of SH: Mortars	cum	0.01	2,311.70	23.12
9999	Cement concrete 1:2:4 filled in chase cut	L.S.	24.18	1.49	36.03

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Disposal of mulba	L.S.	1.82	1.49	2.71
	Priming coat on Tees 0.16x3.3 = 0.53 sqm				
13.50.3	Rate as per Item Number 13.50.3 of SH: Finishing	sqm	0.53	20.70	10.97 (A)
	LABOUR:				
0155	Mason (average)	day	0.50	287.00	143.50
0114	Beldar	day	0.75	247.00	185.25
9999	Sundries	L.S.	2.60	1.49	3.87
	TOTAL				1,242.28
	Add Water Charges @ 1% except on A i.e on (1,242.28 - 294.29 =) 947.99				9.48
	TOTAL				1,251.76
	Add CPOH @ 15% except on A i.e on (1,251.76 - 294.29 =) 957.47				143.62
	Cost of 11.55 kg				1,395.38
	Cost of 1 kg				120.81
	Say				120.80

14.22 Renewing Wrought Iron or M.S. Wheel or roller of steel door or gate and fitting and fixing the same with necessary clamps, nuts and bolts/welding and erection etc. complete.

14.22.1 Wheel 50 mm dia and below

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 wheels of 40mm dia				
	Materials to be dismentled				
	Weight of 10 wheels 10x[3.14x{(4/2)x(4/2)}x4]x7.850/1000 = 3.94 kg				
	Weight of 10 Nos clamps 6 mm thick =10xlength of clamp =10x0.17m @ 1.90kg/m = 3.23 kg				
	Weight of 10 Nos 10 mm dia. Bolts, 10 cm long 10x0.10m = lm @ 0.60 kg/m = 0.60 kg				
	Total = 7.70 kg say 8 kg				
	Labour for dismantling:				
0103	Blacksmith 2nd class	day	0.01	273.00	2.73
0100	Bandhani	day	0.01	260.00	2.60
0114	Beldar	day	0.02	247.00	4.94
9999	Sundries	L.S.	0.39	1.49	0.58
	Renewing the wheels with clamps :-				
	MATERIAL:				
7442	Wheel 75 mm dia. 40 mm wide	each	10.00	60.00	600.00
	10 Nos wheels 40 mm dia. 40 mm wide				
	10 Nos clamps out of M.S. flat 40x6 mm, 170 mm long = 10x0.17m = 1.70m @ 1.9 kg/m = 3.23 kg				
	Add 5% wastage = 0.16 kg				
	Total = 3.39 kg say 3.50 kg				
1008	Flats up to 10 mm in thickness	quintal	0.035	4,200.00	147.00
	M.S. bolt/pin 10 mm dia 10 cm long 10 Nos 10x0.06 = 0.6 kg = 0.006 q				
1034	Bolts and nuts up to 300 mm in length	quintal	0.006	5,400.00	32.40

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1215	Welding by electric plant length = 10x(2x4) = 80cm LABOUR: for cutting, assembling and errection charges	cm	80.00	1.50	120.00
0102	Blacksmith 1 st class	day	0.03	301.00	9.03
0100	Bandhani	day	0.02	260.00	5.20
0114	Beldar	day	0.11	247.00	27.17
	Priming coat: 10x2(0.06+0.008)x0.25m = 0.34 sqm Tees 0.16x3.3 = 0.53 sqm				
13.50.3	Rate as per Item Number 13.50.3 of SH: Finishing	sqm	0.165	20.70	3.42 (A)
9999	Sundries	L.S.	1.69	1.49	2.52
	TOTAL				957.59
	Add Water Charges @ 1% except on A i.e on (957.59 - 3.42 =) 954.17				9.54
	TOTAL				967.13
	Add CPOH @ 15% except on A i.e on (967.13 - 3.42 =) 963.71				144.56
	Cost of 10 wheels				1,111.69
	Cost per wheel				111.17
	Say				111.15

14.22.2 Wheel above 50 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 wheels Considering average wheel dia =75 mm Width of wheel =40 mm M.S. flat for clamp = 60x8 mm Bolt size 16 mm dia. Lenth of one clamp : 2x(0.04+0.0375+0.02)+0.05 =0.195+0.05=0.245m say 0.25m Materials to be dismantled Weight of 10 Nos wheels 10x[3.14x{(7.5/2)x(7.5/2)}x4]x7.850/1000 = 13.87 kg Weight of 10 Nos clamps 8 mm thick = 10x0.25 m @ 3.8kg/m = 9.50 kg Weight of 10 Nos 16 mm dia. Bolts, 10 cm long 10x0.10 m @ 1.60 kg/m = 1.60 kg Total = 24.97 kg say 25 kg Labour for dismantling				
0103	Blacksmith 2nd class	day	0.04	273.00	10.92
0100	Bandhani	day	0.03	260.00	7.80
0114	Beldar	day	0.06	247.00	14.82
9999	Sundries	L.S.	1.04	1.49	1.55
	Renewing the wheels with clamps :- MATERIAL:				
7442	Wheel 75 mm dia. 40 mm wide 10 Nos wheels 75 mm dia. 40 mm wide 10 Nos clamps out of M.S. flat 60x8 mm =	each	10.00	60.00	600.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	10x0.25 m @ 3.8 kg/m = 9.5 kg Add 5% wastage = 0.48 kg Total = 9.48 kg say 10 kg				
1008	Flats up to 10 mm in thickness M.S. bolt/pin 16 mm dia 10 cm long 10 Nos 10x0.16= 1.6 kg = 0.016 q	quintal	0.10	4,200.00	420.00
1034	Bolts and nuts up to 300 mm in length	quintal	0.016	5,400.00	86.40
1215	Welding by electric plant length = 10x(2x6) Labour for cutting, assembling and errection charges	cm	120.00	1.50	180.00
0102	Blacksmith 1 st class	day	0.10	301.00	30.10
0100	Bandhani	day	0.05	260.00	13.00
0114	Beldar Priming coat: = 10x2(0.06+0.008)x0.25m = 0.34 sqm Tees 0.16x3.3 = 0.53 sqm	day	0.36	247.00	88.92
13.50.3	Rate as per Item Number 13.50.3 of SH: Finishing	sqm	0.34	20.70	7.04 (A)
9999	Sundries	L.S.	5.33	1.49	7.94
	TOTAL				1,468.49
	Add Water Charges @ 1% except on A i.e on (1,468.49 - 7.04 =) 1,461.45				14.61
	TOTAL				1,483.10
	Add CPOH @ 15% except on A i.e on (1,483.10 - 7.04 =) 1,476.06				221.41
	Cost of 10 wheels				1,704.51
	Cost per wheel				170.45
	Say				170.45

14.23 Pumping out water caused by springs, tidal or river seepage, broken water mains or drains and the like.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10.91 Kilolitre Pumping hours 3 hrs. or 0.375 days				
0011	Hire charges of Pump set of capacity 4000 litres/hour	day	0.375	500.00	187.50
0114	Beldar for clearing slush	day	2.00	247.00	494.00
	TOTAL				681.50
	Add Water Charges @ 1%				6.82
	TOTAL				688.32
	Add CPOH @ 15%				103.25
	Cost of 10.91 kilo litre				791.57
	Cost of 1 kilo litre				72.55
	Say				72.55

14.24 Mud mortar made with local clay good earth.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum				
	MATERIAL:				
0811	Mud (dry)	cum	1.08	50.00	54.00
	LABOUR:				
0114	Beldar	day	0.63	247.00	155.61
0101	Bhisti	day	0.315	260.00	81.90
9999	Sundries	L.S.	6.45	1.49	9.61
	TOTAL				301.12
	Cost of 1 cum				301.12
	Say				301.10

14.25 Brick work with common burnt clay bricks of class designation 7.5 in mud mortar.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum				
	MATERIAL:				
2602	Common burnt clay F.P.S. (non modular) bricks class designation 7.5	1000 Nos	494.00	2,900.00	1,432.60
	Mud mortar				
3.18	Rate as per Item Number 3.18 of SH: Mortars	cum	0.25	301.10	75.28
2201	Carriage of bricks	1000 Nos	494.00	233.60	115.40
9999	Sundries	L.S.	2.73	1.49	4.07
	LABOUR:				
0123	Mason (brick layer) 1 st class	day	0.36	301.00	108.36
0124	Mason (brick layer) 2nd class	day	0.36	273.00	98.28
0115	Coolie	day	1.37	247.00	338.39
0101	Bhisti	day	0.20	260.00	52.00
	TOTAL				2,224.38
	Add Water Charges @ 1%				22.24
	TOTAL				2,246.62
	Add CPOH @ 15%				336.99
	Cost of 1 cum				2,583.61
	Say				2,583.60

14.26 Providing and fixing 25 mm thick shutters for cup board etc. :

14.26.1 Panelled or panelled & glazed shutters

14.26.1.1 Superior class teak wood including nickel plated bright finished M.S. piano hinges with necessary screws

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for shutter of cup-board 200xl08cm = 2.16 sqm MATERIAL: Styles: 4x200x8.0x2.5cm = 0.016 cum+ Rails: Top rail 1x110.5x8.0x2.5cm = 0.0022 cum+ Lock and bottom rails 2x110.5x8.0x2.5 cm = 0.0044				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Panels 2x48x41x1.6cm = 0.006 cum+ Sash bars 2x114x3.8x2.5cm = 0.003cum+ 6x48x3.8x2.5cm = 0.003 cum+ Beading 16x92x1.4x1.2cm = 0.002cum Total = 0.0366 Add for wastage @ 10% = 0.0037 cum. Grand Total = 0.0403 cum				
1186	Superior class teak wood such as Dandeli, Balarshah or Malabar in planks	10 cudm	40.00	1,050.00	4,200.00
2204	Carriage of timber	cum	0.04	100.11	4.00
2406	Float glass sheet of nominal thickness 4 mm (weight not less than 10 kg/sqm)	sqm	0.99	310.00	306.90
0608	Nickel plated bright finished mild steel piano hinges 1 mm thick 25 mm wide	metre	4.00	35.00	140.00
0639	Bright finished or black enameled mild steel screws 25 mm	100 nos	120.00	30.00	36.00
	LABOUR:				
0111	Carpenter 1 st class	day	2.40	301.00	722.40
0119	Glazier	day	0.18	273.00	49.14
0114	Beldar	day	0.77	247.00	190.19
9999	Sundries	L.S.	40.43	1.49	60.24
	TOTAL				5,708.87
	Add Water Charges @ 1%				57.09
	TOTAL				5,765.96
	Add CPOH @ 15%				864.89
	Cost of 2.16 sqm				6,630.85
	Cost of 1 sqm				3,069.84
	Say				3,069.85

14.26.1.2 Ist class teak wood including nickel plated bright finished M.S. piano hinges with necessary screws

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for shutters of a cup board (half glazed and half panelled) 200x108cm = 2.16 sqm MATERIAL: Styles 4x200x8.0x2.5cm = 0.016 cum+ Rails: Top rail 1x110.5x8.0x2.5cm = 0.0022cum+ Lock rail and bottom rail 2x110.5x8.0x2.5cm = 0.0044 cum Panels 2x48x41xl.6cm = 0.006cum+ Sash bars 2x114x3.8x2.5cm = 0.003cum+ 6x48x3.8x2.5cm = 0.003 cum+				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Beading 16x92x 1.4x 1.2cm = 0.002cum Total = 0.0366 Add for wastage @ 10% = 0.0037 cum. Grand Total = 0.0403 cum				
1188	First class teak wood in planks	10 cudm	40.00	800.00	3,200.00
2204	Carriage of timber	cum	0.04	100.11	4.00
2406	Float glass sheet of nominal thickness 4 mm (weight not less than 10 kg/sqm)	sqm	0.99	310.00	306.90
	Fittings				
0608	Nickel plated bright finished mild steel piano hinges 1 mm thick 25 mm wide	metre	4.00	35.00	140.00
0639	Bright finished or black enameled mild steel screws 25 mm	100 nos	120.00	30.00	36.00
	LABOUR:				
0111	Carpenter 1 st class	day	2.40	301.00	722.40
0119	Glazier	day	0.18	273.00	49.14
0114	Beldar	day	0.77	247.00	190.19
9999	Sundries	L.S.	40.43	1.49	60.24
	TOTAL				4,708.87
	Add Water Charges @ 1%				47.09
	TOTAL				4,755.96
	Add CPOH @ 15%				713.39
	Cost of 2.16 sqm				5,469.35
	Cost of 1 sqm				2,532.11
	Say				2,532.10

14.26.2 Glazed shutters

14.26.2.1 Superior class teak wood including nickel plated bright finished M.S. piano hinges with necessary screws

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for shutters of a cupboard 200x108cm = 2.16 sqm MATERIAL: (i) Teak wood first class Styles: 4x200x9.5x2.5 cm = 0.019 cum Rails: Top & intermediate rails 2x110.5x9.5x2.5 cm = 0.006 cum Lock and bottom rails 2x110.5x19.7x2.5 cm = 0.011 cum Beadings 2x186.1x1.9x1.2cm = 0.001cum+ 4x 171.70x 1.9x 1.2cm = 0.002cum. Total = 0.039 cum. Add for wastage @ 10% = 0.004 cum. Grand Total = 0.043 cum				
1186	Superior class teak wood such as Dandeli, Balarshah or Malabar in planks	10 cudm	43.00	1,050.00	4,515.00
2406	Float glass sheet of nominal thickness 4 mm (weight not less than 10 kg/sqm)	sqm	1.27	310.00	393.70

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0608	Nickel plated bright finished mild steel piano hinges 1 mm thick 25 mm wide 75x45x3.2 mm	metre	4.00	35.00	140.00
0639	Bright finished or black enameled mild steel screws 25 mm	100 nos	120.00	30.00	36.00
0597	Bright finished or black enameled mild steel butt hinges 50x37x1.50 mm	10 nos	2.00	45.00	9.00
0640	Bright finished or black enameled mild steel screws 20 mm	100 nos	8.00	25.00	2.00
2204	Carriage of timber	cum	0.043	100.11	4.30
	LABOUR:				
0156	Carpenter (average)	day	1.83	287.00	525.21
0119	Glazier	day	0.23	273.00	62.79
0114	Beldar	day	0.77	247.00	190.19
9999	Sundries	L.S.	40.43	1.49	60.24
	TOTAL				5,938.43
	Add Water Charges @ 1%				59.38
	TOTAL				5,997.81
	Add CPOH @ 15%				899.67
	Cost of 2.16 sqm				6,897.48
	Cost of 1 sqm				3,193.28
	Say				3,193.30

14.26.2.2 Ist class teak wood including nickel plated bright finished M.S. piano hinges with necessary screws

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for shutters of a cupboard 200x108cm = 2.16 sqm MATERIAL: (i) Teak wood first class Styles: 4x200x9.5x2.5 cm = 0.019 cum Rails: Top & intermediate rails 2x110.5x9.5x2.5 cm = 0.006 cum Lock and bottom rails 2x110.5x19.7x2.5 cm = 0.011 cum Beadings 2x186. 1x1.9x1.2cm = 0.001cum+ 4x171.70x1.9x1.2cm = 0.002cum. Total = 0.039 cum. Add for wastage @ 10% = 0.004 cum. Grand Total = 0.043 cum				
1188	First class teak wood in planks	10 cudm	43.00	800.00	3,440.00
2406	Float glass sheet of nominal thickness 4 mm (weight not less than 10 kg/sqm)	sqm	1.27	310.00	393.70
0608	Nickel plated bright finished mild steel piano hinges 1 mm thick 25 mm wide 75x45x3.2 mm	metre	4.00	35.00	140.00
0639	Bright finished or black enameled mild steel screws 25 mm	100 nos	120.00	30.00	36.00
0597	Bright finished or black enameled mild steel butt hinges 50x37x1.50 mm	10 nos	2.00	45.00	9.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0640	Bright finished or black enameled mild steel screws 20 mm	100 nos	8.00	25.00	2.00
2204	Carriage of timber	cum	0.043	100.11	4.30
	LABOUR:				
0156	Carpenter (average)	day	1.83	287.00	525.21
0119	Glazier	day	0.23	273.00	62.79
0114	Beldar	day	0.77	247.00	190.19
9999	Sundries	L.S.	40.43	1.49	60.24
	TOTAL				4,863.43
	Add Water Charges @ 1%				48.63
	TOTAL				4,912.06
	Add CPOH @ 15%				736.81
	Cost of 2.16 sqm				5,648.87
	Cost of 1 sqm				2,615.22
	Say				2,615.20

14.27 Providing and fixing plain jaffri door and window shutters including bright or/and black enamelled M.S. butt hinges with necessary screws 35x10 mm laths placed 35 mm apart (frames to be paid separately), including fixing 50x12 mm beading complete with:

14.27.1 Second class teak wood

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for a jaffri shutter 176x86cm = 1.51 sqm MATERIAL: Teak wood 2nd class Styles: 2x176x7.5x3.5 cm = 0.0092 cum Rails: 3x86x7.5x3.5 = 0.0068 cum Total = 0.0160 cum Add wastage @ 10 % = 0.0016 cum Total = 0.0176 cum Say 18 cudm				
1190	Second class teak wood in planks	10 cudm	18.00	720.00	1,296.00
2204	Carriage of timber	cum	0.018	100.11	1.80
	Plain Jaffri work				
9.41.1	Rate as per Item Number 9.41.1 of SH: Wood and PVC work	sqm	1.51	1,589.10	2,399.54(A)
0595	Bright finished or black enameled mild steel butt hinges 100x58x1.90 mm	10 nos	6.00	80.00	48.00
0597	Bright finished or black enameled mild steel butt hinges 50x37x1.50 mm	10 nos	2.00	45.00	9.00
0637	Bright finished or black enameled mild steel screws 40 mm	100 nos	48.00	50.00	24.00
0640	Bright finished or black enameled mild steel screws 20 mm	100 nos	8.00	25.00	2.00
	LABOUR: (For making frame and fixing fitting)				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0112	Carpenter 2nd class	day	0.30	273.00	81.90
	TOTAL				3,862.24
	Add Water Charges @ 1% except on A i.e on (3,862.24 - 2,399.54 =) 1,462.70				14.63
	TOTAL				3,876.87
	Add CPOH @ 15% except on A i.e on (3,876.87 - 2,399.54 =) 1,477.33				221.60
	Cost of 1.51 sqm				4,098.47
	Cost of 1 sqm				2,714.22
	Say				2,714.20

14.28 Providing and fixing curtain rods of 1.25 mm thick brass plates with two brass brackets fixed with brass screws and wooden plugs etc. wherever necessary complete.

14.28.1 20 mm diameter

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 2m long				
0444	Brass curtain rod 20 mm dia 1.25 mm thick	metre	2.00	100.00	200.00
0446	Brass brackets (curtain rods) 20 mm	each	2.00	40.00	80.00
9999	Screws	L.S.	2.73	1.49	4.07
9999	Carriage	L.S.	1.56	1.49	2.32
	Wooden plugs including cutting brick work and fixing in cement mortar				
9.32	Rate as per Item Number 9.32 of SH: Wood and PVC work	each	2.00	17.40	34.80 (A)
9999	Labour	L.S.	2.73	1.49	4.07
9999	Sundries	L.S.	1.56	1.49	2.32
	TOTAL				327.58
	Add Water Charges @ 1% except on A i.e on (327.58 - 34.80 =) 292.78				2.93
	TOTAL				330.51
	Add CPOH @ 15% except on A i.e on (330.51 - 34.80 =) 295.71				44.36
	Cost of 2 metre				374.87
	Cost of 1 metre				187.44
	Say				187.45

14.28.2 25 mm diameter

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 2m long				
	MATERIAL:				
0445	Brass curtain rod 25 mm dia 1.25 mm thick	metre	2.00	120.00	240.00
0446	Brass brackets (curtain rods) 20 mm	each	2.00	40.00	80.00
9999	Screws	L.S.	2.73	1.49	4.07
9999	Carriage	L.S.	1.56	1.49	2.32
	Wooden plugs including cutting brick work and fixing in cement mortar				
9.32	Rate as per Item Number 9.32 of SH: Wood and PVC work	each	2.00	17.40	34.80 (A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Labour	L.S.	2.73	1.49	4.07
9999	Sundries	L.S.	1.56	1.49	2.32
	TOTAL				367.58
	Add Water Charges @ 1% except on A i.e on (367.58 - 34.80 =) 332.78				3.33
	TOTAL				370.91
	Add CPOH @ 15% except on A i.e on (370.91 - 34.80 =) 336.11				50.42
	Cost of 2 metre				421.33
	Cost of 1 metre				210.67
	Say				210.65

14.29 Providing and fixing M.S. round or squre bars with M.S. flats at required spacing in wooden frames of windows and clerestory windows.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for window-140x110cm (33.67 kg)				
	MATERIAL:				
	M.S. bar 16 mm dia 13x136 cm = 17.68 m @ 1.57 kg/m = 27.93 kg				
	Add for wastage @ 10% =2.79 kg				
	Total = 30.72 kg or 0.307 q				
1003	Mild steel round bar above 12 mm dia	quintal	0.307	4,000.00	1,228.00
	M.S. flat 40x6mm 2x96cm = 192cm+ 1x110cm = 110cm				
	Total = 302cm+				
	Add wastage @ 10% = 30cm				
	Total = 332cm @ 1.90 kg/m = 6.31 kg				
	Say 0.063 quintal				
1008	Flats up to 10 mm in thickness	quintal	0.063	4,200.00	264.60
2205	Carriage of steel (0.307+0.063 = 0.37 q = 0.037 t)	tonne	0.037	77.87	2.88
9999	Sundries	L.S.	26.91	1.49	40.10
	LABOUR:				
0103	Blacksmith 2nd class	day	0.35	273.00	95.55
0112	Carpenter 2nd class	day	0.20	273.00	54.60
0114	Beldar	day	0.45	247.00	111.15
	TOTAL				1,796.88
	Add Water Charges @ 1%				17.97
	TOTAL				1,814.85
	Add CPOH @ 15%				272.23
	Cost of 33.67 kg				2,087.08
	Cost of 1 kg				61.99
	Say				62.00

14.30 Providing joists (karries) including hoisting, fixing in position and applying wood preservative on unexposed surface etc. complete with:

14.30.1 Sal wood

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 300 cudm or 0.3 cum				
	MATERIAL:				
	Sal wood				
	10x30xl0x30cm = 0.30 cum. or = 300 cudm.+				
	Add wastage @ 2% = 6.00 cudm.				
	Total = 306 cudm				
1199	Sal wood in scantling	10 cudm	306.00	500.00	15,300.00
2204	Carriage of timber	cum	0.306	100.11	30.63
	LABOUR:				
0112	Carpenter 2nd class	day	0.70	273.00	191.10
0114	Beldar	day	1.45	247.00	358.15
0100	Bandhani	day	0.70	260.00	182.00
	Priming coat (Wood preservative)				
13.57.1	Rate as per Item Number 13.57.1 of SH: Finishing	sqm	0.80	18.70	14.96 (A)
9999	Sundries	L.S.	26.91	1.49	40.10
	TOTAL				16,116.94
	Add Water Charges @ 1% except on A i.e on (16,116.94 - 14.96 =) 16,101.98				161.02
	TOTAL				16,277.96
	Add CPOH @ 15% except on A i.e on (16,277.96 - 14.96 =) 16,263.00				2,439.45
	Cost of 0.3 cum				18,717.41
	Cost of 1 cum				62,391.37
	Say				62,391.40

14.30.2 Hollack wood

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 300 cudm or 0.3 cum				
	MATERIAL:				
	Hollock wood in scantling				
	10x30xl0x30cm = 0.30 cum. or = 300 cudm.+				
	Add wastage @ 2% = 6.00 cudm.				
	Total = 306 cudm				
2466	Hollock wood in scantling	10 cudm	306.00	310.00	9,486.00
2204	Carriage of timber	cum	0.306	100.11	30.63
	LABOUR:				
0112	Carpenter 2nd class	day	0.70	273.00	191.10
0114	Beldar	day	1.45	247.00	358.15
0100	Bandhani	day	0.70	260.00	182.00
	Priming coat (Wood preservative)				
13.57.1	Rate as per Item Number 13.57.1 of SH: Finishing	sqm	0.80	18.70	14.96 (A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries	L.S.	26.91	1.49	40.10
	TOTAL				10,302.94
	Add Water Charges @ 1% except on A i.e on (10,302.94 - 14.96 =) 10,287.98				102.88
	TOTAL				10,405.82
	Add CPOH @ 15% except on A i.e on (10,405.82 - 14.96 =) 10,390.86				1,558.63
	Cost of 0.3 cum				11,964.45
	Cost of 1 cum				39,881.50
	Say				39,881.50

14.31 Providing and fixing bright finished brass single acting spring hinges with necessary brass screws etc. complete :

14.31.1 150 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos				
	MATERIAL:				
0389	Brass single acting spring hinges 150 mm	each	10.00	300.00	3,000.00
0449	Brass screws 50 mm	100 nos	80.00	200.00	160.00
9999	Carriage of materials	L.S.	3.64	1.49	5.42
	LABOUR:				
0111	Carpenter 1 st class	day	0.40	301.00	120.40
0114	Beldar	day	0.20	247.00	49.40
	TOTAL				3,335.22
	Add Water Charges @ 1%				33.35
	TOTAL				3,368.57
	Add CPOH @ 15%				505.29
	Cost of 10 nos				3,873.86
	Cost of each				387.39
	Say				387.40

14.31.2 125 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos				
	MATERIAL:				
0390	Brass single acting spring hinges 125 mm	each	10.00	250.00	2,500.00
0449	Brass screws 50 mm	100 nos	80.00	200.00	160.00
9999	Carriage of materials	L.S.	3.64	1.49	5.42
	LABOUR:				
0111	Carpenter 1 st class	day	0.40	301.00	120.40
0114	Beldar	day	0.20	247.00	49.40
	TOTAL				2,835.22
	Add Water Charges @ 1%				28.35
	TOTAL				2,863.57
	Add CPOH @ 15%				429.54
	Cost of 10 nos				3,293.11
	Cost of each				329.31
	Say				329.30

14.31.3 - 100 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos				
	MATERIAL:				
0391	Brass single acting spring hinges 100 mm	each	10.00	150.00	1,500.00
0450	Brass screws 40 mm	100 nos	80.00	160.00	128.00
9999	Carriage of materials	L.S.	3.64	1.49	5.42
	LABOUR:				
0111	Carpenter 1 st class	day	0.40	301.00	120.40
0114	Beldar	day	0.20	247.00	49.40
	TOTAL				1,803.22
	Add Water Charges @ 1%				18.03
	TOTAL				1,821.25
	Add CPOH @ 15%				273.19
	Cost of 10 nos				2,094.44
	Cost of each				209.44
	Say				209.45

14.32 Providing and fixing bright finished brass double acting spring hinges with necessary brass screws etc. complete :

14.32.1 150 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos				
	MATERIAL:				
0392	Brass double acting spring hinges 150 mm	each	10.00	500.00	5,000.00
0449	Brass screws 50 mm	100 nos	80.00	200.00	160.00
9999	Carriage of materials	L.S.	3.64	1.49	5.42
	LABOUR:				
0111	Carpenter 1 st class	day	0.40	301.00	120.40
0114	Beldar	day	0.20	247.00	49.40
	TOTAL				5,335.22
	Add Water Charges @ 1%				53.35
	TOTAL				5,388.57
	Add CPOH @ 15%				808.29
	Cost of 10 nos				6,196.86
	Cost of each				619.69
	Say				619.70

14.32.2 125 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos				
	MATERIAL:				
0393	Brass double acting spring hinges 125 mm	each	10.00	350.00	3,500.00
0449	Brass screws 50 mm	100 nos	80.00	200.00	160.00
9999	Carriage of materials	L.S.	3.64	1.49	5.42
	LABOUR:				
0111	Carpenter 1 st class	day	0.40	301.00	120.40

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Beldar	day	0.20	247.00	49.40
	TOTAL				3,835.22
	Add Water Charges @ 1%				38.35
	TOTAL				3,873.57
	Add CPOH @ 15%				581.04
	Cost of 10 nos				4,454.61
	Cost of each				445.46
	Say				445.45

14.32.3 100 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos				
	MATERIAL:				
0394	Brass double acting spring hinges 100 mm	each	10.00	300.00	3,000.00
0450	Brass screws 40 mm	100 nos	80.00	160.00	128.00
9999	Carriage of materials	L.S.	3.64	1.49	5.42
	LABOUR:				
0111	Carpenter 1 st class	day	0.40	301.00	120.40
0114	Beldar	day	0.20	247.00	49.40
	TOTAL				3,303.22
	Add Water Charges @ 1%				33.03
	TOTAL				3,336.25
	Add CPOH @ 15%				500.44
	Cost of 10 nos				3,836.69
	Cost of each				383.67
	Say				383.65

14.33 Providing and fixing bright finished brass flush bolts with necessary brass screws etc. complete :

14.33.1 250 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos				
	MATERIAL:				
0404	Brass flush bolt 250 mm	each	10.00	140.00	1,400.00
0452	Brass screws 25 mm	100 nos	60.00	95.00	57.00
9999	Carriage of materials	L.S.	3.64	1.49	5.42
	LABOUR:				
0111	Carpenter 1 st class	day	0.20	301.00	60.20
	TOTAL				1,522.62
	Add Water Charges @ 1%				15.23
	TOTAL				1,537.85
	Add CPOH @ 15%				230.68
	Cost of 10 nos				1,768.53
	Cost of each				176.85
	Say				176.85

14.33.2 150 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos				
	MATERIAL:				
0405	Brass flush bolt 150 mm	each	10.00	120.00	1,200.00
0452	Brass screws 25 mm	100 nos	60.00	95.00	57.00
9999	Carriage of materials	L.S.	2.73	1.49	4.07
0111	Carpenter 1 st class	day	0.17	301.00	51.17
	TOTAL				1,312.24
	Add Water Charges @ 1%				13.12
	TOTAL				1,325.36
	Add CPOH @ 15%				198.80
	Cost of 10 nos				1,524.16
	Cost of each				152.42
	Say				152.40

14.33.3 100 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos				
	MATERIAL:				
0406	Brass flush bolt 100 mm	each	10.00	85.00	850.00
0452	Brass screws 25 mm	100 nos	60.00	95.00	57.00
9999	Carriage of materials	L.S.	2.73	1.49	4.07
	LABOUR:				
0111	Carpenter 1 st class	day	0.17	301.00	51.17
	TOTAL				962.24
	Add Water Charges @ 1%				9.62
	TOTAL				971.86
	Add CPOH @ 15%				145.78
	Cost of 10 nos				1,117.64
	Cost of each				111.76
	Say				111.75

14.34 Providing and fixing 150 mm bright finished floor brass door stopper with rubber cushion, necessary brass screws etc. to suit shutter thickness complete

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos				
	MATERIAL:				
0417	Brass 150 mm floor door stopper (0.357kg)	each	10.00	160.00	1,600.00
0450	Brass screws 40 mm	100 nos	40.00	160.00	64.00
9999	Carriage of materials	L.S.	2.73	1.49	4.07
	LABOUR:				
0111	Carpenter 1 st class	day	0.07	301.00	21.07
9999	Sundries (wooden plugs including fixing in the floor)	L.S.	6.37	1.49	9.49
	TOTAL				1,698.63
	Add Water Charges @ 1%				16.99
	TOTAL				1,715.62
	Add CPOH @ 15%				257.34
	Cost of 10 nos				1,972.96
	Cost of each				197.30
	Say				197.30

14.35 Providing and fixing finished brass hard drawn hooks and eyes:

14.35.1 300 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos				
	MATERIAL:				
0418	Brass hard drawn hooks and eyes 300 mm	10 nos	10.00	700.00	700.00
9999	Carriage of materials	L.S.	0.91	1.49	1.36
	LABOUR:				
0111	Carpenter 1 st class	day	0.06	301.00	18.06
	TOTAL				719.42
	Add Water Charges @ 1%				7.19
	TOTAL				726.61
	Add CPOH @ 15%				108.99
	Cost of 10 nos				835.60
	Cost of each				83.56
	Say				83.55

14.35.2 250 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos				
	MATERIAL:				
0419	Brass hard drawn hooks and eyes 250 mm	10 nos	10.00	675.00	675.00
9999	Carriage of materials	L.S.	0.91	1.49	1.36
	LABOUR:				
0111	Carpenter 1 st class	day	0.06	301.00	18.06
	TOTAL				694.42
	Add Water Charges @ 1%				6.94
	TOTAL				701.36
	Add CPOH @ 15%				105.20
	Cost of 10 nos				806.56
	Cost of each				80.66
	Say				80.65

14.35.3 200 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos				
	MATERIAL:				
0420	Brass hard drawn hooks and eyes 200 mm	10 nos	10.00	625.00	625.00
9999	Carriage of materials	L.S.	0.91	1.49	1.36
	LABOUR:				
0111	Carpenter 1 st class	day	0.06	301.00	18.06
	TOTAL				644.42
	Add Water Charges @ 1%				6.44
	TOTAL				650.86
	Add CPOH @ 15%				97.63
	Cost of 10 nos				748.49
	Cost of each				74.85
	Say				74.85

14.35.4 150 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos				
	MATERIAL:				
0421	Brass hard drawn hooks and eyes 150 mm	10 nos	10.00	600.00	600.00
9999	Carriage of materials	L.S.	0.91	1.49	1.36
	LABOUR:				
0111	Carpenter 1 st class	day	0.06	301.00	18.06
	TOTAL				619.42
	Add Water Charges @ 1%				6.19
	TOTAL				625.61
	Add CPOH @ 15%				93.84
	Cost of 10 nos				719.45
	Cost of each				71.95
	Say				71.95

14.35.5 100 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos				
	MATERIAL:				
0422	Brass hard drawn hooks and eyes 100 mm	10 nos	10.00	500.00	500.00
9999	Carriage of materials	L.S.	0.91	1.49	1.36
	LABOUR:				
0111	Carpenter 1 st class	day	0.06	301.00	18.06
	TOTAL				519.42
	Add Water Charges @ 1%				5.19
	TOTAL				524.61
	Add CPOH @ 15%				78.69
	Cost of 10 nos				603.30
	Cost of each				60.33
	Say				60.35

14.36 Providing and fixing bright finished brass fan light pivot with necessary brass screws etc. complete.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos				
	MATERIAL:				
0429	Brass fanlight pivot	10 nos	10.00	190.00	190.00
0450	Brass screws 40 mm	100 nos	40.00	160.00	64.00
9999	Carriage of materials	L.S.	0.91	1.49	1.36
	LABOUR:				
0111	Carpenter 1 st class	day	0.08	301.00	24.08
	TOTAL				279.44
	Add Water Charges @ 1%				2.79
	TOTAL				282.23
	Add CPOH @ 15%				42.33
	Cost of 10 nos				324.56
	Cost of each				32.46
	Say				32.45

14.37 Providing and fixing 300 mm long bright finished brass chain with hook for fan light including necessary brass screws etc. complete.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos				
	MATERIAL:				
0430	Brass chain with hook for fan light catch	each	10.00	30.00	300.00
0452	Brass screws 25 mm	100 nos	40.00	95.00	38.00
9999	Carriage of materials	L.S.	0.91	1.49	1.36
	LABOUR:				
0111	Carpenter 1 st class	day	0.10	301.00	30.10
	TOTAL				369.46
	Add Water Charges @ 1%				3.69
	TOTAL				373.15
	Add CPOH @ 15%				55.97
	Cost of 10 nos				429.12
	Cost of each				42.91
	Say				42.90

14.38 Providing and fixing bright finished brass quadrant stay 300 mm long with necessary brass screws etc. complete.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos				
	MATERIAL:				
0427	Brass quadrant stays 300 mm	each	10.00	120.00	1,200.00
0452	Brass screws 25 mm	100 nos	40.00	95.00	38.00
9999	Carriage of materials	L.S.	0.91	1.49	1.36
	LABOUR:				
0111	Carpenter 1 st class	day	0.10	301.00	30.10
	TOTAL				1,269.46
	Add Water Charges @ 1%				12.69
	TOTAL				1,282.15
	Add CPOH @ 15%				192.32
	Cost of 10 nos				1,474.47
	Cost of each				147.45
	Say				147.45

14.39 Providing and fixing bright finished brass helical door spring (superior quality).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos				
	MATERIAL:				
0442	Brass helical spring 150 mm	each	10.00	300.00	3,000.00
0449	Brass screws 50 mm	100 nos	40.00	200.00	80.00
0452	Brass screws 25 mm	100 nos	20.00	95.00	19.00
	LABOUR:				
0111	Carpenter 1 st class	day	0.40	301.00	120.40
0114	Beldar	day	0.20	247.00	49.40
	TOTAL				3,268.80
	Add Water Charges @ 1%				32.69
	TOTAL				3,301.49
	Add CPOH @ 15%				495.22
	Cost of 10 nos				3,796.71
	Cost of each				379.67
	Say				379.65

14.40 Providing and fixing chromium plated brass butt hinges with necessary chromium plated brass screws etc. complete.

14.40.1 125x70x4 mm (ordinary type)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos				
	MATERIAL:				
0525	Chromium plated Brass butt hinges (light/ordinary) type 125x70x4 mm	10 nos	10.00	810.00	810.00
0585	Chromium plated Brass screws 50 mm	100 nos	100.00	230.00	230.00
9999	Carriage of materials	L.S.	3.64	1.49	5.42
	LABOUR:				
0111	Carpenter 1 st class	day	0.14	301.00	42.14
0114	Beldar	day	0.10	247.00	24.70
	TOTAL				1,112.26
	Add Water Charges @ 1%				11.12
	TOTAL				1,123.38
	Add CPOH @ 15%				168.51
	Cost of 10 nos				1,291.89
	Cost of each				129.19
	Say				129.20

14.40.2 100x70x4 mm (ordinary type)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos				
	MATERIAL:				
0526	Chromium plated Brass butt hinges (light/ordinary) type 100x70x4 mm	10 nos	10.00	675.00	675.00
0586	Chromium plated Brass screws 40 mm	100 Nos	80.00	190.00	152.00
9999	Carriage of materials	L.S.	3.64	1.49	5.42
	LABOUR:				
0111	Carpenter 1 st class	day	0.14	301.00	42.14
0114	Beldar	day	0.10	247.00	24.70
	TOTAL				899.26
	Add Water Charges @ 1%				8.99
	TOTAL				908.25
	Add CPOH @ 15%				136.24
	Cost of 10 nos				1,044.49
	Cost of each				104.45
	Say				104.45

14.40.3 75x65x4 mm (heavy type)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos				
	MATERIAL:				
0524	Chromium plated Brass butt hinges (heavy) type 75x65x4 mm (200gms)	10 Nos	10.00	950.00	950.00
0587	Chromium plated Brass screws 30 mm	100 nos	60.00	150.00	90.00
9999	Carriage of materials	L.S.	1.82	1.49	2.71
	LABOUR:				
0111	Carpenter 1 st class	day	0.14	301.00	42.14

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Beldar	day	0.10	247.00	24.70
	TOTAL				1,109.55
	Add Water Charges @ 1%				11.10
	TOTAL				1,120.65
	Add CPOH @ 15%				168.10
	Cost of 10 nos				1,288.75
	Cost of each				128.88
	Say				128.90

14.40.4 75x40x2.5 mm (ordinary type)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos				
	MATERIAL:				
0527	Chromium plated Brass butt hinges (light/ordinary) type 75x40x2.5 mm	10 nos	10.00	425.00	425.00
0587	Chromium plated Brass screws 30 mm	100 nos	60.00	150.00	90.00
9999	Carriage of materials	L.S.	1.82	1.49	2.71
	LABOUR:				
0111	Carpenter 1 st class	day	0.14	301.00	42.14
0114	Beldar	day	0.10	247.00	24.70
	TOTAL				584.55
	Add Water Charges @ 1%				5.85
	TOTAL				590.40
	Add CPOH @ 15%				88.56
	Cost of 10 nos				678.96
	Cost of each				67.90
	Say				67.90

14.40.5 50x40x2.5 mm (ordinary type)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos				
	MATERIAL:				
0528	Chromium plated Brass butt hinges (light/ordinary) type 50x40x2.5 mm	10 nos	10.00	185.00	185.00
0589	Chromium plated Brass screws 20 mm	100 nos	40.00	100.00	40.00
9999	Carriage of materials	L.S.	0.91	1.49	1.36
	LABOUR:				
0111	Carpenter 1 st class	day	0.08	301.00	24.08
	TOTAL				250.44
	Add Water Charges @ 1%				2.50
	TOTAL				252.94
	Add CPOH @ 15%				37.94
	Cost of 10 nos				290.88
	Cost of each				29.09
	Say				29.10

14.41 Providing and fixing 85x42 mm chromium plated brass pull bolt lock with necessary chromium plated brass screws, nuts, bolts and washers etc. complete.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos				
	MATERIAL:				
2467	Chromium plated Brass pull bolt lock (locking bolt) of size 85 mm x 42 mm with screws, bolts, nuts and washers complete	each	10.00	145.00	1,450.00
9999	Carriage of materials & Sundries	L.S.	6.37	1.49	9.49
	LABOUR:				
0112	Carpenter 2nd class	day	0.25	273.00	68.25
	TOTAL				1,527.74
	Add Water Charges @ 1%				15.28
	TOTAL				1,543.02
	Add CPOH @ 15%				231.45
	Cost of 10 nos				1,774.47
	Cost of each				177.45
	Say				177.45

14.42 White washing with lime to give an even shade:

14.42.1 Old work (two or more coats)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
0775	Dehradun white lime	quintal	0.02	410.00	8.20
9999	Carriage of lime	L.S.	0.52	1.49	0.77
	LABOUR:				
0141	White Washer	day	0.11	260.00	28.60
0115	Coolie	day	0.06	247.00	14.82
9999	Indigo gum etc.	L.S.	2.73	1.49	4.07
9999	Sundries ladders etc.	L.S.	2.73	1.49	4.07
	TOTAL				60.53
	Add Water Charges @ 1%				0.61
	TOTAL				61.14
	Add CPOH @ 15%				9.17
	Cost of 10 sqm				70.31
	Cost of 1 sqm				7.03
	Say				7.05

14.42.2 Old work (one or more coats)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
0775	Dehradun white lime	quintal	0.01	410.00	4.10
9999	Carriage of lime	L.S.	0.52	1.49	0.77
	LABOUR:				
0141	White Washer	day	0.07	260.00	18.20
0115	Coolie	day	0.03	247.00	7.41
9999	Indigo gum etc.	L.S.	2.08	1.49	3.10

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries ladders etc.	L.S.	2.73	1.49	4.07
	TOTAL				37.65
	Add Water Charges @ 1%				0.38
	TOTAL				38.03
	Add CPOH @ 15%				5.70
	Cost of 10 sqm				43.73
	Cost of 1 sqm				4.37
	Say				4.35

14.43 Removing white or colour wash by scrapping and sand papering and preparing the surface smooth including necessary repairs to scratches etc. complete.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	LABOUR:				
0114	Beldar	day	0.09	247.00	22.23
0115	Coolie	day	0.04	247.00	9.88
0101	Bhisti	day	0.04	260.00	10.40
9999	Sundries such as sand paper and scrapper	L.S.	2.73	1.49	4.07
9999	Repair to scratches	L.S.	1.82	1.49	2.71
	TOTAL				49.29
	Add Water Charges @ 1%				0.49
	TOTAL				49.78
	Add CPOH @ 15%				7.47
	Cost of 10 sqm				57.25
	Cost of 1 sqm				5.73
	Say				5.70

14.44 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.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
0815	Dry distemper	kilogram	1.00	35.00	35.00
9999	Carriage of distemper	L.S.	0.91	1.49	1.36
9999	Brushes, sand-paper etc.	L.S.	5.33	1.49	7.94
	LABOUR:				
0131	Painter	day	0.33	273.00	90.09
0115	Coolie	day	0.17	247.00	41.99
9999	Sundries	L.S.	4.42	1.49	6.59
	TOTAL				182.97
	Add Water Charges @ 1%				1.83
	TOTAL				184.80
	Add CPOH @ 15%				27.72
	Cost of 10 sqm				212.52
	Cost of 1 sqm				21.25
	Say				21.25

14.45 Distempering with oil bound washable distemper of approved brand and manufacture to give an even shade:

14.45.1 Old work (one or more coats)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
0816	Oil bound washable distemper/ Acrylic distemper	kilogram	1.00	42.00	42.00
9999	Brushes, putty etc.	L.S.	0.52	1.49	0.77
9999	Sundries including carriage	L.S.	10.79	1.49	16.08
	LABOUR:				
0131	Painter	day	0.33	273.00	90.09
0115	Coolie	day	0.17	247.00	41.99
9999	Sundries	L.S.	7.15	1.49	10.65
	TOTAL				201.58
	Add Water Charges @ 1%				2.02
	TOTAL				203.60
	Add CPOH @ 15%				30.54
	Cost of 10 sqm				234.14
	Cost of 1 sqm				23.41
	Say				23.40

14.46 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.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
0114	Beldar	day	0.11	247.00	27.17
0115	Coolie	day	0.05	247.00	12.35
0101	Bhisti	day	0.05	260.00	13.00
9999	Scrapper, sand paper etc.	L.S.	6.24	1.49	9.30
9999	Sundries including mortar to repair the surface	L.S.	1.82	1.49	2.71
	TOTAL				64.53
	Add Water Charges @ 1%				0.65
	TOTAL				65.18
	Add CPOH @ 15%				9.78
	Cost of 10 sqm				74.96
	Cost of 1 sqm				7.50
	Say				7.50

14.47 Painting on G.S. sheet with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade:

14.47.1 Old work (one or more coats)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
0845	Roofing paint for iron sheets in red colour	litre	0.46	110.00	50.60
9999	Carriage	L.S.	0.52	1.49	0.77

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	LABOUR:				
0131	Painter	day	0.36	273.00	98.28
0115	Coolie	day	0.36	247.00	88.92
9999	Putty, brushes, sand paper etc.	L.S.	6.76	1.49	10.07
9999	Sundries	L.S.	8.06	1.49	12.01
	TOTAL				260.65
	Add Water Charges @ 1%				2.61
	TOTAL				263.26
	Add CPOH @ 15%				39.49
	Cost of 10 sqm				302.75
	Cost of 1 sqm				30.28
	Say				30.30

14.48 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 :

14.48.1 75 mm diameter pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 30 mtrs				
	Area=22/7 x0.0814 x30m =7.67sqm				
	MATERIAL:				
4202	Red oxide Zinc chromate primer	litre	0.41	68.00	27.88
9999	Carriage	L.S.	0.39	1.49	0.58
	LABOUR:				
0131	Painter	day	0.18	273.00	49.14
0115	Coolie	day	0.18	247.00	44.46
9999	Brushes, sand-paper etc.	L.S.	8.19	1.49	12.20
	MATERIAL:				
0828	Anticorrosive bituminous paint (black)	litre	0.73	85.00	62.05
9999	Carriage	L.S.	1.04	1.49	1.55
	LABOUR:				
0131	Painter	day	0.41	273.00	111.93
0115	Coolie	day	0.41	247.00	101.27
9999	Putty, sand paper etc.	L.S.	4.16	1.49	6.20
9999	Sundries	L.S.	6.24	1.49	9.30
9999	Wire brushes for cleaning	L.S.	4.42	1.49	6.59
9999	Extra for delays	L.S.	40.30	1.49	60.05
	TOTAL				493.20
	Add Water Charges @ 1%				4.93
	TOTAL				498.13
	Add CPOH @ 15%				74.72
	Cost of 30 metre				572.85
	Cost of 1 metre				19.10
	Say				19.10

14.49 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:

14.49.1 75 mm diameter pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 30 mtrs				
	Area=22/7 x0.0814 x30m =7.67sqm				
	MATERIAL:				
0828	Anticorrosive bituminous paint (black)	litre	0.43	85.00	36.55
9999	Carriage	L.S.	0.39	1.49	0.58
	LABOUR:				
0131	Painter	day	0.27	273.00	73.71
0115	Coolie	day	0.27	247.00	66.69
9999	Putty, sand paper etc.	L.S.	4.16	1.49	6.20
9999	Sundries	L.S.	6.24	1.49	9.30
9999	Wire brushes for cleaning	L.S.	4.42	1.49	6.59
9999	Extra for delays	L.S.	26.91	1.49	40.10
	TOTAL				239.72
	Add Water Charges @ 1%				2.40
	TOTAL				242.12
	Add CPOH @ 15%				36.32
	Cost of 30 metre				278.44
	Cost of 1 metre				9.28
	Say				9.30

14.49.2 100 mm dia metre pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 30 mtrs				
	Area=22/7 x 106.4 mm x 30 metres = 10.032 sqm				
	MATERIAL:				
0828	Anticorrosive bituminous paint (black)	litre	0.57	85.00	48.45
9999	Carriage	L.S.	0.52	1.49	0.77
	LABOUR:				
0131	Painter	day	0.36	273.00	98.28
0115	Coolie	day	0.36	247.00	88.92
9999	Putty , sand paper etc.	L.S.	5.33	1.49	7.94
9999	Sundries	L.S.	8.06	1.49	12.01
9999	Wire brushes for cleaning	L.S.	5.33	1.49	7.94
9999	Extra for delays	L.S.	34.06	1.49	50.75
	TOTAL				315.06
	Add Water Charges @ 1%				3.15
	TOTAL				318.21
	Add CPOH @ 15%				47.73
	Cost of 30 metres				365.94
	Cost of 1 metre				12.20
	Say				12.20

14.49.3 150 mm dia metre pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 30 metres				
	Area=22/7 x 157.2 mm x 30 metres = 14.82 sqm				
	MATERIAL:				
0828	Anticorrosive bituminous paint (black)	litre	0.85	85.00	72.25
9999	Carriage	L.S.	0.65	1.49	0.97
	LABOUR:				
0131	Painter	day	0.53	273.00	144.69
0115	Coolie	day	0.53	247.00	130.91
9999	Putty , sand paper etc.	L.S.	8.06	1.49	12.01
9999	Sundries	L.S.	11.96	1.49	17.82
9999	Wire brushes for cleaning	L.S.	7.14	1.49	10.64
9999	Extra for delays	L.S.	40.30	1.49	60.05
	TOTAL				449.34
	Add Water Charges @ 1%				4.49
	TOTAL				453.83
	Add CPOH @ 15%				68.07
	Cost of 30 metres				521.90
	Cost of 1 metre				17.40
	Say				17.40

14.50 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:

14.50.1 75 mm diameter pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 30 mtrs				
	MATERIAL:				
4202	Red oxide Zinc chromate primer	litre	0.41	68.00	27.88
9999	Carriage	L.S.	0.39	1.49	0.58
	LABOUR:				
0131	Painter	day	0.18	273.00	49.14
0115	Coolie	day	0.18	247.00	44.46
9999	Sundries	L.S.	8.19	1.49	12.20
	MATERIAL:				
0826	Aluminium paint	litre	0.61	115.00	70.15
9999	Carriage	L.S.	1.04	1.49	1.55
9999	Putty,sand paper etc	L.S.	4.16	1.49	6.20
	LABOUR:				
0131	Painter	ay	0.41	273.00	111.93
0115	Coolie	day	0.41	247.00	101.27
9999	Sundries	L.S.	5.20	1.49	7.75
9999	Wire brushes for cleaning	L.S.	9.10	1.49	13.56
9999	Extra for delay	L.S.	44.85	1.49	66.83
	TOTAL				513.50
	Add Water Charges @ 1%				5.14
	TOTAL				518.64
	Add CPOH @ 15%				77.80
	Cost of 30 metre				596.44
	Cost of 1 metre				19.88
	Say				19.90

14.50.2 100 mm dia metre pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 30 mtrs				
	Area=22/7 x106.4x30m =10.032sqm				
	MATERIAL:				
4202	Red oxide Zinc chromate primer	litre	0.54	68.00	36.72
9999	Carriage	L.S.	0.52	1.49	0.77
	LABOUR:				
0131	Painter	day	0.24	273.00	65.52
	0.18 x 10.032 / 7.67 = 0.24				
0115	Coolie	day	0.24	247.00	59.28
9999	Sundries	L.S.	10.79	1.49	16.08
	MATERIAL:				
0826	Aluminium paint	litre	1.16	115.00	133.40
	0.61 x 10.032 / 7.67 = 0.80				
9999	Carriage	L.S.	1.43	1.49	2.13
9999	Putty, sand paper etc.	L.S.	5.33	1.49	7.94
	LABOUR:				
0131	Painter	day	0.54	273.00	147.42
	0.41 x 10.032 / 7.67 = 0.54				
0115	Coolie	day	0.54	247.00	133.38
9999	Sundries	L.S.	6.76	1.49	10.07
9999	Wire brushes for cleaning	L.S.	11.96	1.49	17.82
9999	Extra for delay	L.S.	66.43	1.49	98.98
	TOTAL				729.51
	Add Water Charges @ 1%				7.30
	TOTAL				736.81
	Add CPOH @ 15%				110.52
	Cost of 30 metre				847.33
	Cost of 1 metre				28.24
	Say				28.25

14.50.3 150 mm dia metre pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 30 sqm				
	Area=22/7 x157.12x30m =14.82 sqm				
	MATERIAL:				
4202	Red oxide Zinc chromate primer	litre	0.80	68.00	54.40
9999	Carriage	L.S.	0.65	1.49	0.97
	LABOUR:				
0131	Painter	day	0.36	273.00	98.28
	0.18 x 14.82 / 7.67 = 0.36				
0115	Coolie	day	0.36	247.00	88.92
9999	Sundries	L.S.	15.99	1.49	23.83
	MATERIAL:				
0826	Aluminium paint	litre	1.72	115.00	197.80
	0.61 x 14.82 / 7.67 = 1.72				
9999	Carriage	L.S.	2.08	1.49	3.10
9999	Putty, sand paper etc.	L.S.	7.93	1.49	11.82
	LABOUR:				
0131	Painter	day	0.80	273.00	218.40
	0.41 x 14.82 / 7.67 = 0.80				
0115	Coolie	day	0.80	247.00	197.60
9999	Sundries	L.S.	10.01	1.49	14.91

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Wire brushes for cleaning	L.S.	17.81	1.49	26.54
9999	Extra for delay	L.S.	101.40	1.49	151.09
	TOTAL				1,087.66
	Add Water Charges @ 1%				10.88
	TOTAL				1,098.54
	Add CPOH @ 15%				164.78
	Cost of 30 metre				1,263.32
	Cost of 1 metre				42.11
	Say				42.10

14.51 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:

14.51.1 75 mm diameter pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 30 mtrs				
	Area=22/7 x0.0814 x30m =7.67sqm				
	MATERIAL:				
0826	Aluminium paint	litre	0.35	115.00	40.25
9999	Putty,sand paper etc	L.S.	0.39	1.49	0.58
9999	Carriage	L.S.	2.08	1.49	3.10
	LABOUR:				
0131	Painter	day	0.28	273.00	76.44
0115	Coolie	day	0.28	247.00	69.16
9999	Putty,sand paper brushes etc.	L.S.	4.16	1.49	6.20
9999	Sundries	L.S.	6.24	1.49	9.30
9999	Wire brushes for cleaning	L.S.	4.42	1.49	6.59
9999	Extra for delay	L.S.	26.91	1.49	40.10
	TOTAL				251.72
	Add Water Charges @ 1%				2.52
	TOTAL				254.24
	Add CPOH @ 15%				38.14
	Cost of 30 metre				292.38
	Cost of 1 metre				9.75
	Say				9.75

14.51.2 100 mm diameter pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 30 mtrs				
	Area = 22/7x106.4 mmx30 m = 10.032 sqm				
	MATERIAL:				
0826	Aluminium paint	litre	0.46	115.00	52.90
9999	Putty,sand paper etc.	L.S.	0.52	1.49	0.77
9999	Carriage	L.S.	2.73	1.49	4.07
	LABOUR:				
0131	Painter	day	0.36	273.00	98.28
0115	Coolie	day	0.36	247.00	88.92
9999	Putty,sand paper brushes etc.	L.S.	5.33	1.49	7.94
9999	Sundries	L.S.	8.06	1.49	12.01
9999	Wire brushes for cleaning	L.S.	5.33	1.49	7.94

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Extra for delay	L.S.	34.06	1.49	50.75
	TOTAL				323.58
	Add Water Charges @ 1%				3.24
	TOTAL				326.82
	Add CPOH @ 15%				49.02
	Cost of 30 metre				375.84
	Cost of 1 metre				12.53
	Say				12.55

14.51.3 150 mm diameter pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 30 metres				
	Area = 22/7x157.2 mmx30 m = 14.82 sqm				
	MATERIAL:				
0826	Aluminium paint	litre	0.68	115.00	78.20
9999	Putty,sand paper etc	L.S.	0.65	1.49	0.97
9999	Carriage	L.S.	3.90	1.49	5.81
	LABOUR:				
0131	Painter	day	0.53	273.00	144.69
0115	Coolie	day	0.53	247.00	130.91
9999	Putty,sand paper brushes etc	L.S.	7.93	1.49	11.82
9999	Sundries	L.S.	11.96	1.49	17.82
9999	Wire brushes for cleaning	L.S.	7.15	1.49	10.65
9999	Extra for delay	L.S.	40.30	1.49	60.05
	TOTAL				460.92
	Add Water Charges @ 1%				4.61
	TOTAL				465.53
	Add CPOH @ 15%				69.83
	Cost of 30 metre				535.36
	Cost of 1 metre				17.85
	Say				17.85

14.52 Painting with oil type wood preservative of approved brand and manufacture:
14.52.1 Old work (one or more coats)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
0859	Oil type wood preservative	litre	0.81	70.00	56.70
9999	Carriage of materials	L.S.	0.52	1.49	0.77
	LABOUR:				
0131	Painter	day	0.11	273.00	30.03
0115	Coolie	day	0.11	247.00	27.17
9999	Brushes etc	L.S.	2.73	1.49	4.07
9999	Sundries	L.S.	2.73	1.49	4.07
	TOTAL				122.81
	Add Water Charges @ 1%				1.23
	TOTAL				124.04
	Add CPOH @ 15%				18.61
	Cost of 10 sqm				142.65
	Cost of 1 sqm				14.27
	Say				14.25

14.53 Wall painting with plastic emulsion paint of approved brand and manufacture to give an even shade:

14.53.1 One or more coats on old work

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
0835	Plastic emulsion paint	litre	0.73	165.00	120.45
9999	Materials for filling in holes and cracks (putty etc.)	L.S.	0.52	1.49	0.77
9999	Carriage of materials	L.S.	5.33	1.49	7.94
	LABOUR:				
0131	Painter	day	0.36	273.00	98.28
0115	Coolie	day	0.36	247.00	88.92
9999	Brushes, sand paper etc	L.S.	8.06	1.49	12.01
9999	Sundries	L.S.	6.76	1.49	10.07
	TOTAL				338.44
	Add Water Charges @ 1%				3.38
	TOTAL				341.82
	Add CPOH @ 15%				51.27
	Cost of 10 sqm				393.09
	Cost of 1 sqm				39.31
	Say				39.30

14.54 Painting with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade:

14.54.1 One or more coats on old work

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
0833	Synthetic enamel paint in black or chocolate shade	litre	0.70	130.00	91.00
9999	Carriage of paint and materials	L.S.	0.52	1.49	0.77
	LABOUR:				
0131	Painter	day	0.36	273.00	98.28
0115	Coolie	day	0.36	247.00	88.92
9999	Putty	L.S.	2.73	1.49	4.07
9999	Brushes sand paper etc	L.S.	5.33	1.49	7.94
9999	Sundries	L.S.	8.06	1.49	12.01
	TOTAL				302.99
	Add Water Charges @ 1%				3.03
	TOTAL				306.02
	Add CPOH @ 15%				45.90
	Cost of 10 sqm				351.92
	Cost of 1 sqm				35.19
	Say				35.20

14.55 Painting with aluminium paint of approved brand and manufacture to give an even shade:

14.55.1 One or more coats on old work

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
0826	Aluminium paint	litre	0.46	115.00	52.90
9999	Carriage of paint and materials	L.S.	0.52	1.49	0.77
9999	Putty etc.	L.S.	2.73	1.49	4.07
	LABOUR:				
0131	Painter	day	0.36	273.00	98.28
0115	Coolie	day	0.36	247.00	88.92
9999	Brushes, sand paper etc	L.S.	5.33	1.49	7.94
9999	Sundries	L.S.	8.06	1.49	12.01
	TOTAL				264.89
	Add Water Charges @ 1%				2.65
	TOTAL				267.54
	Add CPOH @ 15%				40.13
	Cost of 10 sqm				307.67
	Cost of 1 sqm				30.77
	Say				30.75

14.56 Painting with acid proof paint of approved brand and manufacture of required colour to give an even shade:

14.56.1 One or more coats on old work

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
0827	Acid proof paint (chocolate or black)	litre	0.70	105.00	73.50
9999	Carriage of paint and materials	L.S.	0.52	1.49	0.77
9999	Putty etc	L.S.	2.73	1.49	4.07
	LABOUR:				
0131	Painter	day	0.36	273.00	98.28
0115	Coolie	day	0.36	247.00	88.92
9999	Brushes, sand paper etc	L.S.	5.33	1.49	7.94
9999	Sundries	L.S.	8.06	1.49	12.01
	TOTAL				285.49
	Add Water Charges @ 1%				2.85
	TOTAL				288.34
	Add CPOH @ 15%				43.25
	Cost of 10 sqm				331.59
	Cost of 1 sqm				33.16
	Say				33.15

14.57 Painting with black anti-corrosive bitumastic paint of approved brand and manufacture to give an even shade:

14.57.1 One or more coats on old work

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
0828	Anticorrosive bituminous paint (black)	litre	0.57	85.00	48.45
9999	Carriage	L.S.	0.52	1.49	0.77
	LABOUR:				
0131	Painter	day	0.36	273.00	98.28
0115	Coolie	day	0.36	247.00	88.92
9999	Putty, brushes sand paper etc.	L.S.	5.33	1.49	7.94
9999	Sundries	L.S.	8.06	1.49	12.01
	TOTAL				256.37
	Add Water Charges @ 1%				2.56
	TOTAL				258.93
	Add CPOH @ 15%				38.84
	Cost of 10 sqm				297.77
	Cost of 1 sqm				29.78
	Say				29.80

14.58 French spirit polishing:

14.58.1 One or more coats on old work

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
1000	Spirit	litre	0.98	65.00	63.70
0999	Shellac	kilogram	0.13	205.00	26.65
9999	Carriage of materials	L.S.	0.91	1.49	1.36
9999	Turpentine oil sand paper cotton/woolen cloth putty etc	L.S.	10.79	1.49	16.08
9999	Linseed oil	L.S.	0.52	1.49	0.77
	LABOUR:				
0131	Painter	day	1.76	273.00	480.48
9999	Sundries	L.S.	8.06	1.49	12.01
	TOTAL				601.05
	Add Water Charges @ 1%				6.01
	TOTAL				607.06
	Add CPOH @ 15%				91.06
	Cost of 10 sqm				698.12
	Cost of 1 sqm				69.81
	Say				69.80

14.59 Polishing on wood work with ready made wax polish of approved brand and manufacture:

14.59.1 Old work

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
0855	Wax polish (ready made)	kilogram	0.25	175.00	43.75

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Carriage	L.S.	0.39	1.49	0.58
	LABOUR:				
0131	Painter	day	0.40	273.00	109.20
0115	Coolie	day	0.40	247.00	98.80
9999	Soap, brushes, cloth etc	L.S.	4.16	1.49	6.20
9999	Sundries	L.S.	4.42	1.49	6.59
	TOTAL				265.12
	Add Water Charges @ 1%				2.65
	TOTAL				267.77
	Add CPOH @ 15%				40.17
	Cost of 10 sqm				307.94
	Cost of 1 sqm				30.79
	Say				30.80

14.60 Re-lettering with black japan paint of approved brand and manufacture.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 letters of 15 cm height				
	MATERIAL:				
0829	Black Japan paint	litre	0.37	90.00	33.30
9999	Carriage	L.S.	0.52	1.49	0.77
	LABOUR:				
0131	Painter	day	4.00	273.00	1,092.00
0115	Coolie	day	1.00	247.00	247.00
9999	Painting brushes, turpentine, stencil etc	L.S.	7.15	1.49	10.65
9999	Sundries	L.S.	8.06	1.49	12.01
	TOTAL				1,395.73
	Add Water Charges @ 1%				13.96
	TOTAL				1,409.69
	Add CPOH @ 15%				211.45
	Cost of 100 letters of 15 cm height				1,621.14
	Cost per letter per cm height				1.08
	Say				1.10

14.61 Painting (one or more coats) with black japan paint of approved brand and manufacturing to give an even shade.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
0829	Black Japan paint	litre	0.70	90.00	63.00
9999	Carriage	L.S.	0.52	1.49	0.77
9999	Putty etc	L.S.	2.73	1.49	4.07
	LABOUR:				
0131	Painter	day	0.36	273.00	98.28
0115	Coolie	day	0.36	247.00	88.92
9999	Brushes, sand paper etc	L.S.	5.33	1.49	7.94
9999	Sundries	L.S.	8.06	1.49	12.01
	TOTAL				274.99
	Add Water Charges @ 1%				2.75
	TOTAL				277.74
	Add CPOH @ 15%				41.66
	Cost of 10 sqm				319.40
	Cost of 1 sqm				31.94
	Say				31.95

14.62 Providing and fixing C.P. brass chain and rubber plug complete for sink or wash basin:

14.62.1 32 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 no				
	MATERIAL:				
1314	C.P.brass chain with 32 mm dia rubber plug	each	1.00	26.00	26.00
9999	Carriage of materials and fixing charges	L.S.	8.06	1.49	12.01
	TOTAL				38.01
	Add Water Charges @ 1%				0.38
	TOTAL				38.39
	Add CPOH @ 15%				5.76
	Cost of each				44.15
	Say				44.15

14.62.2 40 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 no				
	MATERIAL:				
1315	C.P.brass chain with 40 mm dia rubber plug	each	1.00	27.00	27.00
9999	Carriage of materials and fixing charges	L.S.	8.06	1.49	12.01
	TOTAL				39.01
	Add Water Charges @ 1%				0.39
	TOTAL				39.40
	Add CPOH @ 15%				5.91
	Cost of each				45.31
	Say				45.30

14.63 Distempering with 1st quality acrylic washable distemper (ready made) of approved manufacturer and of required shade and colour complete as per manufacturer's specification.

14.63.1 One or more coats on old work

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
0816	Oil bound washable distemper/ Acrylic distemper	kilogram	1.00	42.00	42.00
9999	Brushes, putty etc.	L.S.	0.52	1.49	0.77
9999	Sundries including carriage of material	L.S.	10.76	1.49	16.03
	LABOUR:				
0131	Painter	day	0.22	273.00	60.06
0114	Beldar	day	0.22	247.00	54.34
9999	Sundries	L.S.	7.15	1.49	10.65
	TOTAL				183.85
	Add Water Charges @ 1%				1.84
	TOTAL				185.69
	Add CPOH @ 15%				27.85
	Cost of 10 sqm				213.54
	Cost of 1 sqm				21.35
	Say				21.35

14.64 Finishing walls with water proofing cement paint of required shade:

14.64.1 Old work (one or more coats applied @ 2.20 kg/10 sqm) over priming coat of primer applied @ 0.80 litrs/ 10 sqm complete including cost of Priming coat

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
0851	Water proofing cement paint	kilogram	2.20	40.00	88.00
8508	Primer for cement paint	litre	0.80	63.00	50.40
9999	Carriage of material	L.S.	1.56	1.49	2.32
	LABOUR:				
0131	Painter	day	0.46	273.00	125.58
0115	Coolie	day	0.23	247.00	56.81
0101	Bhisti	day	0.05	260.00	13.00
9999	Brushes, sand paper etc	L.S.	7.15	1.49	10.65
9999	Sundries	L.S.	8.06	1.49	12.01
	TOTAL				358.77
	Add Water Charges @ 1%				3.59
	TOTAL				362.36
	Add CPOH @ 15%				54.35
	Cost of 10 sqm				416.71
	Cost of 1 sqm				41.67
	Say				41.65

14.64.2 Old work (one or more coats @ 2.20 kg/ 10 sqm) complete

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
0851	Water proofing cement paint	kilogram	2.20	40.00	88.00
9999	Carriage of material	L.S.	1.10	1.49	1.64
	LABOUR:				
0131	Painter	day	0.35	273.00	95.55
0115	Coolie	day	0.12	247.00	29.64
0101	Bhisti	day	0.05	260.00	13.00
9999	Brushes, sand paper etc.	L.S.	3.15	1.49	4.69
9999	Sundries	L.S.	8.06	1.49	12.01
	TOTAL				244.53
	Add Water Charges @ 1%				2.45
	TOTAL				246.98
	Add CPOH @ 15%				37.05
	Cost of 10 sqm				284.03
	Cost of 1 sqm				28.40
	Say				28.40

14.65 Finishing walls with textured exterior paint of required shade:

14.65.1 Old work (Two or more coats on existing cement paint surface applied @ 3.28 ltr/ 10 sqm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
8507	Textured exterior paint	litre	3.28	198.00	649.44
9999	Carriage of material	L.S.	1.56	1.49	2.32

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	LABOUR:				
0131	Painter	day	0.46	273.00	125.58
0115	Coolie	day	0.23	247.00	56.81
9999	Brushes, sand paper etc	L.S.	7.15	1.49	10.65
9999	Sundries	L.S.	8.06	1.49	12.01
	TOTAL				856.81
	Add Water Charges @ 1%				8.57
	TOTAL				865.38
	Add CPOH @ 15%				129.81
	Cost of 10 sqm				995.19
	Cost of 1 sqm				99.52
	Say				99.50

14.65.2 Old work (One or more coats) applied @ 1.82 ltr/ 10 sqm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
8507	Textured exterior paint	litre	1.82	198.00	360.36
9999	Carriage of material	L.S.	0.52	1.49	0.77
	LABOUR:				
0131	Painter	day	0.33	273.00	90.09
0115	Coolie	day	0.17	247.00	41.99
9999	Brushes, sand paper etc	L.S.	7.15	1.49	10.65
9999	Sundries	L.S.	8.06	1.49	12.01
	TOTAL				515.87
	Add Water Charges @ 1%				5.16
	TOTAL				521.03
	Add CPOH @ 15%				78.15
	Cost of 10 sqm				599.18
	Cost of 1 sqm				59.92
	Say				59.90

14.66 Finishing walls with Acrylic Smooth exterior paint of required shade:

14.66.1 Old work (Two or more coats applied @ 1.67 ltr/ 10 sqm) on existing cement paint surface

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
8505	Acrylic exterior paint	litre	1.67	130.00	217.10
9999	Carriage of material	L.S.	0.91	1.49	1.36
	LABOUR:				
0131	Painter	day	0.46	273.00	125.58
0115	Coolie	day	0.23	247.00	56.81
9999	Brushes, sand paper etc	L.S.	4.81	1.49	7.17
9999	Sundries	L.S.	5.33	1.49	7.94
	TOTAL				415.96
	Add Water Charges @ 1%				4.16
	TOTAL				420.12
	Add CPOH @ 15%				63.02
	Cost of 10 sqm				483.14
	Cost of 1 sqm				48.31
	Say				48.30

14.66.2 Old work (One or more coat applied @ 0.90 ltr/ 10 sqm)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
8505	Acrylic exterior paint	litre	0.90	130.00	117.00
9999	Carriage of material	L.S.	0.52	1.49	0.77
	LABOUR:				
0131	Painter	day	0.33	273.00	90.09
0115	Coolie	day	0.17	247.00	41.99
9999	Brushes, sand paper etc	L.S.	7.15	1.49	10.65
9999	Sundries	L.S.	8.06	1.49	12.01
	TOTAL				272.51
	Add Water Charges @ 1%				2.73
	TOTAL				275.24
	Add CPOH @ 15%				41.29
	Cost of 10 sqm				316.53
	Cost of 1 sqm				31.65
	Say				31.65

14.67 Finishing walls with Premium Acrylic Smooth exterior paint with Silicone additives of required shade:

14.67.1 Old work (Two or more coats applied @ 1.43 ltr/ 10 sqm) over existing cement paint surface

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
8506	Premium Acrylic exterior paint	litre	1.43	230.00	328.90
9999	Carriage of material	L.S.	1.04	1.49	1.55
	LABOUR:				
0131	Painter	day	0.46	273.00	125.58
0115	Coolie	day	0.23	247.00	56.81
9999	Brushes, sand paper etc	L.S.	7.15	1.49	10.65
9999	Sundries	L.S.	8.06	1.49	12.01
	TOTAL				535.50
	Add Water Charges @ 1%				5.36
	TOTAL				540.86
	Add CPOH @ 15%				81.13
	Cost of 10 sqm				621.99
	Cost of 1 sqm				62.20
	Say				62.20

14.67.2 Old work (one or more coats applied @ 0.83 ltr/ 10 sqm)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
8506	Premium Acrylic exterior paint	litre	0.83	230.00	190.90
9999	Carriage of material	L.S.	0.91	1.49	1.36
	LABOUR:				
0131	Painter	day	0.33	273.00	90.09
0115	Coolie	day	0.17	247.00	41.99

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Brushes, sand paper etc	L.S.	7.15	1.49	10.65
9999	Sundries	L.S.	8.06	1.49	12.01
	TOTAL				347.00
	Add Water Charges @ 1%				3.47
	TOTAL				350.47
	Add CPOH @ 15%				52.57
	Cost of 10 sqm				403.04
	Cost of 1 sqm				40.30
	Say				40.30

14.69 Varnishing with varnish of approved brand and manufacture:

14.69.1 One or more coats with copal varnish

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
0857	Superior copal varnish	litre	0.70	125.00	87.50
9999	Carriage	L.S.	0.52	1.49	0.77
9999	Repair to the surface	L.S.	2.73	1.49	4.07
	LABOUR:				
0131	Painter	day	0.36	273.00	98.28
0115	Coolie	day	0.36	247.00	88.92
9999	Brushes, sand Paper etc.	L.S.	5.33	1.49	7.94
9999	Sundries	L.S.	2.73	1.49	4.07
	TOTAL				291.55
	Add Water Charges @ 1%				2.92
	TOTAL				294.47
	Add CPOH @ 15%				44.17
	Cost of 10 sqm				338.64
	Cost of 1 sqm				33.86
	Say				33.85

14.69.2 One or more coats with spar varnish

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
0858	Superior spar varnish	litre	0.75	125.00	93.75
9999	Carriage	L.S.	0.52	1.49	0.77
9999	Repair etc	L.S.	2.73	1.49	4.07
	LABOUR:				
0131	Painter	day	0.36	273.00	98.28
0114	Beldar	day	0.36	247.00	88.92
9999	Brushes, sand paper etc	L.S.	2.73	1.49	4.07
9999	Sundries	L.S.	4.16	1.49	6.20
	TOTAL				296.06
	Add Water Charges @ 1%				2.96
	TOTAL				299.02
	Add CPOH @ 15%				44.85
	Cost of 10 sqm				343.87
	Cost of 1 sqm				34.39
	Say				34.40

14.70 Melamine polishing on wood work (one or more coat).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
7241	Melamine polish	litre	0.65	250.00	162.50
0006	Hire charges of Spraying machine including electric charges	day	0.78	250.00	195.00
9999	Carriage charge of machine & material	L.S.	4.42	1.49	6.59
	LABOUR:				
0131	Painter	day	0.35	273.00	95.55
0115	Coolie	day	0.35	247.00	86.45
9999	Sundries	L.S.	4.42	1.49	6.59
	TOTAL				552.68
	Add Water Charges @ 1%				5.53
	TOTAL				558.21
	Add CPOH @ 15%				83.73
	Cost of 10 sqm				641.94
	Cost of 1 sqm				64.19
	Say				64.20

14.71 Varnishing with flatting varnish of approved brand and manufacture one or more coats on old work.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
0856	Ordinary varnish	litre	0.70	65.00	45.50
9999	Glue, putty etc	L.S.	2.73	1.49	4.07
9999	Carriage	L.S.	1.82	1.49	2.71
9999	Painting brushes, turpentine, stencil etc	L.S.	24.18	1.49	36.03
	LABOUR:				
0131	Painter	day	0.36	273.00	98.28
0115	Coolie	day	0.36	247.00	88.92
	TOTAL				275.51
	Add Water Charges @ 1%				2.76
	TOTAL				278.27
	Add CPOH @ 15%				41.74
	Cost of 10 sqm				320.01
	Cost of 1 sqm				32.00
	Say				32.00

14.72 Providing and fixing double scaffolding system (cup lock type) on the exterior side, upto seven story hight made with 40 mm dia. M.S. tube 1.5 m centre to centre, horizontal & vertical tubes joining with cup & lock system with M.S. tubes, M.S. tube challies, M.S. clamps and M.S. staricase 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, sonnection with the building etc wherever required for inspection of work at required lacations with essential safety features for the workmen etc. complete as per directions and approval of Engineer-in-Charge. The elevational area of the scaffolding shall be measured for payment purpose. The

payment will be made once irrespective of duration of scaffolding. Note:- This item to be used for maintenance work judicially, necessary deduction for scaffolding in the existing item to be done.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for area 22.5m x 9.0m = 202.5 sqm				
14.72X	Cost of scaffolding of SH: Repairs to buildings 40 mm dia. M.S. pipe = 3,765.42 kg 25 mm box spigot = 123.98 kg Nuts and bolts = 37.80 kg Clamps = 120 Nos. @ 1.00 kg.each = 120.00 kg Challies = 90 Nos. @ 15.00 kg. each = 1,350.00 kg Cup locks = 1314 Nos. @ 0.50 kg each = 657.00 kg Total = 6054.20 kg. say 6.054 MT	each	1.00	7,820.65	7,820.65
2205	Carriage of steel	tonne	6.054	77.87	471.42
0116	Fitter (grade 1)	day	15.50	301.00	4,665.50
0114	Beldar	day	31.00	247.00	7,657.00
9999	Sundries	L.S.	1,035.00	1.49	1,542.15
	TOTAL				22,156.72
	Add Water Charges @ 1%				221.57
	TOTAL				22,378.29
	Add CPOH @ 15%				3,356.74
	Cost of 106.52 sqm				25,735.03
	Cost of 1 sqm				127.09
	Say				127.10

14.72X Scaffolding

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7397	Base Jack 7x2=14.00Nos 40mm dia M.S. Tube Vertical standards 2.5mts length=7x2x9x2.5 =315.00mts Bracing ledger 1.50 m length=7x2x9x2.50 =513.00 mts size support 6.00 m length = 3x2x6.00 =36.00 mts Horizontal support 3.00 m length =18x3x3.00 m = 162.00 mts Total = 1026.00 mts M.S.Tube 1026 m x 3.67 kg/m =3765.42 kg	each	14.00	180.00	2,520.00
4009	Mild steel tubes hot finished welded type	kilogram	3,765.42	48.00	1,80,740.16
7387	Spigot for standard jointing 7x2x9=126 Nos. 126 Nos.x 0.40 m length =50.40 m @ 2.46 kg/m =123.98 kg	kilogram	123.98	45.00	5,579.10

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1034	Bolts and nuts up to 300 mm in length 2x7x2x9 = 252 Nos. @ 0.15 kg each = 37.80 kg Say 0.378 q Clamps/couplers for clamps for fixing of M.S. Tube with scaffolding = (2x3x2+2x18x3) =120 Nos	quintal	0.378	5,400.00	2,041.20
7346	Double coupler Challies 3 Nos. x 18 line = 54 Nos. Two level plate challies = 2x18 line = 36 Nos. Total = 90 Nos	each	120.00	55.00	6,600.00
7398	Challies Cup locks for :- Vertical standards 5x7x2x9 = 630.00 Nos. 2x18x19 = 694.00 Nos. Total =1314 Nos.	each	90.00	800.00	72,000.00
7399	Cup locks TOTAL = 368030.46 Add 10% for maintenance on P P * 10 /100 = 368030.46 * 10 /100 Less 25% salvage value on P P * (-25/100) = 368030.46 * (-25/100) P + Q + R = 368030.46 + 36803.05 + 92007.62 Considering that scaffolding shall be unserviceable after using 40 times, cost of using once S / 40 = 312825.89 / 40 Cost of each Say	each	1,314.00	75.00	98,550.00 3,68,030.46 (P) 36,803.05 (Q) -92,007.62 (R) -3,12,825.89(S) 7,820.65 7,820.65 7,820.65

14.73 Providing and fixing bright finished brass casement window fasteners or peg stays to windows/ ventilators with necessary welding and machine screws etc. complete.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for ten (10 x 0.20 = 2.00 kg) MATERIAL:				
0423	Brass casement window fastener	each	10.00	45.00	450.00
9999	Fixing charge including welding and materials etc.	L.S.	125.58	1.49	187.11
9999	Carriage of materials	L.S.	3.64	1.49	5.42
	TOTAL				642.53
	Add Water Charges @ 1%				6.43
	TOTAL				648.96
	Add CPOH @ 15%				97.34
	Cost of 2 kg				746.30
	Cost of 1 kg				373.15
	Say				373.15

14.74 Providing and fixing 14 mm bright finished brass spring catch to steel centre hung ventilators with necessary welding and machine screws etc. complete.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for ten				
	MATERIAL:				
0428	Brass fanlight catch	10 nos	10.00	170.00	170.00
9999	Fixing charge including welding and materials etc.	L.S.	125.58	1.49	187.11
9999	Carriage of materials	L.S.	3.64	1.49	5.42
	TOTAL				362.53
	Add Water Charges @ 1%				3.63
	TOTAL				366.16
	Add CPOH @ 15%				54.92
	Cost of 10 nos				421.08
	Cost of each				42.11
	Say				42.10

SUB HEAD : 15

DISMANTLING AND DEMOLISHING

15.1 Demolishing lime concrete manually / by mechanical means and disposal of material within 50 metres lead as per direction of Engineer-in-Charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum				
	LABOUR:				
0114	Beldar	day	0.44	247.00	108.68
0115	Coolie	day	0.37	247.00	91.39
9999	Sundries	L.S.	1.04	1.49	1.55
	TOTAL				201.62
	Add Water Charges @ 1%				2.02
	TOTAL				203.64
	Add CPOH @ 15%				30.55
	Cost of 1 cum				234.19
	Say				234.20

15.2 Demolishing cement concrete manually / by mechanical means including disposal of material within 50 metres lead as per direction of Engineer-in - charge.

15.2.1 Nominal concrete 1:3:6 or richer mix (i/c equivalent design mix)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum				
	LABOUR:				
0114	Beldar	day	1.59	247.00	392.73
0115	Coolie	day	0.72	247.00	177.84
9999	Sundries	L.S.	4.81	1.49	7.17
	TOTAL				577.74
	Add Water Charges @ 1%				5.78
	TOTAL				583.52
	Add CPOH @ 15%				87.53
	Cost of 1 cum				671.05
	Say				671.05

15.2.2 Nominal concrete 1:4:8 or leaner mix (including equivalent design mix)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum				
	LABOUR:				
0114	Beldar	day	0.88	247.00	217.36
0115	Coolie	day	0.55	247.00	135.85
9999	Sundries	L.S.	1.95	1.49	2.91
	TOTAL				356.12
	Add Water Charges @ 1%				3.56
	TOTAL				359.68
	Add CPOH @ 15%				53.95
	Cost of 1 cum				413.63
	Say				413.65

15.3 Demolishing R.C.C. work manually / by mechanical means including stacking of steel bars and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in-Charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum				
	LABOUR:				
0114	Beldar	day	2.65	247.00	654.55

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0115	Coolie	day	0.72	247.00	177.84
9999	Sundries	L.S.	7.02	1.49	10.46
	TOTAL				842.85
	Add Water Charges @ 1%				8.43
	TOTAL				851.28
	Add CPOH @ 15%				127.69
	Cost of 1 cum				978.97
	Say				978.95

15.4 Demolishing R.B. work manually / by mechanical means including stacking of steel bars and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in-Charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum				
	LABOUR:				
0114	Beldar	day	2.12	247.00	523.64
0115	Coolie	day	0.90	247.00	222.30
9999	Sundries	L.S.	4.68	1.49	6.97
	TOTAL				752.91
	Add Water Charges @ 1%				7.53
	TOTAL				760.44
	Add CPOH @ 15%				114.07
	Cost of 1 cum				874.51
	Say				874.50

15.5 Extra for cutting reinforcement bars manually / by mechanical means in R.C.C. or R.B. work (Payment shall be made on the cross sectional area of R.C.C. or R.B. work) as per direction of Engineer - in -charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 sqm				
	R.C.C. or R.B. work Reinforced area considering 1% reinforcement = 0.01 sqm				
	LABOUR				
	For cutting 0.01 sqm reinforcement				
0103	Blacksmith 2nd class	day	0.50	273.00	136.50
0114	Beldar	day	0.50	247.00	123.50
9999	Sundries	L.S.	13.39	1.49	19.95
	TOTAL				279.95
	Add Water Charges @ 1%				2.80
	TOTAL				282.75
	Add CPOH @ 15%				42.41
	Cost of 1 sqm				325.16
	Say				325.15

15.6 Extra for scrapping, cleaning and straightening reinforcement from R.C.C. or R.B. work.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos 6 m long, 16mm dia bars (94.80 kg)				
	6 metres long 16 mm dia bars @ 1.58 kg/metre				
	Total weight = 94.80 kg = 0.948 quintal				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	LABOUR:				
0103	Blacksmith 2nd class	day	0.25	273.00	68.25
0114	Beldar	day	0.50	247.00	123.50
9999	Sundries	L.S.	13.39	1.49	19.95
	TOTAL				211.70
	Add Water Charges @ 1%				2.12
	TOTAL				213.82
	Add CPOH @ 15%				32.07
	Cost of 94.8 kg				245.89
	Cost of 1 kg				2.59
	Say				2.60

15.7 Demolishing brick work manually / by mechanical means including stacking of serviceable material and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in-Charge.

15.7.1 In mud mortar

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum				
	LABOUR:				
0114	Beldar	day	0.30	247.00	74.10
0115	Coolie	day	0.37	247.00	91.39
9999	Sundries	L.S.	1.04	1.49	1.55
	TOTAL				167.04
	Add Water Charges @ 1%				1.67
	TOTAL				168.71
	Add CPOH @ 15%				25.31
	Cost of 1 cum				194.02
	Say				194.00

15.7.2 In lime mortar with old mughal bricks

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum				
	LABOUR:				
0114	Beldar	day	1.24	247.00	306.28
0115	Coolie	day	0.46	247.00	113.62
9999	Sundries	L.S.	1.04	1.49	1.55
	TOTAL				421.45
	Add Water Charges @ 1%				4.21
	TOTAL				425.66
	Add CPOH @ 15%				63.85
	Cost of 1 cum				489.51
	Say				489.50

15.7.3 In lime mortar

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum				
	LABOUR:				
0114	Beldar	day	0.44	247.00	108.68
0115	Coolie	day	0.37	247.00	91.39
9999	Sundries	L.S.	1.04	1.49	1.55
	TOTAL				201.62
	Add Water Charges @ 1%				2.02
	TOTAL				203.64
	Add CPOH @ 15%				30.55
	Cost of 1 cum				234.19
	Say				234.20

15.7.4 In cement mortar

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum				
	LABOUR:				
0114	Beldar	day	1.06	247.00	261.82
0115	Coolie	day	0.90	247.00	222.30
9999	Sundries	L.S.	2.47	1.49	3.68
	TOTAL				487.80
	Add Water Charges @ 1%				4.88
	TOTAL				492.68
	Add CPOH @ 15%				73.90
	Cost of 1 cum				566.58
	Say				566.60

15.8 Removing mortar from bricks and cleaning bricks including stacking within a lead of 50 m (stacks of cleaned bricks shall be measured) :

15.8.1 From brick work in mud mortar

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1000 nos				
	LABOUR:				
0114	Beldar	day	2.40	247.00	592.80
0115	Coolie	day	1.60	247.00	395.20
0124	Mason (brick layer) 2nd class	day	0.40	273.00	109.20
9999	Sundries	L.S.	1.82	1.49	2.71
	TOTAL				1,099.91
	Add Water Charges @ 1%				11.00
	TOTAL				1,110.91
	Add CPOH @ 15%				166.64
	Cost of 1000 nos				1,277.55
	Say				1,277.55

15.8.2 From brick work in lime mortar

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1000 nos				
	LABOUR:				
0114	Beldar	day	2.80	247.00	691.60
0115	Coolie	day	1.40	247.00	345.80
0124	Mason (brick layer) 2nd class	day	0.80	273.00	218.40
9999	Sundries	L.S.	8.97	1.49	13.37
	TOTAL				1,269.17
	Add Water Charges @ 1%				12.69
	TOTAL				1,281.86
	Add CPOH @ 15%				192.28
	Cost of 1000 nos				1,474.14
	Say				1,474.15

15.8.3 From brick work in cement mortar

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1000 nos				
	LABOUR:				
0114	Beldar	day	3.50	247.00	864.50
0115	Coolie	day	1.50	247.00	370.50
0124	Mason (brick layer) 2nd class	day	1.24	273.00	338.52

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries	L.S.	8.06	1.49	12.01
	TOTAL				1,585.53
	Add Water Charges @ 1%				15.86
	TOTAL				1,601.39
	Add CPOH @ 15%				240.21
	Cost of 1000 nos				1,841.60
	Say				1,841.60

15.9 Demolishing stone rubble masonry manually / by mechanical means including stacking of serviceable material and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in-Charge:

15.9.1 In Lime Mortor

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum				
	LABOUR:				
0114	Beldar	day	0.61	247.00	150.67
0115	Coolie	day	0.49	247.00	121.03
9999	Sundries	L.S.	1.95	1.49	2.91
	TOTAL				274.61
	Add Water Charges @ 1%				2.75
	TOTAL				277.36
	Add CPOH @ 15%				41.60
	Cost of 1 cum				318.96
	Say				318.95

15.9.2 In cement mortar

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum				
	LABOUR:				
0114	Beldar	day	1.30	247.00	321.10
0115	Coolie	day	1.04	247.00	256.88
9999	Sundries	L.S.	2.73	1.49	4.07
	TOTAL				582.05
	Add Water Charges @ 1%				5.82
	TOTAL				587.87
	Add CPOH @ 15%				88.18
	Cost of 1 cum				676.05
	Say				676.05

15.10 Dismantling dressed stone work ashlar face stone work, marble work or precast concrete work manually / by mechanical means including stacking of serviceable and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in-Charge:

15.10.1 In lime mortar

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum				
	LABOUR:				
0114	Beldar	day	0.78	247.00	192.66
0115	Coolie	day	0.61	247.00	150.67

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries	L.S.	2.73	1.49	4.07
	TOTAL				347.40
	Add Water Charges @ 1%				3.47
	TOTAL				350.87
	Add CPOH @ 15%				52.63
	Cost of 1 cum				403.50
	Say				403.50

15.10.2 In cement mortar

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum				
	LABOUR:				
0114	Beldar	day	1.55	247.00	382.85
0115	Coolie	day	1.19	247.00	293.93
9999	Sundries	L.S.	2.73	1.49	4.07
	TOTAL				680.85
	Add Water Charges @ 1%				6.81
	TOTAL				687.66
	Add CPOH @ 15%				103.15
	Cost of 1 cum				790.81
	Say				790.80

15.11 Removing mortar from and cleaning stones and concrete articles (net quantity of stacks of cleaned materials will be measured) :

15.11.1 In lime mortar

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum				
	LABOUR:				
0124	Mason (brick layer) 2nd class	day	0.05	273.00	13.65
0114	Beldar	day	0.20	247.00	49.40
0115	Coolie	day	0.20	247.00	49.40
9999	Sundries	L.S.	0.52	1.49	0.77
	TOTAL				113.22
	Add Water Charges @ 1%				1.13
	TOTAL				114.35
	Add CPOH @ 15%				17.15
	Cost of 1 cum				131.50
	Say				131.50

15.11.2 In cement mortar

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum				
	LABOUR:				
0124	Mason (brick layer) 2nd class	day	0.05	273.00	13.65
0114	Beldar	day	0.40	247.00	98.80
0115	Coolie	day	0.20	247.00	49.40
9999	Sundries	L.S.	0.91	1.49	1.36
	TOTAL				163.21
	Add Water Charges @ 1%				1.63
	TOTAL				164.84
	Add CPOH @ 15%				24.73
	Cost of 1 cum				189.57
	Say				189.55

15.12 Dismantling doors, windows and clerestory windows (steel or wood) shutter including chowkhats, architrave, holdfasts etc. complete and stacking within 50 metres lead:

15.12.1 Of area 3 sq. metres and below

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for each				
	LABOUR:				
0124	Mason (brick layer) 2nd class	day	0.10	273.00	27.30
0114	Beldar	day	0.18	247.00	44.46
0103	Blacksmith 2nd class	day	0.05	273.00	13.65
9999	Sundries	L.S.	1.43	1.49	2.13
	TOTAL				87.54
	Add Water Charges @ 1%				0.88
	TOTAL				88.42
	Add CPOH @ 15%				13.26
	Cost of each				101.68
	Say				101.70

15.12.2 Of area beyond 3 sq. metres

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for each				
0124	Mason (brick layer) 2nd class	day	0.13	273.00	35.49
0114	Beldar	day	0.25	247.00	61.75
0103	Blacksmith 2nd class	day	0.07	273.00	19.11
9999	Sundries	L.S.	2.73	1.49	4.07
	TOTAL				120.42
	Add Water Charges @ 1%				1.20
	TOTAL				121.62
	Add CPOH @ 15%				18.24
	Cost of each				139.86
	Say				139.85

15.13 Taking out doors, windows and clerestory window shutters (steel or wood) including stacking within 50 metres lead:

15.13.1 Of area 3 sq. metres and below

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for each				
	LABOUR:				
0112	Carpenter 2nd class	day	0.05	273.00	13.65
0114	Beldar	day	0.08	247.00	19.76
9999	Sundries	L.S.	0.52	1.49	0.77
	TOTAL				34.18
	Add Water Charges @ 1%				0.34
	TOTAL				34.52
	Add CPOH @ 15%				5.18
	Cost of each				39.70
	Say				39.70

15.13.2 Of area beyond 3 sq. metres

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for each				
	LABOUR:				
0112	Carpenter 2nd class	day	0.07	273.00	19.11
0114	Beldar	day	0.10	247.00	24.70
9999	Sundries	L.S.	0.91	1.49	1.36
	TOTAL				45.17
	Add Water Charges @ 1%				0.45
	TOTAL				45.62
	Add CPOH @ 15%				6.84
	Cost of each				52.46
	Say				52.45

15.14 Dismantling wood work in frames, trusses, purlins and rafters up to 10 metres span and 5 metres height including stacking the material within 50 metres lead:

15.14.1 Of sectional area 40 square centimetres and above

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum				
	LABOUR:				
0112	Carpenter 2nd class	day	2.00	273.00	546.00
0114	Beldar	day	2.00	247.00	494.00
9999	Sundries	L.S.	13.39	1.49	19.95
	TOTAL				1,059.95
	Add Water Charges @ 1%				10.60
	TOTAL				1,070.55
	Add CPOH @ 15%				160.58
	Cost of 1 cum				1,231.13
	Say				1,231.15

15.14.2 Of sectional area below 40 square centimetres

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	LABOUR:				
0112	Carpenter 2nd class	day	0.08	273.00	21.84
0114	Beldar	day	0.08	247.00	19.76
9999	Sundries	L.S.	0.52	1.49	0.77
	TOTAL				42.37
	Add Water Charges @ 1%				0.42
	TOTAL				42.79
	Add CPOH @ 15%				6.42
	Cost of 10 metre				49.21
	Cost of 1 metre				4.92
	Say				4.90

15.15 Extra for dismantling trusses, rafters, purlins etc. of wood work for every additional span of one metre or part thereof beyond 10 metres:

15.15.1 Of sectional area 40 square centimetres and above

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum for every additional span of one metre				
	LABOUR:				
0103	Blacksmith 2nd class	day	0.20	273.00	54.60
0114	Beldar	day	0.30	247.00	74.10
9999	Sundries	L.S.	13.39	1.49	19.95
	TOTAL				148.65
	Add Water Charges @ 1%				1.49
	TOTAL				150.14
	Add CPOH @ 15%				22.52
	Cost of 1 cum per metre span				172.66
	Say				172.65

15.15.2 Of sectional area below 40 square centimetres

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metres for every additional span of one metre				
	LABOUR:				
0103	Blacksmith 2nd class	day	0.006	273.00	1.64
0114	Beldar	day	0.008	247.00	1.98
9999	Sundries	L.S.	0.39	1.49	0.58
	TOTAL				4.20
	Add Water Charges @ 1%				0.04
	TOTAL				4.24
	Add CPOH @ 15%				0.64
	Cost of 10 metre per metre span				4.88
	Cost of 1 metre per metre span				0.49
	Say				0.50

15.16 Extra for dismantling trusses, rafters, purlins etc. of wood work for every additional height of one metre or part thereof beyond 5 metres:

15.16.1 Of sectional area 40 square centimetres and above

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum for every additional height of one metre				
	LABOUR:				
0103	Blacksmith 2nd class	day	0.25	273.00	68.25
0114	Beldar	day	0.50	247.00	123.50
9999	Sundries	L.S.	13.39	1.49	19.95
	TOTAL				211.70
	Add Water Charges @ 1%				2.12
	TOTAL				213.82
	Add CPOH @ 15%				32.07
	Cost of 1 cum per metre height				245.89
	Say				245.90

15.16.2 Of sectional area below 40 square centimetres

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metres for every additional height of one metre				
	LABOUR:				
0103	Blacksmith 2nd class	day	0.01	273.00	2.73
0114	Beldar	day	0.02	247.00	4.94
9999	Sundries	L.S.	0.39	1.49	0.58
	TOTAL				8.25
	Add Water Charges @ 1%				0.08
	TOTAL				8.33
	Add CPOH @ 15%				1.25
	Cost of 10 metre per metre height				9.58
	Cost of 1 metre per metre height				0.96
	Say				0.95

15.17 Dismantling steel work in single sections including dismembering and stacking within 50 metres lead in:

15.17.1 R.S. Joists

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 quintal				
	LABOUR:				
0103	Blacksmith 2nd class	day	0.05	273.00	13.65
0100	Bandhani	day	0.10	260.00	26.00
0114	Beldar	day	0.15	247.00	37.05
9999	Sundries	L.S.	2.73	1.49	4.07
	TOTAL				80.77
	Add Water Charges @ 1%				0.81
	TOTAL				81.58
	Add CPOH @ 15%				12.24
	Cost of 100 kg				93.82
	Cost of 1 kg				0.94
	Say				0.95

15.17.2 Channels, angles, tees and flats

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 quintal				
	LABOUR:				
0103	Blacksmith 2nd class	day	0.05	273.00	13.65
0100	Bandhani	day	0.05	260.00	13.00
0114	Beldar	day	0.10	247.00	24.70
9999	Sundries	L.S.	2.73	1.49	4.07
	TOTAL				55.42
	Add Water Charges @ 1%				0.55
	TOTAL				55.97
	Add CPOH @ 15%				8.40
	Cost of 100 kg				64.37
	Cost of 1 kg				0.64
	Say				0.65

15.18 Dismantling steel work in built up sections in angles, tees, flats and channels including all gusset plates, bolts, nuts, cutting rivets, welding etc. including dismembering and stacking within 50 metres lead.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 quintal				
	LABOUR:				
0103	Blacksmith 2nd class	day	0.15	273.00	40.95
0100	Bandhani	day	0.10	260.00	26.00
0114	Beldar	day	0.25	247.00	61.75
9999	Sundries	L.S.	4.16	1.49	6.20
	TOTAL				134.90
	Add Water Charges @ 1%				1.35
	TOTAL				136.25
	Add CPOH @ 15%				20.44
	Cost of 100 kg				156.69
	Cost of 1 kg				1.57
	Say				1.55

15.19 Dismantling steel work manually / by mechanical means in built up sections without dismembering and stacking within 50 metres lead as per direction of Engineer-in-Charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 quintal				
	LABOUR:				
0100	Bandhani	day	0.10	260.00	26.00
0114	Beldar	day	0.25	247.00	61.75
9999	Sundries	L.S.	2.73	1.49	4.07
	TOTAL				91.82
	Add Water Charges @ 1%				0.92
	TOTAL				92.74
	Add CPOH @ 15%				13.91
	Cost of 100 kg				106.65
	Cost of 1 kg				1.07
	Say				1.05

15.20 Extra for dismantling trusses, rafters, purlins etc. of steel work for every additional span of one metre or part thereof beyond 10 metres.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 quintal for every additional span of one metre beyond 10m				
	LABOUR:				
0100	Bandhani	day	0.02	260.00	5.20
0114	Beldar	day	0.06	247.00	14.82
9999	Sundries	L.S.	0.39	1.49	0.58
	TOTAL				20.60
	Add Water Charges @ 1%				0.21
	TOTAL				20.81
	Add CPOH @ 15%				3.12
	Cost of 100 kg per metre span				23.93
	Cost of 1 kg per metre span				0.24
	Say				0.25

15.21 Extra for dismantling trusses, rafters, purlins etc. of steel work for every additional height of one metre or part thereof beyond 5 metres.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 quintal for every additional span of one metre beyond 5m				
	LABOUR:				
0100	Bandhani	day	0.02	260.00	5.20
0114	Beldar	day	0.06	247.00	14.82
9999	Sundries	L.S.	0.39	1.49	0.58
	TOTAL				20.60
	Add Water Charges @ 1%				0.21
	TOTAL				20.81
	Add CPOH @ 15%				3.12
	Cost of 100 kg per metre height				23.93
	Cost of 1 kg per metre height				0.24
	Say				0.25

15.22 Extra for marking of structural steel work required to be re-erected.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 quintal				
	LABOUR:				
0130	Mistry	day	0.20	301.00	60.20
0114	Beldar	day	0.20	247.00	49.40
	TOTAL				109.60
	Add Water Charges @ 1%				1.10
	TOTAL				110.70
	Add CPOH @ 15%				16.60
	Cost of 100 kg				127.30
	Cost of 1 kg				1.27
	Say				1.25

15.23 Dismantling tile work in floors and roofs laid in cement mortar including stacking material within 50 metres lead.

15.23.1 For thickness of tiles 10 mm to 25 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	LABOUR:				
0124	Mason (brick layer) 2nd class	day	0.30	273.00	81.90
0114	Beldar	day	0.12	247.00	29.64
0115	Coolie	day	0.24	247.00	59.28
9999	Sundries	L.S.	2.73	1.49	4.07
	TOTAL				174.89
	Add Water Charges @ 1%				1.75
	TOTAL				176.64
	Add CPOH @ 15%				26.50
	Cost of 10 sqm				203.14
	Cost of 1 sqm				20.31
	Say				20.30

15.23.2 For thickness of tiles above 25 mm and up to 40 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	LABOUR:				
0124	Mason (brick layer) 2nd class	day	0.59	273.00	161.07
0114	Beldar	day	0.18	247.00	44.46
0115	Coolie	day	0.24	247.00	59.28
9999	Sundries	L.S.	2.73	1.49	4.07
	TOTAL				268.88
	Add Water Charges @ 1%				2.69
	TOTAL				271.57
	Add CPOH @ 15%				40.74
	Cost of 10 sqm				312.31
	Cost of 1 sqm				31.23
	Say				31.25

15.24 Demolishing dry brick pitching in floors, drains etc. including stacking serviceable material and disposal of unserviceable material within 50 metres lead :

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum				
	LABOUR:				
0114	Beldar	day	0.25	247.00	61.75
0115	Coolie	day	1.00	247.00	247.00
9999	Sundries	L.S.	2.73	1.49	4.07
	TOTAL				312.82
	Add Water Charges @ 1%				3.13
	TOTAL				315.95
	Add CPOH @ 15%				47.39
	Cost of 1 cum				363.34
	Say				363.35

15.25 Dismantling stone slab flooring laid in cement mortar including stacking of serviceable material and disposal of unserviceable material within 50 metres lead.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	LABOUR:				
0114	Beldar	day	1.77	247.00	437.19
0115	Coolie	day	0.75	247.00	185.25
9999	Sundries	L.S.	8.06	1.49	12.01
	TOTAL				634.45
	Add Water Charges @ 1%				6.34
	TOTAL				640.79
	Add CPOH @ 15%				96.12
	Cost of 10 sqm				736.91
	Cost of 1 sqm				73.69
	Say				73.70

15.26 Demolishing brick tile covering in terracing including stacking of serviceable material and disposal of unserviceable material within 50 metres lead.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	LABOUR:				
0124	Mason (brick layer) 2nd class	day	0.54	273.00	147.42
0114	Beldar	day	0.16	247.00	39.52
0115	Coolie	day	0.24	247.00	59.28
9999	Sundries	L.S.	2.47	1.49	3.68
	TOTAL				249.90
	Add Water Charges @ 1%				2.50
	TOTAL				252.40
	Add CPOH @ 15%				37.86
	Cost of 10 sqm				290.26
	Cost of 1 sqm				29.03
	Say				29.05

15.27 Demolishing mud phaska in terracing and disposal of material within 50 metres lead.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum				
	LABOUR:				
0114	Beldar	day	0.25	247.00	61.75
0115	Coolie	day	0.62	247.00	153.14
9999	Sundries	L.S.	1.04	1.49	1.55
	TOTAL				216.44
	Add Water Charges @ 1%				2.16
	TOTAL				218.60
	Add CPOH @ 15%				32.79
	Cost of 1 cum				251.39
	Say				251.40

15.28 Dismantling roofing including ridges, hips, valleys and gutters etc., and stacking the material within 50 metres lead of:

15.28.1 G.S. Sheet

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	LABOUR:				
0112	Carpenter 2nd class	day	0.50	273.00	136.50
0114	Beldar	day	1.00	247.00	247.00
9999	Sundries	L.S.	6.76	1.49	10.07
	TOTAL				393.57
	Add Water Charges @ 1%				3.94
	TOTAL				397.51
	Add CPOH @ 15%				59.63
	Cost of 10 sqm				457.14
	Cost of 1 sqm				45.71
	Say				45.70

15.28.2 Asbestos Sheet

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	LABOUR:				
0112	Carpenter 2nd class	day	0.20	273.00	54.60
0114	Beldar	day	0.50	247.00	123.50
9999	Sundries	L.S.	5.33	1.49	7.94
	TOTAL				186.04
	Add Water Charges @ 1%				1.86
	TOTAL				187.90
	Add CPOH @ 15%				28.18
	Cost of 10 sqm				216.08
	Cost of 1 sqm				21.61
	Say				21.60

15.29 Dismantling stone slab roofing over wooden karries or R.C.C. battens (dismantling karries and battens to be paid for separately), including stacking of serviceable material and disposal of unserviceable material within 50 metres lead.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum				
	LABOUR:				
0114	Beldar	day	1.77	247.00	437.19
0115	Coolie	day	0.75	247.00	185.25
9999	Sundries	L.S.	8.06	1.49	12.01
	TOTAL				634.45
	Add Water Charges @ 1%				6.34
	TOTAL				640.79
	Add CPOH @ 15%				96.12
	Cost of 1 cum				736.91
	Say				736.90

15.30 Dismantling jack arch roofing and floors including stacking of serviceable material and disposal of unserviceable material within 50 metres lead.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	LABOUR:				
0114	Beldar	day	1.19	247.00	293.93
0115	Coolie	day	1.21	247.00	298.87
9999	Sundries	L.S.	8.06	1.49	12.01
	TOTAL				604.81
	Add Water Charges @ 1%				6.05
	TOTAL				610.86
	Add CPOH @ 15%				91.63
	Cost of 10 sqm				702.49
	Cost of 1 sqm				70.25
	Say				70.25

15.31 Dismantling tiled roofing with battens, boarding etc. complete including stacking of serviceable material and disposal of unserviceable material within 50 metres lead.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	LABOUR:				
0114	Beldar	day	1.73	247.00	427.31
0115	Coolie	day	0.25	247.00	61.75
9999	Sundries	L.S.	8.06	1.49	12.01
	TOTAL				501.07
	Add Water Charges @ 1%				5.01
	TOTAL				506.08
	Add CPOH @ 15%				75.91
	Cost of 10 sqm				581.99
	Cost of 1 sqm				58.20
	Say				58.20

15.32 Demolishing thatch roofing including mats, bamboo, jaffari etc. complete including stacking of serviceable material and disposal of unserviceable material within 50 metres lead.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	LABOUR:				
0114	Beldar	day	0.54	247.00	133.38
9999	Sundries	L.S.	3.64	1.49	5.42
	TOTAL				138.80
	Add Water Charges @ 1%				1.39
	TOTAL				140.19
	Add CPOH @ 15%				21.03
	Cost of 10 sqm				161.22
	Cost of 1 sqm				16.12
	Say				16.10

15.33 Dismantling wooden ballies in posts and struts including stacking within 50 metres lead.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 50 metre				
	LABOUR:				
0114	Beldar	day	0.50	247.00	123.50
0115	Coolie	day	0.50	247.00	123.50
9999	Sundries	L.S.	0.52	1.49	0.77
	TOTAL				247.77
	Add Water Charges @ 1%				2.48
	TOTAL				250.25
	Add CPOH @ 15%				37.54
	Cost of 50 metre				287.79
	Cost of 1 metre				5.76
	Say				5.75

15.34 Dismantling and stacking within 50 metres lead, fencing posts or struts including all earth work and dismantling of concrete etc. in base of:

15.34.1 T' or 'L' iron or pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for each				
	LABOUR:				
0114	Beldar	day	0.107	247.00	26.43
0115	Coolie	day	0.067	247.00	16.55
9999	Excavation, transporting and stacking the posts to the required place within 50 metre lead, refilling the pit and dressing the same	L.S.	0.26	1.49	0.39
9999	Extra for lifting of R.C.C. posts being heavier than L iron and cleaning the posts of stacking concrete	L.S.	13.39	1.49	19.95
9999	Sundries	L.S.	1.43	1.49	2.13
	TOTAL				65.45
	Add Water Charges @ 1%				0.65
	TOTAL				66.10
	Add CPOH @ 15%				9.91
	Cost of each				76.01
	Say				76.00

15.34.2 R.C.C.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for each				
	LABOUR:				
0114	Beldar	day	0.097	247.00	23.96
0115	Coolie	day	0.06	247.00	14.82
9999	Sundries	L.S.	0.26	1.49	0.39
9999	Excavation, transporting and stacking the posts to the required place within 50 metre lead, refilling the pit and dressing the same	L.S.	13.39	1.49	19.95
9999	Extra for lifting of R.C.C. posts being heavier than L iron and cleaning the posts of stacking concrete	L.S.	8.06	1.49	12.01
9999	Sundries	L.S.	2.73	1.49	4.07
	TOTAL				75.20
	Add Water Charges @ 1%				0.75
	TOTAL				75.95
	Add CPOH @ 15%				11.39
	Cost of each				87.34
	Say				87.35

15.35 Cutting ballies or wooden posts of fencing at the point of projection above the concrete or ground and stacking the same within 50 metres lead.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 ballie(post)				
9999	Cutting	L.S.	2.73	1.49	4.07
9999	Transporting and stacking	L.S.	1.43	1.49	2.13
	TOTAL				6.20
	Add Water Charges @ 1%				0.06

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	TOTAL				6.26
	Add CPOH @ 15%				0.94
	Cost of each				7.20
	Say				7.20

15.36 Dismantling barbed wire or flexible wire rope in fencing including making rolls and stacking within 50 metres lead.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 quintal				
	LABOUR:				
0114	Beldar	day	3.50	247.00	864.50
9999	Sundries	L.S.	5.33	1.49	7.94
	TOTAL				872.44
	Add Water Charges @ 1%				8.72
	TOTAL				881.16
	Add CPOH @ 15%				132.17
	Cost of 100 kg				1,013.33
	Cost of 1 kg				10.13
	Say				10.15

15.37 Dismantling wooden trellis work excluding frames but including stacking the serviceable material within 50 metres lead.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	LABOUR:				
0124	Mason (brick layer) 2nd class	day	0.10	273.00	27.30
0114	Beldar	day	0.25	247.00	61.75
0115	Coolie	day	0.25	247.00	61.75
9999	Sundries	L.S.	2.73	1.49	4.07
	TOTAL				154.87
	Add Water Charges @ 1%				1.55
	TOTAL				156.42
	Add CPOH @ 15%				23.46
	Cost of 10 sqm				179.88
	Cost of 1 sqm				17.99
	Say				18.00

15.38 Dismantling expanded metal or I.R.C. fabrics with necessary battens and beading including stacking the serviceable material within 50 metres lead.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	LABOUR:				
0112	Carpenter 2nd class	day	0.10	273.00	27.30
0114	Beldar	day	0.40	247.00	98.80
0115	Coolie	day	0.20	247.00	49.40
9999	Sundries	L.S.	4.16	1.49	6.20
	TOTAL				181.70
	Add Water Charges @ 1%				1.82
	TOTAL				183.52

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Add CPOH @ 15%				27.53
	Cost of 10 sqm				211.05
	Cost of 1 sqm				21.11
	Say				21.10

15.39 Dismantling wooden boardings in lining of walls and partitions, excluding supporting members but including stacking within 50 metres lead:

15.39.1 Upto 10 mm thick

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	LABOUR:				
0112	Carpenter 2nd class	day	0.15	273.00	40.95
0114	Beldar	day	0.20	247.00	49.40
0115	Coolie	day	0.20	247.00	49.40
9999	Sundries	L.S.	5.33	1.49	7.94
	TOTAL				147.69
	Add Water Charges @ 1%				1.48
	TOTAL				149.17
	Add CPOH @ 15%				22.38
	Cost of 10 sqm				171.55
	Cost of 1 sqm				17.16
	Say				17.15

15.39.2 Thickness above 10 mm upto 25 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	LABOUR:				
0112	Carpenter 2nd class	day	0.20	273.00	54.60
0114	Beldar	day	0.25	247.00	61.75
0115	Coolie	day	0.25	247.00	61.75
9999	Sundries	L.S.	6.76	1.49	10.07
	TOTAL				188.17
	Add Water Charges @ 1%				1.88
	TOTAL				190.05
	Add CPOH @ 15%				28.51
	Cost of 10 sqm				218.56
	Cost of 1 sqm				21.86
	Say				21.85

15.39.3 Thickness above 25 mm upto 40 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	LABOUR:				
0112	Carpenter 2nd class	day	0.20	273.00	54.60
0114	Beldar	day	0.30	247.00	74.10
0115	Coolie	day	0.30	247.00	74.10
9999	Sundries	L.S.	13.39	1.49	19.95
	TOTAL				222.75

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Add Water Charges @ 1%				2.23
	TOTAL				224.98
	Add CPOH @ 15%				33.75
	Cost of 10 sqm				258.73
	Cost of 1 sqm				25.87
	Say				25.85

15.40 Dismantling precast concrete or stone slabs in walls, partition walls etc. including stacking within 50 metres lead:

15.40.1 Thickness upto 40 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	LABOUR:				
0124	Mason (brick layer) 2nd class	day	0.20	273.00	54.60
0114	Beldar	day	2.00	247.00	494.00
0115	Coolie	day	0.50	247.00	123.50
9999	Sundries	L.S.	13.39	1.49	19.95
	TOTAL				692.05
	Add Water Charges @ 1%				6.92
	TOTAL				698.97
	Add CPOH @ 15%				104.85
	Cost of 10 sqm				803.82
	Cost of 1 sqm				80.38
	Say				80.40

15.40.2 Thickness above 40 mm upto 75 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	LABOUR:				
0124	Mason (brick layer) 2nd class	day	0.30	273.00	81.90
0114	Beldar	day	3.00	247.00	741.00
0115	Coolie	day	0.75	247.00	185.25
9999	Sundries	L.S.	18.85	1.49	28.09
	TOTAL				1,036.24
	Add Water Charges @ 1%				10.36
	TOTAL				1,046.60
	Add CPOH @ 15%				156.99
	Cost of 10 sqm				1,203.59
	Cost of 1 sqm				120.36
	Say				120.35

15.41 Dismantling cement asbestos or other hard board ceiling or partition walls including stacking of serviceable materials and disposal of unserviceable materials within 50 metres lead.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	LABOUR:				
0112	Carpenter 2nd class	day	0.20	273.00	54.60

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Beldar	day	0.30	247.00	74.10
9999	Sundries	L.S.	5.33	1.49	7.94
	TOTAL				136.64
	Add Water Charges @ 1%				1.37
	TOTAL				138.01
	Add CPOH @ 15%				20.70
	Cost of 10 sqm				158.71
	Cost of 1 sqm				15.87
	Say				15.85

15.42 Dismantling C.I. or asbestos rain water pipe with fittings and clamps including stacking the material within 50 metres lead :

15.42.1 75 to 80 mm dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metres				
	LABOUR:				
0114	Beldar	day	0.36	247.00	88.92
0115	Coolie	day	0.36	247.00	88.92
9999	Sundries	L.S.	0.91	1.49	1.36
	TOTAL				179.20
	Add Water Charges @ 1%				1.79
	TOTAL				180.99
	Add CPOH @ 15%				27.15
	Cost of 10 metre				208.14
	Cost of 1 metre				20.81
	Say				20.80

15.42.2 100 mm dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metres				
	LABOUR:				
0114	Beldar	day	0.36	247.00	88.92
0115	Coolie	day	0.38	247.00	93.86
9999	Sundries	L.S.	1.56	1.49	2.32
	TOTAL				185.10
	Add Water Charges @ 1%				1.85
	TOTAL				186.95
	Add CPOH @ 15%				28.04
	Cost of 10 metre				214.99
	Cost of 1 metre				21.50
	Say				21.50

15.42.3 150 mm dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metres				
	LABOUR:				
0114	Beldar	day	0.36	247.00	88.92
0115	Coolie	day	0.40	247.00	98.80
9999	Sundries	L.S.	2.08	1.49	3.10

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	TOTAL				190.82
	Add Water Charges @ 1%				1.91
	TOTAL				192.73
	Add CPOH @ 15%				28.91
	Cost of 10 metre				221.64
	Cost of 1 metre				22.16
	Say				22.15

15.43 Dismantling manually / by mechanical means including stacking of serviceable material and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in-Charge :

15.43.1 Water bound macadam road

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 36 sqm				
	Consider a road 6 metres wide and 6 metres length wise 25 cm average depth = 9.00 cubic metre				
	LABOUR:				
	For cutting road taking out soling and metalling including sorting and screening				
0114	Beldar	day	4.80	247.00	1,185.60
0115	Coolie	day	2.40	247.00	592.80
9999	Labour for stacking of serviceable material and disposl of unserviceable material within 50 metre lead	L.S.	89.70	1.49	133.65
	TOTAL				1,912.05
	Add Water Charges @ 1%				19.12
	TOTAL				1,931.17
	Add CPOH @ 15%				289.68
	Cost of 36 sqm				2,220.85
	Cost of 1 sqm				61.69
	Say				61.70

15.43.2 Bituminous road

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 36 sqm				
	Consider a road 6 metres wide and 6 metres length wise 30 cm average depth = 10.80 cubic metre				
	LABOUR:				
	For cutting road taking out soling and metalling including sorting and screening				
0114	Beldar	day	9.60	247.00	2,371.20
0115	Coolie	day	4.80	247.00	1,185.60
9999	Labour for stacking of serviceable material and disposl of unserviceable material within 50 metre lead	L.S.	107.64	1.49	160.38
	TOTAL				3,717.18
	Add Water Charges @ 1%				37.17
	TOTAL				3,754.35

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Add CPOH @ 15%				563.15
	Cost of 36 sqm				4,317.50
	Cost of 1 sqm				119.93
	Say				119.95

15.44 Dismantling G.I. pipes (external work) including excavation and refilling trenches after taking out the pipes, manually / by mechanical means including stacking of pipes within 50 metres lead as per direction of Engineer-in-Charge:

15.44.1 15 mm to 40 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	LABOUR:				
0114	Beldar	day	0.66	247.00	163.02
0115	Coolie	day	0.66	247.00	163.02
9999	Dismantling G.I. pipe and stacking etc.	L.S.	35.88	1.49	53.46
	TOTAL				379.50
	Add Water Charges @ 1%				3.80
	TOTAL				383.30
	Add CPOH @ 15%				57.50
	Cost of 10 metre				440.80
	Cost of 1 metre				44.08
	Say				44.10

15.44.2 Above 40 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metres				
	LABOUR:				
0114	Beldar	day	0.66	247.00	163.02
0115	Coolie	day	0.66	247.00	163.02
9999	Dismantling G.I. pipe and stacking etc.	L.S.	71.70	1.49	106.83
	TOTAL				432.87
	Add Water Charges @ 1%				4.33
	TOTAL				437.20
	Add CPOH @ 15%				65.58
	Cost of 10 metre				502.78
	Cost of 1 metre				50.28
	Say				50.30

15.45 Dismantling C.I. pipes including excavation and refilling trenches after taking out the pipes, manually / by mechanical means breaking lead caulked joints, melting of lead and making into blocks including stacking of pipes & lead at site within 50 metre lead as per direction of Engineer-in-Charge:

15.45.1 Up to 150 mm diameter

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 40.26 metre or 11 nos joints				
	Earth work in excavation for dismantling pipes including refilling of excavated earth				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	1x40.26x0.55x0.75 m= 16.61cum Deduct for pipes of average 100 mm dia =lx40.26x(22/7)/4x(0.018)x(0.018) =0.44cum Total =16.17cum LABOUR:				
2.8.1	Rate as per Item Number 2.8.1 of SH: Earth work	cum	16.17	130.80	2,115.04 (A)
2.25	Rate as per Item Number 2.25 of SH: Earth work	cum	16.17	83.80	1,355.05 (A)
0761	Fuel wood	quintal	0.46	450.00	207.00
0771	Kerosene oil	litre	0.38	30.00	11.40
0117	Assistant Fitter or 2nd class Fitter	day	0.63	273.00	171.99
0114	Beldar	day	4.50	247.00	1,111.50
9999	Carriage.	L.S.	53.82	1.49	80.19
	TOTAL				5,052.17
	Add Water Charges @ 1% except on A i.e on (5,052.17 - 3,470.09 =) 1,582.08				15.82
	TOTAL				5,067.99
	Add CPOH @ 15% except on A i.e on (5,067.99 - 3,470.09 =) 1,597.90				239.68
	Cost of 40.26 metre				5,307.67
	Cost of 1 metre				131.83
	Say				131.85

15.45.2 Above 150 mm dia upto 300 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 40.26 metre or 11 nos joints Earth work in excavation for dismantling pipes including refilling of excavated earth 1x40.26x0.65x0.75 m =19.63cum Deduct for pipes of average 250 mm dia = lx40.26x(22/7)/4x(0.274)x(0.274)=2.37cum Total =17.26cum LABOUR:				
2.8.1	Rate as per Item Number 2.8.1 of SH: Earth work	cum	17.26	130.80	2,257.61 (A)
2.25	Rate as per Item Number 2.25 of SH: Earth work	cum	17.26	83.80	1,446.39 (A)
0761	Fuel wood	quintal	1.03	450.00	463.50
0771	Kerosene oil	litre	1.14	30.00	34.20
0117	Assistant Fitter or 2nd class Fitter	day	1.30	273.00	354.90
0114	Beldar	day	7.50	247.00	1,852.50
9999	Carriage	L.S.	80.73	1.49	120.29
	TOTAL				6,529.39
	Add Water Charges @ 1% except on A i.e on (6,529.39 - 3,704.00 =) 2,825.39				28.25
	TOTAL				6,557.64
	Add CPOH @ 15% except on A i.e on (6,557.64 - 3,704.00 =) 2,853.64				428.05
	Cost of 40.26 metre				6,985.69
	Cost of 1 metre				173.51
	Say				173.50

15.45.3 Above 300 mm diameter

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 40.26 metre or 11 nos joints Earth work in excavation for dismantling pipes including refilling of excavated earth 1x40.26x0.85x0.75 m =25.67cum Deduct for pipes of average 450 mm dia =lx40.26x(22/7)/4x(0.48)x(0.48) =7.29cum = 18.38cum LABOUR:				
2.8.1	Rate as per Item Number 2.8.1 of SH: Earth work	cum	18.38	130.80	2,404.10 (A)
2.25	Rate as per Item Number 2.25 of SH: Earth work	cum	18.38	83.80	1,540.24 (A)
0761	Fuel wood	quintal	1.40	450.00	630.00
0771	Kerosene oil	litre	2.27	30.00	68.10
0117	Assistant Fitter or 2nd class Fitter	day	2.25	273.00	614.25
0114	Beldar	day	11.50	247.00	2,840.50
9999	Carriage & sundries	L.S.	134.55	1.49	200.48
	TOTAL				8,297.67
	Add Water Charges @ 1% except on A i.e on (8,297.67 - 3,944.34 =) 4,353.33				43.53
	TOTAL				8,341.20
	Add CPOH @ 15% except on A i.e on (8,341.20 - 3,944.34 =) 4,396.86				659.53
	Cost of 40.26 metre				9,000.73
	Cost of 1 metre				223.57
	Say				223.55

15.46 Dismantling steel cylinder RC. pipes including excavation and refilling trenches after taking out the pipes, manually / by mechanical means breaking lead caulked joints, melting of lead and making into blocks including stacking of pipes & lead at site within 50 metres lead as per direction of Engineer-in-Charge:

15.46.1 Upto 600 mm diameter

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 40.26 metre or 11 nos joints Earth work in excavation for dismantling pipes including refilling of excavated earth 1x40.26x1.30x1.65 m =86.36cum Deduct for pipes of average 450 mm dia =1x40.26x(22/7)/4x(0.48)x(0.48) =7.29 cum Total = 79.07 cum LABOUR:				
0114	Beldar	day	5.32	247.00	1,314.04
0115	Coolie	day	5.46	247.00	1,348.62
0101	Bhisti	day	0.31	260.00	80.60
0761	Fuel wood	quintal	1.40	450.00	630.00
0771	Kerosene oil	litre	2.27	30.00	68.10
0117	Assistant Fitter or 2nd class Fitter	day	2.25	273.00	614.25
0114	Beldar	day	11.50	247.00	2,840.50
9999	Carriage & sundries	L.S.	134.55	1.49	200.48

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	TOTAL				7,096.59
	Add Water Charges @ 1%				70.97
	TOTAL				7,167.56
	Add CPOH @ 15%				1,075.13
	Cost of 40.26 metre				8,242.69
	Cost of 1 metre				204.74
	Say				204.75

15.46.2 Above 600 mm diameter

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 40.26 metre or 11 nos joints Earth work in excavation for dismantling pipes including refilling of excavated earth lx40.26xl.30xl.65 m =86.36cum Deduct for pipes of average 900 mm dia = 1 x40.26x(22/7)/4x(1.00)x(1.00) =31.63cum Total =54.73 cum LABOUR:				
0114	Beldar	day	15.82	247.00	3,907.54
0115	Coolie	day	16.25	247.00	4,013.75
0101	Bhisti	day	0.93	260.00	241.80
0761	Fuel wood	quintal	3.08	450.00	1,386.00
0771	Kerosene oil	litre	5.00	30.00	150.00
0117	Assistant Fitter or 2nd class Fitter	day	10.00	273.00	2,730.00
0114	Beldar	day	20.00	247.00	4,940.00
9999	Carriage & sundries	L.S.	179.40	1.49	267.31
	TOTAL				17,636.40
	Add Water Charges @ 1%				176.36
	TOTAL				17,812.76
	Add CPOH @ 15%				2,671.91
	Cost of 40.26 metre				20,484.67
	Cost of 1 metre				508.81
	Say				508.80

15.47 Dismantling asbestos cement pressure pipes including excavation and refilling trenches after taking out the pipes manually / by mechanical means and stacking the pipes within 50 metres lead as per direction of Engineer-in-Charge:

15.47.1 Upto 150 mm diameter

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre or 11 nos joints Earth work in excavation for dismantling pipes including refilling of excavated earth 10.00x0.55x0.75 m =4.125cum Deduct for pipes of average 100 mm dia =1x10x(22/7)/4x(0.118)x(0.118) =0.109cum Total =4.016cum LABOUR:				
0114	Beldar	day	1.16	247.00	286.52

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0115	Coolie	day	1.19	247.00	293.93
0101	Bhisti	day	0.07	260.00	18.20
0114	Beldar	day	0.36	247.00	88.92
0115	Coolie	day	0.38	247.00	93.86
9999	Carriage & sundries	L.S.	1.56	1.49	2.32
	TOTAL				783.75
	Add Water Charges @ 1%				7.84
	TOTAL				791.59
	Add CPOH @ 15%				118.74
	Cost of 10 metre				910.33
	Cost of 1 metre				91.03
	Say				91.05

15.47.2 Above 150 mm diameter

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre or 11 nos joints Earth work in excavation for dismantling pipes including refilling of excavated earth 10.00x0.65x0.75 m =4.88cum Deduct for pipes of average 250 mm dia = lxl0x(22/7)/4x(0.274)x(0.274)=0.590cum Total =4.29cum LABOUR:				
0114	Beldar	day	1.24	247.00	306.28
0115	Coolie	day	1.28	247.00	316.16
0101	Bhisti	day	0.07	260.00	18.20
0114	Beldar	day	0.36	247.00	88.92
0115	Coolie	day	0.88	247.00	217.36
9999	Carriage & sundries	L.S.	3.77	1.49	5.62
	TOTAL				952.54
	Add Water Charges @ 1%				9.53
	TOTAL				962.07
	Add CPOH @ 15%				144.31
	Cost of 10 metre				1,106.38
	Cost of 1 metre				110.64
	Say				110.65

15.48 Taking out C.I. cover with frame from R.C.C. top slab of manholes of various sizes including demolishing of R.C.C. work manually / by mechanical means and stacking of useful materials near the site and disposal of unserviceable materials within 50 metres lead as per direction of Engineer-in-Charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 man hole Demolition of R.C.C. slab 1.3x1.2x0.15 m=0.234cum Less cover 0.61x0.455x0.15 m =0.042cum =0.192cum LABOUR:				
0114	Beldar	day	0.50	247.00	123.50
0115	Coolie	day	0.14	247.00	34.58

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Removal of C.I Cover with frame including stacking	L.S.	1.30	1.49	1.94
9999	Sundries	L.S.	7.15	1.49	10.65
	TOTAL				170.67
	Add Water Charges @ 1%				1.71
	TOTAL				172.38
	Add CPOH @ 15%				25.86
	Cost of each				198.24
	Say				198.25

15.49 Taking out C.I. cover with frame from R.C.C. top slab of inspection chambers of various sizes including demolishing of R.C.C. work manually / by mechanical means and stacking of useful materials near the site and disposal of unserviceable materials within 50 metres lead as per direction of Engineer-in-Charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 man hole Demolition of R.C.C. slab 1.1x0.9x0.15 m=0.148cum Less cover 0.61x0.455x0.15 m =0.042cum =0.106cum Say 0.11 cum LABOUR:				
0114	Beldar	day	0.29	247.00	71.63
0115	Coolie	day	0.08	247.00	19.76
9999	Removal of C.I Cover with frame including stacking	L.S.	0.65	1.49	0.97
9999	Sundries	L.S.	5.33	1.49	7.94
	TOTAL				100.30
	Add Water Charges @ 1%				1.00
	TOTAL				101.30
	Add CPOH @ 15%				15.19
	Cost of each				116.49
	Say				116.50

15.50 Dismantling of R.C.C. spun vent shaft including excavating the cement concrete pit completely, taking out the shaft, refilling the excavated gap, stacking the useful materials near the site and disposal of unserviceable materials within 50 metres lead.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 each Dismantling cement concrete (a) 1:4:8: 0.90x0.90x1.35m =1.094cum Less shaft 1/4x22/7x(0.450)x(0.450)x1.10 m =0.175cum =0.919cum Say 0.92cum Dismantling cement concrete (b)1:2:4 : 90x0.90x0.15m =0.122cum Less shaft 1/4x22/7x0.15x0.45 m =0.024cum =0.098cum Say 0. l0 cum LABOUR:				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Beldar	day	0.81	247.00	200.07
0115	Coolie	day	0.51	247.00	125.97
9999	Sundries	L.S.	1.82	1.49	2.71
0114	Beldar	day	0.16	247.00	39.52
0115	Coolie	day	0.07	247.00	17.29
9999	Sundries	L.S.	0.52	1.49	0.77
0130	Mistry	day	0.25	301.00	75.25
0123	Mason (brick layer) 1 st class	day	0.12	301.00	36.12
0124	Mason (brick layer) 2nd class	day	0.12	273.00	32.76
0100	Bandhani	day	1.00	260.00	260.00
0114	Beldar	day	1.00	247.00	247.00
9999	Sundries for scaffolding etc.	L.S.	53.82	1.49	80.19
	TOTAL				1,117.65
	Add Water Charges @ 1%				11.18
	TOTAL				1,128.83
	Add CPOH @ 15%				169.32
	Cost of each				1,298.15
	Say				1,298.15

15.51 Dismantling of road gully chamber of various sizes including C.I. grating with frame including stacking of useful materials near the site and disposal of unserviceable materials within 50 metres lead including refilling the excavated gap.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one chamber				
	Dismantling cement concrete				
	a) 1:5:10 : 1.05x1.00x0.15m=0.16cum				
	Dismantling brick work in cement mortar				
	2.70x0.20x0.45m =0.24cum				
	Dismantling cement concrete				
	b) 1:2:4: 2.70x0.20x0.15m =0.08cum				
	LABOUR:				
0114	Beldar	day	0.14	247.00	34.58
0115	Coolie	day	0.09	247.00	22.23
9999	Sundries	L.S.	0.26	1.49	0.39
0114	Beldar	day	0.25	247.00	61.75
0115	Coolie	day	0.22	247.00	54.34
9999	Sundries	L.S.	0.52	1.49	0.77
0114	Beldar	day	0.13	247.00	32.11
0115	Coolie	day	0.06	247.00	14.82
9999	Sundries for scaffolding etc.	L.S.	0.39	1.49	0.58
9999	Dismantling C.I. Grating	L.S.	7.15	1.49	10.65
	TOTAL				232.22
	Add Water Charges @ 1%				2.32
	TOTAL				234.54
	Add CPOH @ 15%				35.18
	Cost of each				269.72
	Say				269.70

15.52 Dismantling of flushing cistern of all types (C.I. /PVC/Vitrous China) including stacking of useful materials near the site and disposal of unserviceable materials within 50 metres lead.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for each				
	LABOUR:				
0116	Fitter (grade 1)	day	0.25	301.00	75.25
0114	Beldar	day	0.50	247.00	123.50
9999	Sundries	L.S.	17.94	1.49	26.73
	TOTAL				225.48
	Add Water Charges @ 1%				2.25
	TOTAL				227.73
	Add CPOH @ 15%				34.16
	Cost of each				261.89
	Say				261.90

15.53 Dismantling of C.I. sluice valve including stacking of useful materials within a lead of 50 metres.

15.53.1 Upto 150 mm diameter

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sluice valves (ace.) 100mm				
	LABOUR:				
0116	Fitter (grade 1)	day	0.60	301.00	180.60
0117	Assistant Fitter or 2nd class Fitter	day	0.40	273.00	109.20
0114	Beldar	day	1.60	247.00	395.20
9999	Sundries for removing the R.C.C. cover etc for dismantling sluice valve	L.S.	89.70	1.49	133.65
	TOTAL				818.65
	Add Water Charges @ 1%				8.19
	TOTAL				826.84
	Add CPOH @ 15%				124.03
	Cost of 10 nos				950.87
	Cost of each				95.09
	Say				95.10

15.53.2 Above 150 mm diameter

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sluice valves (ace.) 100mm				
	LABOUR:				
0116	Fitter (grade 1)	day	2.40	301.00	722.40
0117	Assistant Fitter or 2nd class Fitter	day	1.54	273.00	420.42
0114	Beldar	day	6.40	247.00	1,580.80
9999	Sundries for removing the R.C.C. cover etc for dismantling sluice valve	L.S.	89.70	1.49	133.65
	TOTAL				2,857.27
	Add Water Charges @ 1%				28.57
	TOTAL				2,885.84
	Add CPOH @ 15%				432.88
	Cost of 10 nos				3,318.72
	Cost of each				331.87
	Say				331.85

15.54 Dismantling of spindle fire hydrant including stacking of useful materials within 50 metres lead.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos				
	LABOUR:				
0116	Fitter (grade 1)	day	1.50	301.00	451.50
0117	Assistant Fitter or 2nd class Fitter	day	1.00	273.00	273.00
0114	Beldar	day	4.00	247.00	988.00
	TOTAL				1,712.50
	Add Water Charges @ 1%				17.12
	TOTAL				1,729.62
	Add CPOH @ 15%				259.44
	Cost of 10 nos				1,989.06
	Cost of each				198.91
	Say				198.90

15.55 Dismantling of cement concrete platform along with curtain walls and base concrete etc. including stacking of useful materials near the site and disposal of unserviceable materials within 50 metres lead:

15.55.1 120 x 120 cm (outside to outside)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one platform				
	Dismantling cement concrete 1:5:10				
	4.00x0.35x0.12m =0.168cum				
	0.80x0.80x0.075m =0.048cum				
	=0.216cum Say 0.22cum				
	Dismantling brick work in cement mortar				
	4.00x0.20x0.30m =0.24cum				
	4.00x0.10x0.20m =0.088cum				
	=0.328cum Say 0.33cum				
	Dismantling 40 mm C.C. flooring 1:2:4				
	1.00x 1.00x0.04m =0.04cum				
	LABOUR:				
0114	Beldar	day	0.19	247.00	46.93
0115	Coolie	day	0.12	247.00	29.64
9999	Sundries	L.S.	0.39	1.49	0.58
0114	Beldar	day	0.35	247.00	86.45
0115	Coolie	day	0.30	247.00	74.10
9999	Sundries	L.S.	0.91	1.49	1.36
0114	Beldar	day	0.06	247.00	14.82
0115	Coolie	day	0.03	247.00	7.41
9999	Sundries for scaffolding etc.	L.S.	0.13	1.49	0.19
	TOTAL				261.48
	Add Water Charges @ 1%				2.61
	TOTAL				264.09
	Add CPOH @ 15%				39.61
	Cost of each				303.70
	Say				303.70

15.55.2 210 x 120 cm (outside to outside)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one platform Dismantling cement concrete 1:5:10 5.80x0.35x0.22m =0.243cum 0.80x1.70x0.075m =0.102cum =0.345cum Say 0.35cum Dismantling brick work in cement mortar 5.80x0.20x0.30m =0.348cum 6.20x0.10x0.20m =0.124cum =0.472cum Say 0.47cum Dismantling 40 mm C.C. flooring 1:2:4 1.90x 1.00x0.04m =0.08cum LABOUR:				
0114	Beldar	day	0.31	247.00	76.57
0115	Coolie	day	0.19	247.00	46.93
9999	Sundries	L.S.	0.65	1.49	0.97
0114	Beldar	day	0.50	247.00	123.50
0115	Coolie	day	0.42	247.00	103.74
9999	Sundries	L.S.	1.30	1.49	1.94
0114	Beldar	day	0.13	247.00	32.11
0115	Coolie	day	0.06	247.00	14.82
9999	Sundries for scaffolding etc.	L.S.	0.39	1.49	0.58
	TOTAL				401.16
	Add Water Charges @ 1%				4.01
	TOTAL				405.17
	Add CPOH @ 15%				60.78
	Cost of each				465.95
	Say				465.95

15.55.3 320 x 120 cm (outside to outside)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one platform Dismantling cement concrete l:5:10 8.00x0.35x0.12m =0.336cum 2.80x0.80x0.075m =0.168cum =0.504cum Say 0.50cum Dismantling brick work in cement mortar 8.00x0.20x0.30m =0.48cum 8.40x0.10x0.20m =0.168cum =0.648cum Say 0.65cum Dismantling 40 mm C.C. flooring 1:2:4 3.00x1.00x0.04m =0.12cum LABOUR:				
0114	Beldar	day	0.44	247.00	108.68
0115	Coolie	day	0.28	247.00	69.16
9999	Sundries	L.S.	0.91	1.49	1.36
0114	Beldar	day	0.69	247.00	170.43
0115	Coolie	day	0.59	247.00	145.73
9999	Sundries	L.S.	1.56	1.49	2.32
0114	Beldar	day	0.19	247.00	46.93
0115	Coolie	day	0.09	247.00	22.23
9999	Sundries for scaffolding etc.	L.S.	0.52	1.49	0.77

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	TOTAL				567.61
	Add Water Charges @ 1%				5.68
	TOTAL				573.29
	Add CPOH @ 15%				85.99
	Cost of each				659.28
	Say				659.30

15.56 Dismantling old plaster or skirting raking out joints and cleaning the surface for plaster including disposal of rubbish to the dumping ground within 50 metres lead.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	LABOUR:				
0114	Beldar	day	0.36	247.00	88.92
0115	Coolie	day	0.08	247.00	19.76
0101	Bhisti	day	0.07	260.00	18.20
9999	Sundries for scaffolding etc.	L.S.	1.43	1.49	2.13
	TOTAL				129.01
	Add Water Charges @ 1%				1.29
	TOTAL				130.30
	Add CPOH @ 15%				19.55
	Cost of 10 sqm				149.85
	Cost of 1 sqm				14.99
	Say				15.00

15.57 Dismantling aluminium / Gypsum partitions, doors, windows, fixed glazing and false ceiling including disposal of unserviceable surplus material and stacking of serviceable material with in 50 meters lead as directed by Engineer-in-Charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	LABOUR:				
0112	Carpenter 2nd class	day	0.20	273.00	54.60
0114	Beldar	day	0.30	247.00	74.10
9999	Sundries	L.S.	5.38	1.49	8.02
	TOTAL				136.72
	Add Water Charges @ 1%				1.37
	TOTAL				138.09
	Add CPOH @ 15%				20.71
	Cost of 10 sqm				158.80
	Cost of 1 sqm				15.88
	Say				15.90

15.58 Demolishing R.C.C. work by mechanical means and stockpiling at designated locations and disposal of dismantled materials up to a lead of 1 kilometre, stacking serviceable and unserviceable material separately including cutting reinforcement bars.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum				
	LABOUR:				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0128	Mate	day	0.03	260.00	7.80
	Labour for operating pneumatic tools				
0139	Skilled Beldar (for floor rubbing etc.)	day	0.50	260.00	130.00
0114	Beldar	day	0.50	247.00	123.50
	Labour for cutting reinforcement bars				
0103	Blacksmith 2nd class	day	0.50	273.00	136.50
0114	Beldar	day	0.50	247.00	123.50
	MACHINERY:				
0040	Air compressor 250 cfm with two leads for pneumatic cutters / hammers	day	0.125	1,800.00	225.00
0039	Tractor with trolley	day	0.05	1,350.00	67.50
0041	Joint cutting machine with 2-3 blades	day	0.125	900.00	112.50
	TOTAL				926.30
	Add Water Charges @ 1%				9.26
	TOTAL				935.56
	Add CPOH @ 15%				140.33
	Cost of 1 cum				1,075.89
	Say				1,075.90

15.59 Dismantling of flexible pavement (bituminous courses) by mechanical means and disposal of dismantled material up to a lead of 1 kilometre, as per direction of Engineer-in-charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum				
	LABOUR:				
0128	Mate	day	0.01	260.00	2.60
0114	Beldar	day	0.30	247.00	74.10
	MACHINERY:				
0039	Tractor with trolley	day	0.0475	1,350.00	64.12
0038	Tractor with ripper attachment	day	0.002	1,350.00	2.70
	TOTAL				143.52
	Add Water Charges @ 1%				1.44
	TOTAL				144.96
	Add CPOH @ 15%				21.74
	Cost of 1 cum				166.70
	Say				166.70

15.60 Disposal of building rubbish / malba / similar unserviceable, dismantled or waste materials by mechanical means, including loading, transporting, unloading to approved municipal dumping ground or as approved by Engineer-in-charge, beyond 50 m initial lead, for all leads including all lifts involved.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum				
2264	Carriage of rubbish	cum	1.00	87.60	87.60
	TOTAL				87.60
	Add Water Charges @ 1%				0.88
	TOTAL				88.48
	Add CPOH @ 15%				13.27
	Cost of 1 cum				101.75
	Say				101.75

SUB HEAD : 16.0

ROAD WORK

16.1 Preparation and consolidation of sub grade with power road roller of 8 to 12 tonne capacity after excavating earth to an average of 22.5 cm depth, dressing to camber and consolidating with road roller including making good the undulations etc. and re-rolling the sub grade and disposal of surplus earth with lead upto 50 metres.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 sqm				
	MATERIAL:				
	(A) preparation of subgrade.				
	Earth work in excavation including dressing etc. 100sqm.x22.5cm (average depth) = 22.5cum				
	LABOUR:				
0128	Mate	day	1.80	260.00	468.00
0115	Coolie	day	18.00	247.00	4,446.00
0114	Beldar	day	0.27	247.00	66.69
0003	Hire charges of Diesel Road Roller - 8 to 10 tonne	day	0.054	1,500.00	81.00
0113	Chowkidar	day	0.054	247.00	13.34
1235	Diesel oil for road roller @ 18 litres	litre	0.972	41.29	40.13
9999	Carriage of diesel	L.S.	1.43	1.49	2.13
9999	Sundries	L.S.	6.76	1.49	10.07
	(B) Conslidation of subgrade				
	Roller charges (one roller does 1860 sqm. of consolidation of sub - grade with road roller of 8 to 12 tonne capacity including making good the undulations etc. with earth or quarry spoils etc. and rerolling the subgrade				
0003	Hire charges of Diesel Road Roller - 8 to 10 tonne	day	0.054	1,500.00	81.00
0113	Chowkidar	day	0.054	247.00	13.34
1235	Diesel oil	litre	0.972	41.29	40.13
9999	Carriage of diesel	L.S.	1.43	1.49	2.13
9999	Sundries	L.S.	6.76	1.49	10.07
	TOTAL				5,274.03
	Add Water Charges @ 1%				52.74
	TOTAL				5,326.77
	Add CPOH @ 15%				799.02
	Cost of 100 sqm				6,125.79
	Cost of 1 sqm				61.26
	Say				61.25

16.2 Extra for compaction of earth work in embankment under optimum moisture conditions to give at least 95% of the maximum dry density (proctor density).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 cum				
	LABOUR				
	(Extra to item No.2.3 in Earth work)				
0101	Bhisti	day	0.17	260.00	44.20
	Roller charges (one roller does 1860sqm. of consolidation per day of 8 hours and uses 18 litres diesel)				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0003	Hire charges of Diesel Road Roller - 8 to 10 tonne	day	0.008	1,500.00	12.00
0113	Chowkidar	day	0.008	247.00	1.98
1235	Diesel oil for road roller @ 18 litres per day i.e. 0.008x18=0.144 litres	litre	0.144	41.29	5.95
9999	Carriage of diesel	L.S.	0.39	1.49	0.58
9999	Sundries	L.S.	1.43	1.49	2.13
	TOTAL				66.84
	Add Water Charges @ 1%				0.67
	TOTAL				67.51
	Add CPOH @ 15%				10.13
	Cost of 10 cum				77.64
	Cost of 1 cum				7.76
	Say				7.75

16.3 Supplying and stacking at site.

16.3.1 90 mm to 45 mm size stone aggregate

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum				
	MATERIAL:				
2901	Stone Aggregate (Single size) : 100 mm nominal size	cum	0.10	750.00	75.00
2902	Stone Aggregate (Single size) : 80 mm nominal size	cum	0.65	750.00	487.50
0291	Stone Aggregate (Single size) : 63 mm nominal size	cum	0.25	850.00	212.50
2206	Carriage of stone aggregate 40 mm nominal size and above	cum	1.00	95.22	95.22
	TOTAL				870.22
	Add Water Charges @ 1%				8.70
	TOTAL				878.92
	Add CPOH @ 15%				131.84
	Cost of 1 cum				1,010.76
	Say				1,010.75

16.3.2 63 mm to 45 mm size stone aggregate

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum				
	MATERIAL:				
2902	Stone Aggregate (Single size) : 80 mm nominal size	cum	0.10	750.00	75.00
0291	Stone Aggregate (Single size) : 63 mm nominal size	cum	0.65	850.00	552.50
0292	Stone Aggregate (Single size) : 50 mm nominal size	cum	0.25	900.00	225.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
2206	Carriage of stone aggregate 40 mm nominal size and above	cum	1.00	95.22	95.22
	TOTAL				947.72
	Add Water Charges @ 1%				9.48
	TOTAL				957.20
	Add CPOH @ 15%				143.58
	Cost of 1 cum				1,100.78
	Say				1,100.80

16.3.3 53 mm to 22.4 mm size stone aggregate

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum				
	MATERIAL:				
0291	Stone Aggregate (Single size) : 63 mm nominal size	cum	0.05	850.00	42.50
0292	Stone Aggregate (Single size) : 50 mm nominal size	cum	0.30	900.00	270.00
0293	Stone Aggregate (Single size) : 40 mm nominal size	cum	0.65	950.00	617.50
2206	Carriage of stone aggregate 40 mm nominal size and above	cum	1.00	95.22	95.22
	TOTAL				1,025.22
	Add Water Charges @ 1%				10.25
	TOTAL				1,035.47
	Add CPOH @ 15%				155.32
	Cost of 1 cum				1,190.79
	Say				1,190.80

16.3.4 Over burnt (Jhama) brick aggregate 120 mm to 40 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum				
	MATERIAL:				
2908	Over burnt (Jhama) Brick Aggregate: 120 mm to 40 mm size	cum	1.00	330.00	330.00
2260	Carriage of brick aggregate	cum	1.00	95.22	95.22
	TOTAL				425.22
	Add Water Charges @ 1%				4.25
	TOTAL				429.47
	Add CPOH @ 15%				64.42
	Cost of 1 cum				493.89
	Say				493.90

16.3.5 Over burnt (Jhama) brick aggregate 90 mm to 45 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum				
	MATERIAL:				
2909	Over burnt (Jhama) Brick Aggregate: 90 mm to 40 mm size	cum	1.00	360.00	360.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
2260	Carriage of brick aggregate	cum	1.00	95.22	95.22
	TOTAL				455.22
	Add Water Charges @ 1%				4.55
	TOTAL				459.77
	Add CPOH @ 15%				68.97
	Cost of 1 cum				528.74
	Say				528.75

16.3.6 Stone screening 13.2 mm nominal size (Type A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum				
	MATERIAL:				
2910	Stone chippings/ screenings 12.5/ 13.2 mm nominal size	cum	0.05	1,050.00	52.50
2911	Stone chippings/ screenings 10/ 11.2 mm nominal size	cum	0.80	1,050.00	840.00
2903	Stone chippings/ screenings 4.75 mm nominal size	cum	0.15	1,150.00	172.50
2202	Carriage of stone aggregate below 40 mm nominal size	cum	1.00	87.60	87.60
	TOTAL				1,152.60
	Add Water Charges @ 1%				11.53
	TOTAL				1,164.13
	Add CPOH @ 15%				174.62
	Cost of 1 cum				1,338.75
	Say				1,338.75

16.3.7 Stone screening 11.2 mm nominal size (Type B)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum				
	MATERIAL:				
2911	Stone chippings/ screenings 10/ 11.2 mm nominal size	cum	0.10	1,050.00	105.00
2903	Stone chippings/ screenings 4.75 mm nominal size	cum	0.75	1,150.00	862.50
2904	Stone chippings/ screenings 150 micron nominal size	cum	0.15	1,150.00	172.50
2202	Carriage of stone aggregate below 40 mm nominal size	cum	0.85	87.60	74.46
2267	Carriage of stone dust	cum	0.15	87.60	13.14
	TOTAL				1,227.60
	Add Water Charges @ 1%				12.28
	TOTAL				1,239.88
	Add CPOH @ 15%				185.98
	Cost of 1 cum				1,425.86
	Say				1,425.85

16.3.8 Red bajri

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum				
	MATERIAL:				
0304	Bajri	cum	1.00	900.00	900.00
2311	Carriage of red bajri	cum	1.00	87.60	87.60
	TOTAL				987.60
	Add Water Charges @ 1%				9.88
	TOTAL				997.48
	Add CPOH @ 15%				149.62
	Cost of 1 cum				1,147.10
	Say				1,147.10

16.3.9 Good earth

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum				
	MATERIAL:				
0114	Beldar	day	0.177	247.00	43.72
0115	Coolie	day	0.167	247.00	41.25
0979	Royalty for good earth	cum	1.00	30.00	30.00
2241	Carriage of good earth	cum	1.00	109.50	109.50
	by mechanical transport upto 5 km lead				
	TOTAL				224.47
	Add Water Charges @ 1%				2.24
	TOTAL				226.71
	Add CPOH @ 15%				34.01
	Cost of 1 cum				260.72
	Say				260.70

16.3.10 Moorum

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum				
	MATERIAL:				
0810	Moorum	cum	1.00	450.00	450.00
2265	Carriage of moorum	cum	1.00	87.60	87.60
	TOTAL				537.60
	Add Water Charges @ 1%				5.38
	TOTAL				542.98
	Add CPOH @ 15%				81.45
	Cost of 1 cum				624.43
	Say				624.45

16.4 Laying, spreading and compacting stone aggregate of specified sizes to WBM specifications in uniform thickness, hand picking, rolling with 3 wheeled road / vibratory roller 8-10 tonne capacity in stages to proper grade and camber, applying and brooming requisite type of screening / binding material to fill up interstices of coarse aggregate, watering and compacting to the required density.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum				
	LABOUR:				
0114	Beldar	day	0.26	247.00	64.22
0115	Coolie	day	0.26	247.00	64.22
0101	Bhisti	day	0.26	260.00	67.60
	Roller charges (one roller does 30 cum consolidation per day of 8 hours and uses 18 litres of diesel oil)				
0003	Hire charges of Diesel Road Roller - 8 to 10 tonne	day	0.033	1,500.00	49.50
0113	Chowkidar	day	0.033	247.00	8.15
1235	Diesel oil	litre	0.59	41.29	24.36
	Diesel for road roller @ 18 litres 0.033x18 = 0.59				
9999	Carriage of diesel	L.S.	1.43	1.49	2.13
9999	Sundries	L.S.	2.73	1.49	4.07
	TOTAL				284.25
	Add Water Charges @ 1%				2.84
	TOTAL				287.09
	Add CPOH @ 15%				43.06
	Cost of 1 cum				330.15
	Say				330.15

16.5 Laying water bound macadam sub-base with brick aggregate and blinding material, earth etc. including screening, sorting and spreading to template and consolidation with light power road-roller etc. complete.(payment for brick aggregate and moorum etc. to be made separately).

16.5.1 Over burnt (Jhama) brick aggregate 120 mm to 40 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum				
	LABOUR:				
0114	Beldar	day	0.35	247.00	86.45
0115	Coolie	day	0.26	247.00	64.22
0101	Bhisti	day	0.18	260.00	46.80
	Roller charges (one roller does 230cum. consolidation per day of 8 hours and uses 18 litres of diesel oil)				
0003	Hire charges of Diesel Road Roller - 8 to 10 tonne	day	0.004	1,500.00	6.00
0113	Chowkidar	day	0.004	247.00	0.99
1235	Diesel oil	litre	0.072	41.29	2.97
	road roller @ 18 litres per day 18x0.004=0.072				
9999	Carriage of diesel	L.S.	0.39	1.49	0.58

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries	L.S.	2.73	1.49	4.07
	TOTAL				212.08
	Add Water Charges @ 1%				2.12
	TOTAL				214.20
	Add CPOH @ 15%				32.13
	Cost of 1 cum				246.33
	Say				246.35

16.5.2 Over burnt (Jhama) brick aggregate 90 mm to 45 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum				
	LABOUR:				
0114	Beldar	day	0.35	247.00	86.45
0115	Coolie	day	0.26	247.00	64.22
0101	Bhisti	day	0.18	260.00	46.80
	Roller charges (one roller does 230cum. consolidation per day of 8 hours and uses 18 litres of diesel oil)				
0003	Hire charges of Diesel Road Roller - 8 to 10 tonne	day	0.004	1,500.00	6.00
0113	Chowkidar	day	0.004	247.00	0.99
1235	Diesel oil road roller @ 18 litres per day 18x0.004=0.072	litre	0.072	41.29	2.97
9999	Carriage of diesel	L.S.	0.39	1.49	0.58
9999	Sundries	L.S.	2.73	1.49	4.07
	TOTAL				212.08
	Add Water Charges @ 1%				2.12
	TOTAL				214.20
	Add CPOH @ 15%				32.13
	Cost of 1 cum				246.33
	Say				246.35

16.6 Supplying, stacking and Spreading 6 mm thick red bajri, watering and rolling complete including preparation of the surface and rolling.

16.6.1 With road roller / hand roller

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 6mm thick and 100 sqm area				
	LABOUR:				
	A. Supplying and stacking of red bajri at site				
0304	Bajri	cum	0.60	900.00	540.00
2311	Carriage of red bajri	cum	0.60	87.60	52.56
	B. Spreading of red bajri				
0114	Beldar	day	0.54	247.00	133.38
0101	Bhisti	day	0.54	260.00	140.40
	Roller charges				
	Roller charges (one roller does 1860sqm. consolidation per day of 8 hours and uses 18 litres of diesel oil)				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0003	Hire charges of Diesel Road Roller - 8 to 10 tonne	day	0.054	1,500.00	81.00
0113	Chowkidar	day	0.054	247.00	13.34
1235	Diesel oil for road roller @ 18 litres per day i.e. 18x0.054=0.972	litre	0.972	41.29	40.13
9999	Carriage of diesel	L.S.	1.43	1.49	2.13
	TOTAL				1,002.94
	Add Water Charges @ 1%				10.03
	TOTAL				1,012.97
	Add CPOH @ 15%				151.95
	Cost of 100 sqm				1,164.92
	Cost of 1 sqm				11.65
	Say				11.65

16.7 Brick edging in full brick width and half brick depth including excavation, refilling and disposal of surplus earth lead upto 50 metres.

16.7.1 With common burnt clay F.P.S.(non modular) bricks of class designation 7.5

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 m				
	LABOUR:				
2602	Common burnt clay F.P.S. (non modular) bricks class designation 7.5 including 12% wastage	1000 Nos	160.00	2,900.00	464.00
2201	Carriage of bricks	1000 Nos	160.00	233.60	37.38
0123	Mason (brick layer) 1 st class	day	0.17	301.00	51.17
0124	Mason (brick layer) 2nd class	day	0.17	273.00	46.41
0115	Coolie	day	0.35	247.00	86.45
9999	Removal of rubbish	L.S.	17.94	1.49	26.73
9999	Sundries	L.S.	8.97	1.49	13.37
	TOTAL				725.51
	Add Water Charges @ 1%				7.26
	TOTAL				732.77
	Add CPOH @ 15%				109.92
	Cost of 10 metre				842.69
	Cost of 1 metre				84.27
	Say				84.25

16.8 Brick edging laid lengthwise with half brick depth including excavation, refilling and disposal of surplus earth lead upto 50 metres:

16.8.1 With common burnt clay F.P.S.(non modular) bricks of class designation 7.5

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 m				
	MATERIAL:				
2602	Common burnt clay F.P.S. (non modular) bricks class designation 7.5 including 12% wastage	1000 Nos	49.00	2,900.00	142.10
2201	Carriage of bricks	1000 Nos	49.00	233.60	11.45
	LABOUR:				
0123	Mason (brick layer) 1 st class	day	0.04	301.00	12.04

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0124	Mason (brick layer) 2nd class	day	0.04	273.00	10.92
0115	Coolie	day	0.09	247.00	22.23
9999	Removal of rubbish	L.S.	4.16	1.49	6.20
	TOTAL				204.94
	Add Water Charges @ 1%				2.05
	TOTAL				206.99
	Add CPOH @ 15%				31.05
	Cost of 10 metre				238.04
	Cost of 1 metre				23.80
	Say				23.80

16.9 Scarifying metalled (water-bound) road surface including disposal of rubbish, lead upto 50 m and consolidation of the aggregate received from scarifying with power road roller of 8 to 10 tonne capacity.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 sqm				
	LABOUR				
0114	Beldar	day	1.35	247.00	333.45
0115	Coolie	day	1.08	247.00	266.76
	Consolidation of scarified material 100sqm.x50mm = 5cum Less 20% wastage = 1 cum. = 4 cum				
0003	Hire charges of Diesel Road Roller - 8 to 10 tonne	day	0.132	1,500.00	198.00
0113	Chowkidar	day	0.132	247.00	32.60
1235	Diesel oil for road roller @ 18 litres/ day(8 hour)	litre	2.376	41.29	98.11
9999	Carriage	L.S.	1.43	1.49	2.13
9999	Sundries	L.S.	5.46	1.49	8.14
	TOTAL				939.19
	Add Water Charges @ 1%				9.39
	TOTAL				948.58
	Add CPOH @ 15%				142.29
	Cost of 100 sqm				1,090.87
	Cost of 1 sqm				10.91
	Say				10.90

16.10 Making bajri path including preparation of subgrade, supplying and laying brick aggregate of 50 mm nominal size 7.5 cm deep with blinding material consisting of 12 mm moorum and 12 mm red bajri consolidated with road roller.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 sqm Earth work in excavation including dressing etc. 100x0.075=7.5cum				
2.6.1	Rate as per Item Number 2.6.1 of SH: Earth work Collection and stacking of brick aggregate 53 mm nominal size 100x0.075 =7.50cum	cum	7.50	129.35	970.12 (A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0286	Brick Aggregate (Single size) : 50 mm nominal size	cum	7.50	490.00	3,675.00
2260	Carriage of brick aggregate Supply staking Red Bajri 100x0.012= 1.2 cum	cum	7.50	95.22	714.15
16.3.8	Rate as per Item Number 16.3.8 of SH: Road work Collection and stacking of moorum at site 100x0.012= 1.20cum	cum	1.20	1,147.10	1,376.52 (A)
16.3.10	Rate as per Item Number 16.3.10 of SH: Road work Spreading and consolidation of brick aggregate and blinding material etc.	cum	1.20	624.45	749.34 (A)
0114	Beldar	day	1.95	247.00	481.65
0115	Coolie	day	2.63	247.00	649.61
0101	Bhisti	day	1.35	260.00	351.00
0003	Hire charges of Diesel Road Roller - 8 to 10 tonne	day	0.135	1,500.00	202.50
0113	Chowkidar	day	0.135	247.00	33.34
1235	Diesel oil for road roller @ 18 litres/ day(8 hour)	litre	2.43	41.29	100.33
9999	Carriage of diesel	L.S.	10.79	1.49	16.08
9999	Sundries Spreading of red bajri, watering and rolling	L.S.	20.15	1.49	30.02
0003	Hire charges of Diesel Road Roller - 8 to 10 tonne	day	0.054	1,500.00	81.00
0113	Chowkidar	day	0.054	247.00	13.34
1235	Diesel oil	litre	0.972	41.29	40.13
9999	Carriage of diesel	L.S.	0.55	1.49	0.82
	TOTAL				9,484.95
	Add Water Charges @ 1% except on A i.e on (9,484.95 - 3,095.98 =) 6,388.97				63.89
	TOTAL				9,548.84
	Add CPOH @ 15% except on A i.e on (9,548.84 - 3,095.98 =) 6,452.86				967.93
	Cost of 100 sqm				10,516.77
	Cost of 1 sqm				105.17
	Say				105.15

16.11 Dry stone pitching 22.5 cm thick including supply of stones and preparing surface complete.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm MATERIAL:				
1158	Stone for pitching 15 cm x 22.5 cm	cum	2.25	420.00	945.00
2216	Carriage of stone blocks white & red sand stone & kota stone slab 2.25x2245/1000 = 5.05 t	tonne	5.05	77.87	393.24
	LABOUR:				
0123	Mason (brick layer) 1 st class	day	1.08	301.00	325.08
0124	Mason (brick layer) 2nd class	day	1.08	273.00	294.84
0114	Beldar	day	2.15	247.00	531.05

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0115	Coolie	day	1.61	247.00	397.67
9999	Sundries	L.S.	6.76	1.49	10.07
	TOTAL				2,896.95
	Add Water Charges @ 1%				28.97
	TOTAL				2,925.92
	Add CPOH @ 15%				438.89
	Cost of 10 sqm				3,364.81
	Cost of 1 sqm				336.48
	Say				336.50

16.12 Dry brick pitching half brick thick in drains including supply of bricks and preparing the surface complete:

16.12.1 With common burnt clay F.P.S.(non modular) bricks of class designation 7.5

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
2602	Common burnt clay F.P.S. (non modular) bricks class designation 7.5	1000 Nos	645.00	2,900.00	1,870.50
2201	Carriage of bricks	1000 Nos	645.00	233.60	150.67
	LABOUR:				
0123	Mason (brick layer) 1 st class	day	0.40	301.00	120.40
0124	Mason (brick layer) 2nd class	day	0.40	273.00	109.20
0114	Beldar	day	1.08	247.00	266.76
	TOTAL				2,517.53
	Add Water Charges @ 1%				25.18
	TOTAL				2,542.71
	Add CPOH @ 15%				381.41
	Cost of 10 sqm				2,924.12
	Cost of 1 sqm				292.41
	Say				292.40

16.13 Cutting road and making good the same including supply of extra quantities of materials i.e. aggregate, moorum screening, red bajri and labour required.

16.13.1 Bituminous portion

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1.08cum. (road 6 metres wide, 0.6 metre length wise and 0.30m (average depth) volume = 1.08 cum)				
	MATERIAL:				
	Supplying and stacking stone aggregate 53mm to 24mm nominal size at site				
16.3.3	Rate as per Item Number 16.3.3 of SH: Road work	cum	0.09	1,190.80	107.17 (A)
	Supplying and stacking red bajri at site				
16.3.8	Rate as per Item Number 16.3.8 of SH: Road work	cum	0.023	1,147.10	26.38 (A)
	Supplying and stacking moorum at site				
16.3.10	Rate as per Item Number 16.3.10 of SH: Road work	cum	0.022	624.45	13.74 (A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
2911	Stone chippings/ screenings 10/ 11.2 mm nominal size	cum	0.092	1,050.00	96.60
2202	Carriage of stone aggregate below 40 mm nominal size	cum	0.092	87.60	8.06
0309	Paving bitumen of grade VG-10 of approved quality	tonne	0.011	37,000.00	407.00
2211	Carriage of tar / bitumen	tonne	0.011	87.60	0.96
	LABOUR:				
	For cutting road and taking out soling and metalling including sorting and screening.				
0114	Beldar	day	0.96	247.00	237.12
0115	Coolie	day	0.48	247.00	118.56
	Relaying soling stone 3.6x0.15=0.54cum.				
0114	Beldar	day	0.24	247.00	59.28
0115	Coolie	day	0.24	247.00	59.28
	Relaying road metal with extra quantity and consolidation to 0.10m, thickness 3.6x0.10=0.36cum				
0114	Beldar	day	0.71	247.00	175.37
0115	Coolie	day	0.48	247.00	118.56
0101	Bhisti	day	0.10	260.00	26.00
	Painting two coats, 3.6sqm. including labour for spreading grit				
0114	Beldar	day	0.48	247.00	118.56
0115	Coolie	day	0.48	247.00	118.56
9999	Barrier, chowkidar, sprayman, mate, etc.	L.S.	40.43	1.49	60.24
	TOTAL				1,751.44
	Add Water Charges @ 1% except on A i.e on (1,751.44 - 147.29 =) 1,604.15				16.04
	TOTAL				1,767.48
	Add CPOH @ 15% except on A i.e on (1,767.48 - 147.29 =) 1,620.19				243.03
	Cost of 1.08 cum				2,010.51
	Cost of 1 cum				1,861.58
	Say				1,861.60

16.13.2 Water bound macadam

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 0.90 cum				
	Consider a road 6 metres wide and 0.6m lengthwise and 0.25m cm average depth =0.90cum				
	MATERIAL:				
	Supplying and stacking stone aggregate 53mm to 22 mm nominal size at site				
16.3.3	Rate as per Item Number 16.3.3 of SH: Road work	cum	0.09	1,190.80	107.17 (A)
	Supplying and stacking red bajri at site				
16.3.8	Rate as per Item Number 16.3.8 of SH: Road work	cum	0.023	1,147.10	26.38 (A)
	Supplying and stacking moorum at site				
16.3.10	Rate as per Item Number 16.3.10 of SH: Road work	cum	0.022	624.45	13.74 (A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	For cutting road and taking out soling and metalling including sorting and screening				
0114	Beldar	day	0.48	247.00	118.56
0115	Coolie	day	0.24	247.00	59.28
	For relaying soling stone 3.6x0.15=0.54cum				
0114	Beldar	day	0.24	247.00	59.28
0115	Coolie	day	0.24	247.00	59.28
	For relaying road metal with extra quantity and consolidation to 0.10m thickness - 3.6x0.10=0.36cum				
0114	Beldar	day	0.48	247.00	118.56
0115	Coolie	day	0.48	247.00	118.56
0101	Bhisti	day	0.10	260.00	26.00
9999	Barrier, chowkidar, etc.	L.S.	53.82	1.49	80.19
	TOTAL				787.00
	Add Water Charges @ 1% except on A i.e on (787.00 - 147.29 =) 639.71				6.40
	TOTAL				793.40
	Add CPOH @ 15% except on A i.e on (793.40 - 147.29 =) 646.11				96.92
	Cost of 0.9 cum				890.32
	Cost of 1 cum				989.24
	Say				989.25

16.14 Cutting bajri paths and making good the same including supply of extra quantities of brick aggregate, moorum and red bajri required.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	10x0.075=0.75cum				
	MATERIAL:				
	Supplying and stacking 50mm brick aggregate at site(extra quantity)				
0286	Brick Aggregate (Single size) : 50 mm nominal size	cum	0.19	490.00	93.10
2260	Carriage of brick aggregate	cum	0.19	95.22	18.09
	Supplying and stacking red bajri at site				
16.3.8	Rate as per Item Number 16.3.8 of SH: Road work	cum	0.06	1,147.10	68.83 (A)
	Supplying and stacking moorum at site				
16.3.10	Rate as per Item Number 16.3.10 of SH: Road work	cum	0.06	624.45	37.47 (A)
	LABOUR:				
	For cutting, sorting out, spreading and consolidation of aggregate				
0114	Beldar	day	1.60	247.00	395.20
0115	Coolie	day	0.80	247.00	197.60
	TOTAL				810.29
	Add Water Charges @ 1% except on A i.e on (810.29 - 106.30 =) 703.99				7.04
	TOTAL				817.33
	Add CPOH @ 15% except on A i.e on (817.33 - 106.30 =) 711.03				106.65
	Cost of 10 sqm				923.98
	Cost of 1 sqm				92.40
	Say				92.40

16.15 Supplying at site:

16.15.1 R.C.C. Standards post / struts / rails / pales of mix 1:1.5:3 (1 cement : 1.5 coarse sand : 3 graded stone aggregate 12.5 mm nominal size) with wooden plugs or 6 mm bar nibs wherever required as per direction of Engineer-in-Charge (cost of earth works in excavation, concrete works in foundation to be paid separately).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 posts = 0.336cum Cubical contents of one post Area bottom A1 = (15+12.5)/2 x8.75+ x½x3.14 x(6.25)² =120.31+61.38=181.69 sqm. Area top A2 = (10+7.5)/2 x6.25+½x3.14 x(3.75)² = 54.68+22.08 = 76.76 sqm. sqrt(A1 x A2) = 118.10sqm A1+A2+ sqrt(A1 x A2)= 0.03766 sqm Volume = (1.05)/3x0.03766 = 0.01316 cum =0.0132 cum Volume of lower and square portion = (16.5x16.5x75)/100x100x100 = 0.0204cum. Total volume = 0.0132+0.0204 cum = 0.0336 cum. Qty. for 10 post = 0.0336x10 = 0.336cum. Cement concrete 1:1.5:3 (1 Cement: 1.5 Coarse sand : 3 graded stone aggregate 12.5mm nominal size)				
4.1.2	Rate as per Item Number 4.1.2 of SH: Concrete work	cum	0.336	4,904.95	1,648.06 (A)
	Extra labour for laying cement concrete in RCC work				
0114	Beldar	day	0.034	247.00	8.40
0101	Bhisti	day	0.067	260.00	17.42
0123	Mason (brick layer) 1 st class	day	0.013	301.00	3.91
0124	Mason (brick layer) 2nd class	day	0.013	273.00	3.55
0128	Mate	day	0.013	260.00	3.38
	M.S. Reinforcement 6mm dia. bars 10x4x1.88m = 75.20m+ 10x9x0.50m=45.00m Total = 120.20m 120.20m@0.22kg/m =26.44kg				
5.22.2	Rate as per Item Number 5.22.2 of SH: Reinforced cement concrete work	kilogram	26.44	58.15	1,537.49 (A)
	Centering and shuttering				
5.9.1	Rate as per Item Number 5.9.1 of SH: Reinforced cement concrete work	sqm	6.99	166.90	1,166.63 (A)
	6mm Cement.Plaster 1:2 (1 Cement: 2 fine sand) Details of cost for 9.88 sqm. (0.072)/l 0x9.88 = 0.071				
0367	Portland Cement	tonne	0.05	5,000.00	250.00
2209	Carriage of cement	tonne	0.05	77.87	3.89
0983	Fine sand (zone IV)	cum	0.07	640.00	44.80
2261	Carriage of fine sand (1 part badarpur sand: 2 parts jamuna sand)	cum	0.07	87.60	6.13
0114	Beldar	day	0.05	247.00	12.35

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0101	Bhisti	day	0.02	260.00	5.20
0155	Mason (average)	day	0.64	287.00	183.68
0115	Coolie	day	0.80	247.00	197.60
0101	Bhisti	day	0.27	260.00	70.20
9999	Hire and running charges of mixer	L.S.	1.95	1.49	2.91
9999	extra for removing burr, cleaning with wire brushes,pock making with pointed tool etc.complete	L.S.	13.26	1.49	19.76
9999	Scaffolding and sundries	L.S.	11.57	1.49	17.24
9999	Carriage of RCC posts	L.S.	53.82	1.49	80.19
9999	Wooden plugs or 6mm bar nibs	L.S.	12.22	1.49	18.21
9999	Sundries	L.S.	13.52	1.49	20.14
	TOTAL				5,321.14
	Add Water Charges @ 1% except on A i.e on (5,321.14 - 4,352.18 =) 968.96				9.69
	TOTAL				5,330.83
	Add CPOH @ 15% except on A i.e on (5,330.83 - 4,352.18 =) 978.65				146.80
	Cost of 0.336 cum				5,477.63
	Cost of 1 cum				16,302.47
	Say				16,302.45

16.15.2 Welded steel wire fabric of required width having rectangular mesh painted with two or more coats of enamel paint of approved shade over a coat of primer (Priming & painting to be paid for separately).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 27 sqm (209.25 kg)				
	MATERIAL:				
	Steel wire fabric 0.9m wide rectangular mesh 75x25mm size weight not less than 7.75kg/sqm. 30x0.9 = 27sqm				
1021	Hard drawn steel wire fabric	sqm	27.00	430.00	11,610.00
2314	Carriage of barbed wire 7.75x27=209.25kg=0.209tonne	tonne	0.209	77.87	16.27
	TOTAL				11,626.27
	Add Water Charges @ 1%				116.26
	TOTAL				11,742.53
	Add CPOH @ 15%				1,761.38
	Cost of 209.25 kg				13,503.91
	Cost of 1 kg				64.53
	Say				64.55

16.16 Supplying and fixing turn buckles and straining bolts for barbed wire fencing.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one set				
	MATERIAL:				
1030	Galvanised steel turn buckles	each	1.00	15.00	15.00
1028	Straining bolts	each	1.00	70.00	70.00
9999	Carriage of turn buckles and straining bolts	L.S.	2.73	1.49	4.07
	Labour for fixing straining bolts and turn buckles				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0103	Blacksmith 2nd class	day	0.10	273.00	27.30
	TOTAL				116.37
	Add Water Charges @ 1%				1.16
	TOTAL				117.53
	Add CPOH @ 15%				17.63
	Cost of each set				135.16
	Say				135.15

16.17 Fencing with R.C.C. post placed at required distance, embedded in cement concrete blocks, every 15th post, last but one end post and corner post shall be strutted on both sides and end post one side only, provided with horizontal lines and two diagonals of barbed wire weighing 9.38 kg per 100 metres (minimum), between the two posts fitted and fixed with G.I. staples on wooden plugs or G.I. binding wire tied to 6 mm bar nibs fixed while casting the post (cost of R.C.C. posts, struts, earth work and concrete to be paid for separately) :- Payment to be made per metre cost of total length of barbed wire used.

16.17.1 With G.I. barbed wire

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 30 m				
	MATERIAL:				
	G.I. barbed wire				
	30x9 = 270m+				
	10x6.32 = 63m.				
	= 333.00m.				
	333m @9.38kg/100m =31.24kg = 0.31q				
1029	Galvanised steel barbed wire	quintal	0.31	5,175.00	1,604.25
2314	Carriage of barbed wire	tonne	0.03	77.87	2.34
9999	G.I.staples or binding wire	L.S.	49.40	1.49	73.61
	LABOUR:				
	Labour for fixing costs in line, fixing and stretching wire				
0123	Mason (brick layer) 1 st class	day	0.12	301.00	36.12
0124	Mason (brick layer) 2nd class	day	0.12	273.00	32.76
0114	Beldar	day	0.50	247.00	123.50
0102	Blacksmith 1 st class	day	0.50	301.00	150.50
0103	Blacksmith 2nd class	day	0.50	273.00	136.50
9999	Sundries	L.S.	13.52	1.49	20.14
	TOTAL				2,179.72
	Add Water Charges @ 1%				21.80
	TOTAL				2,201.52
	Add CPOH @ 15%				330.23
	Cost of 333 metre				2,531.75
	Cost of 1 metre				7.60
	Say				7.60

16.18 Fencing with angle iron post placed at required distance embedded in cement concrete blocks, every 15th post, last but one end post and corner post shall be strutted on both sides and end post on one side only and provided with horizontal lines and two diagonals interwoven with horizontal wires, of barbed wire weighing 9.38 kg per 100 metres (minimum), between the two posts fitted and fixed with G.I.

staples, turn buckles etc. complete. (Cost of posts, struts, earth work and concrete work to be paid for serarately) :- Payment to be made per metre cost of total length of barbed wire used.

16.18.1 With G.I. barbed wire

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 30 m MATERIAL: G.I. barbed wire 30x9 = 270.00m 2xl0x(12+32) 1/2 = 63.24 m. Total = 333.24m 333.24m @9.38kg/l00m =31.26 kg say 0.31 q				
1029	Galvanised steel barbed wire	quintal	0.31	5,175.00	1,604.25
2314	Carriage of barbed wire	tonne	0.031	77.87	2.41
	Supplying & Fixing. Turn buckle & staple				
16.16	Rate as per Item Number 16.16 of SH: Road work	each set	10.00	135.15	1,351.50(A)
9999	G.I.staples	L.S.	49.40	1.49	73.61
	LABOUR: Labour for fixing posts in line and fixing and stretching wire:				
0123	Mason (brick layer) 1 st class	day	0.12	301.00	36.12
0124	Mason (brick layer) 2nd class	day	0.12	273.00	32.76
0114	Beldar	day	0.50	247.00	123.50
0102	Blacksmith 1 st class	day	0.50	301.00	150.50
0103	Blacksmith 2nd class	day	0.50	273.00	136.50
	TOTAL				3,511.15
	Add Water Charges @ 1% except on A i.e on (3,511.15 - 1,351.50 =) 2,159.65				21.60
	TOTAL				3,532.75
	Add CPOH @ 15% except on A i.e on (3,532.75 - 1,351.50 =) 2,181.25				327.19
	Cost of 333.24 metre				3,859.94
	Cost of 1 metre				11.58
	Say				11.60

16.19 Supplying at site Angle iron post & strut of required size including bottom to be split and bent at right angle in opposite direction for 10 cm length and drilling holes upto 10 mm dia. etc. complete.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 quintal MATERIAL: M.S. angle = 1.00 qtl. Add 5% wastage = 0.05 qtl. =1.05 qtl				
1007	Structural steel such as tees, angles channels and R.S. joists	quintal	1.05	4,250.00	4,462.50
2205	Carriage of steel	tonne	0.105	77.87	8.18
	LABOUR:				
0103	Blacksmith 2nd class	day	0.75	273.00	204.75
0114	Beldar	day	0.50	247.00	123.50
	For spotting, bending of angle and drilling holes etc.				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0103	Blacksmith 2nd class	day	1.00	273.00	273.00
0114	Beldar	day	1.00	247.00	247.00
9999	Sundries such as drilling bit etc.	L.S.	19.76	1.49	29.44
	TOTAL				5,348.37
	Add Water Charges @ 1%				53.48
	TOTAL				5,401.85
	Add CPOH @ 15%				810.28
	Cost of 100 kg				6,212.13
	Cost of 1 kg				62.12
	Say				62.10

16.20 Welded steel wire fabric fencing with posts of specified material and of standard design placed and embedded in cement concrete blocks 45x45x60 cm of mix 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size), every 15th post, last but one end post and corner post shall be strutted on both sides and end post on one side only and struts embedded in cement concrete blocks 70x45x50 cm of the same mix, provided with welded steel wire fabric fixed between the posts fitted and fixed with G.I. staples on wooden plugs or tied to 6mm bar nibs with G.I. binding wire (cost of posts, welded steel wire fabric, painting, earth work in excavation and concrete to be paid for separately) :

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 30 metre i.e 30x1.20 = 36 sqm				
	Labour for fixing posts in line fixing and stretching - welded wire fabric				
0123	Mason (brick layer) 1 st class	day	0.12	301.00	36.12
0124	Mason (brick layer) 2nd class	day	0.12	273.00	32.76
0114	Beldar	day	0.50	247.00	123.50
0102	Blacksmith 1 st class	day	0.50	301.00	150.50
0103	Blacksmith 2nd class	day	0.50	273.00	136.50
9999	G.I. staple or binding wire	L.S.	53.82	1.49	80.19
9999	Sundries	L.S.	53.82	1.49	80.19
	TOTAL				639.76
	Add Water Charges @ 1%				6.40
	TOTAL				646.16
	Add CPOH @ 15%				96.92
	Cost of 36 sqm				743.08
	Cost of 1 sqm				20.64
	Say				20.65

16.21 Engraving letters in hard stone

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 6 letters 8cm hieght				
	LABOUR:				
	For Engraving stone-				
0126	Mason (for ornamental stone work) 1 st class	day	0.38	301.00	114.38

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundires	L.S.	6.76	1.49	10.07
	TOTAL				124.45
	Add Water Charges @ 1%				1.24
	TOTAL				125.69
	Add CPOH @ 15%				18.85
	Cost of 6 letters 8cm hieght				144.54
	Cost per cm height per letter				3.01
	Say				3.00

16.22 Providing and fixing 15x15x90 cm boundary stone of hard stone with top 30 cm chisel dressed on all four sides including top (cost of excavation, refilling and concrete etc. to be paid for separately).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one stone				
	MATERIAL:				
1151	Boundary stone top chisel dressed 15x15x90 cm	each	1.00	60.00	60.00
	Labour for fixing				
0114	Beldar	day	0.12	247.00	29.64
9999	Carriage to site	L.S.	4.16	1.49	6.20
	TOTAL				95.84
	Add Water Charges @ 1%				0.96
	TOTAL				96.80
	Add CPOH @ 15%				14.52
	Cost of each				111.32
	Say				111.30

16.23 Providing and fixing 15 cm dia at top, 20 cm at bottom and 90 cm high precast reinforced cement concrete 1:1.5:3 (1 cement : 1.5 coarse sand :3 graded stone aggregate 20 mm nominal size) boundary stone as per standard design, including finishing smooth with cement mortar 1:3 (1 cement : 3 fine sand) (cost of excavation, refilling and concreting to be paid for separately).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one stone MATERIAL: (i) Cement concrete 1:1.5:3 (1 cement :1.5 course sand :3 graded stone aggregate 20mm nominal size) Volume of frustum of cone: L/3 x [A1+A2+sqrt(A1A2)] = 0.825/3 x [0.095^2+ 0.075^2 + sqrt(0.095 x 0.075^2)]x3.142 =0.01882 (A) Volume of hemi sphere: ½ x 4 /3 x PI x r^3 = ½x(4/ 3)x(22/7)x0.075^3=0.00100 (B) Total volume = A+B = 0.01982 Say 0.02cum				
4.1.2	Rate as per Item Number 4.1.2 of SH: Concrete work	cum	0.02	4,904.95	98.10 (A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	(ii) Extra for laying cement concerte in RCC work				
	LABOUR :				
0114	Beldar	day	0.002	247.00	0.49
0101	Bhisti	day	0.004	260.00	1.04
0123	Mason (brick layer) 1 st class	day	0.0008	301.00	0.24
0124	Mason (brick layer) 2nd class	day	0.0008	273.00	0.22
0128	Mate	day	0.0008	260.00	0.21
	(iii) M.S. reinforcement:				
	6mm dia. bar				
	5.99 metre =5.99x0.22 =1.32kg				
5.22.1	Rate as per Item Number 5.22.1 of SH: Reinforced cement concrete work	kilogram	1.32	56.75	74.91(A)
	(iv) Centering and shuttering:				
	½x3.142 x(0.19+0.15)x0.825 =0.441				
	3.142/4 x $(0.19)^2$=0028				
	½ x4x3.142 x $(0.075)^2$ = 0.035				
	Total = 0.504 Say 0.50 sqm				
5.9.1	Rate as per Item Number 5.9.1 of SH: Reinforced cement concrete work	sqm	0.50	166.90	83.45 (A)
	(v) 6mm cement plaster 1:3 (1 Cement :3 fine sand):				
	½x3.142 x (0.19+0.15)x0.825 =0.44				
	3.142/4 x 0.19^2 =0.028				
	½x4x3.142 x $(0.075)^2$ = 0.035				
	Total = 0.504 sqm				
	Say 0.50 sqm				
0367	Portland Cement	tonne	0.0018	5,000.00	9.00
2209	Carriage of cement	tonne	0.0018	77.87	0.14
0983	Fine sand (zone IV)	cum	0.0385	640.00	24.64
2261	Carriage of fine sand (1 part badarpur sand: 2 parts jamuna sand)	cum	0.0385	87.60	3.37
	Labour for mortar				
0114	Beldar	day	0.0027	247.00	0.67
0101	Bhisti	day	0.0002	260.00	0.05
9999	Hire and running charges of mixer	L.S.	0.10	1.49	0.15
9999	Sundries	L.S.	0.05	1.49	0.07
	Labour for plaster				
0155	Mason (average)	day	0.026	287.00	7.46
0115	Coolie	day	0.038	247.00	9.39
0101	Bhisti	day	0.046	260.00	11.96
9999	Extra for removing burr	L.S.	0.68	1.49	1.01
9999	Scaffolding, sundries etc.	L.S.	0.60	1.49	0.89
	(vi) Labour for fixing				
0114	Beldar	day	0.12	247.00	29.64
9999	Carriage to site	L.S.	4.16	1.49	6.20
	TOTAL				363.30
	Add Water Charges @ 1% except on A i.e on (363.30 - 256.46 =) 106.84				1.07
	TOTAL				364.37
	Add CPOH @ 15% except on A i.e on (364.37 - 256.46 =) 107.91				16.19
	Cost of each				380.56
	Say				380.55

16.24 Providing and fixing precast reinforced cement concrete 1:1.5:3 (1 cement : 1.5 coarse sand : 3 graded stone aggregate 20 mm nominal size) kilometre stone as per standard design including finishing smooth in 1:3 cement mortar (1 cement : 3 fine sand) but excluding the cost of earth work, concrete in foundation, painting and lettering etc. which shall be paid for separately.

16.24.1 35x111x25 cm size

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one stone (i) Cement concrete 1:1.5:3 (1 cement :1.5 Coarse sand :3 graded stone aggregate 20mm nominal size) in Kilometre stone 0.35x0.25x0.835m = 0.073 0.37x0.27x0.10m = 0.010 1/2x22/7x(0.175) x0.25m = 0.012 Total = 0.095cum Say 0.10 cum				
4.1.2	Rate as per Item Number 4.1.2 of SH: Concrete work (ii) Extra for laying cement concrete in RCC work	cum	0.10	4,904.95	490.50 (A)
0114	Beldar	day	0.01	247.00	2.47
0101	Bhisti	day	0.02	260.00	5.20
0123	Mason (brick layer) 1 st class	day	0.004	301.00	1.20
0124	Mason (brick layer) 2nd class	day	0.004	273.00	1.09
0128	Mate (iii) M.S. reinforcement- 0.10 cum @48.06kg/cum. = 4.806kg. Say 4.81kg	day	0.004	260.00	1.04
5.22.1	Rate as per Item Number 5.22.1 of SH: Reinforced cement concrete work (iv) Centering and shuttering- (0.35+2x0.25)x0.835 = 0.710 sqm 0.35x0.25 = 0.088sqm (0.37+2x0.27)x0.10 = 0.091sqm 2x0.37x0.01 =.0.007 sqm 2x2x0.25x0.01=0.010sqm 1/2x3.142/4x(0.35)2= 0.048sqm 1/2x0.35x0.25x3.142 = 0.138sqm. = 1. 092sqm say 1.09 sqm	kilogram	4.81	56.75	272.97 (A)
5.9.1	Rate as per Item Number 5.9.1 of SH: Reinforced cement concrete work (v) 6mm cement plaster 1:3 (1 Cement :3 fine sand)- Qty. as per centering and shuttering = 1.092sqm 0.35x0.835 = 0.292sqm 0.37x0.10 = 0.037sqm 1/2x3.142/4x(0.35)2= 0.048sqm 2x0.37x0.01 = 0.007 sqm = 1.476 sqm Say 1.48 sqm	sqm	1.09	166.90	181.92 (A)
0367	Portland Cement	tonne	0.054	5,000.00	270.00
2209	Carriage of cement	tonne	0.054	77.87	4.20
0983	Fine sand (zone IV)	cum	0.011	640.00	7.04

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
2261	Carriage of fine sand (1 part badarpur sand: 2 parts jamuna sand)	cum	0.011	87.60	0.96
	Labour for mortar				
0114	Beldar	day	0.008	247.00	1.98
0101	Bhisti	day	0.0007	260.00	0.18
9999	Hire and running charges of mixer	L.S.	0.03	1.49	0.04
9999	Sundries	L.S.	0.13	1.49	0.19
	Labour for plaster				
0155	Mason (average)	day	0.075	287.00	21.52
0115	Coolie	day	0.111	247.00	27.42
0101	Bhisti	day	0.136	260.00	35.36
9999	Extra for removing burr	L.S.	1.95	1.49	2.91
9999	Scaffolding, sundries etc.	L.S.	1.82	1.49	2.71
	(vi) Labour for fixing				
0114	Beldar	day	0.20	247.00	49.40
9999	Carriage to site	L.S.	13.52	1.49	20.14
	TOTAL				1,400.44
	Add Water Charges @ 1% except on A i.e on (1,400.44 - 945.39 =) 455.05				4.55
	TOTAL				1,404.99
	Add CPOH @ 15% except on A i.e on (1,404.99 - 945.39 =) 459.60				68.94
	Cost of each				1,473.93
	Say				1,473.95

16.24.2 50x152.5x25 cm size

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one stone				
	(i) Cement concrete 1:1.5:3 (1 cement: 1.5 Coarse sand :3 graded stone aggregate 20mm nominal size)				
	0.50x0.25x1.145m = 0.143cum. + 0.52x0.27x0.13m = 0.018cum. + 1/2x22/7x(0.25)2x0.25m = 0.025cum. = 0.186 cum. Say0.19cum				
4.1.2	Rate as per Item Number 4.1.2 of SH: Concrete work	cum	0.19	4,904.95	931.94 (A)
	(ii) Extra for laying cement concrete in RCC work				
0114	Beldar	day	0.019	247.00	4.69
0101	Bhisti	day	0.038	260.00	9.88
0123	Mason (brick layer) 1 st class	day	0.008	301.00	2.41
0124	Mason (brick layer) 2nd class	day	0.008	273.00	2.18
0128	Mate	day	0.008	260.00	2.08
	(iii) M.S. reinforcement- 0.19cum @48.06kg/cum. =9.131kg. Say 9.13 kg				
5.22.1	Rate as per Item Number 5.22.1 of SH: Reinforced cement concrete work	kilogram	9.13	56.75	518.13 (A)
	(iv) Centering and shuttering- (0.50+2x0.25)xl.l45 = 1.145 sqm				
	½ x $(0.25)^2$ x 3.142 = 0.098				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	3.142 x 0.25x0.25 =0.196 (0.52+2x0.27)x0.13 =0.138 2x0.52x0.01 =0.10 2x2x0.25x0.01 =0.010 1x0.50x0.25=0.125 Total = 1.722sqm. Say 1.72 sqm				
5.9.1	Rate as per Item Number 5.9.1 of SH: Reinforced cement concrete work (v) 6mm cement plaster 1:3 (1 Cement :3 fine sand)- Qty. as per centering and shuttering = 1.722sqm. + 0.50x1.145 = 0.572 + 0.52x0.13 ,=_0.068sqm.+ ½ x $(0.25)^2$ x 3.142 = 0.098 + 2x0.52x001 =0.010 = 2.470sqm Sq. 2.47 sqm	sqm	1.72	166.90	287.07 (A)
0367	Portland Cement	tonne	0.09	5,000.00	450.00
2209	Carriage of cement	tonne	0.09	77.87	7.01
0983	Fine sand (zone IV)	cum	0.20	640.00	128.00
2261	Carriage of fine sand (1 part badarpur sand: 2 parts jamuna sand)	cum	0.20	87.60	17.52
	Labour for mortar				
0114	Beldar	day	0.013	247.00	3.21
0101	Bhisti	day	0.001	260.00	0.26
9999	Hire and running charges of mixer	L.S.	0.52	1.49	0.77
9999	Sundries	L.S.	0.26	1.49	0.39
	Labour for plaster				
0155	Mason (average)	day	0.126	287.00	36.16
0115	Coolie	day	0.185	247.00	45.70
0101	Bhisti	day	0.227	260.00	59.02
9999	Extra for removing burr	L.S.	3.38	1.49	5.04
9999	Scaffolding, sundries etc.	L.S.	2.86	1.49	4.26
	(vi) Labour for fixing				
0114	Beldar	day	0.20	247.00	49.40
9999	Carriage to site	L.S.	13.52	1.49	20.14
	TOTAL				2,585.26
	Add Water Charges @ 1% except on A i.e on (2,585.26 - 1,737.14 =) 848.12				8.48
	TOTAL				2,593.74
	Add CPOH @ 15% except on A i.e on (2,593.74 - 1,737.14 =) 856.60				128.49
	Cost of each				2,722.23
	Say				2,722.25

16.24.3 35x93.5x18 cm size

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one stone (i) Cement concrete 1:1.5:3 (1 cement :1.5 Coarse sand :3 graded stone aggregate 20mm nominal size) 0.35x0.18x0.835m = 0.0526 cum. + 0.37x0.20x0.10m = 0.0074 cum Total = 0.060 cum				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
4.1.2	Rate as per Item Number 4.1.2 of SH: Concrete work (ii) Extra for laying cement concrete in RCC work	cum	0.06	4,904.95	294.30 (A)
0114	Beldar	day	0.006	247.00	1.48
0101	Bhisti	day	0.012	260.00	3.12
0123	Mason (brick layer) 1 st class	day	0.0024	301.00	0.72
0124	Mason (brick layer) 2nd class	day	0.0024	273.00	0.66
0128	Mate	day	0.0024	260.00	0.62
	(iii) M.S. reinforcement- 0.06cum @48.06kg/cum. =2.8836 kg. Say 2.88 kg.				
5.22.1	Rate as per Item Number 5.22.1 of SH: Reinforced cement concrete work (iv) Centering and shuttering- (0.35+2x0.18)x0.835 = 0.593 sqm (0.37+2x0.20)x0.10 = 0.077 sqm 2x0.35x0.18 = 0.126 sqm 2x0.37x0.01 =0.007sqm 2x2x0.18x0.01 =0.007sqm = 0.810 sqm	kilogram	2.88	56.75	163.44 (A)
5.9.1	Rate as per Item Number 5.9.1 of SH: Reinforced cement concrete work (v) 6mm cement plaster 1:3(1 Cement :3 fine sand)- Qty. as per centering and shuttering = 0.810sqm 0.35x0.835 = 0.292sqm 0.37x0.10 =0.037sqm 2x0.37x0.01 =0.007sqm = 1.146 sqm Say 1.15sqm	sqm	0.81	166.90	135.19 (A)
0367	Portland Cement	tonne	0.042	5,000.00	210.00
2209	Carriage of cement	tonne	0.042	77.87	3.27
0983	Fine sand (zone IV)	cum	0.009	640.00	5.76
2261	Carriage of fine sand (1 part badarpur sand: 2 parts jamuna sand)	cum	0.009	87.60	0.79
	Labour for mortar				
0114	Beldar	day	0.006	247.00	1.48
0101	Bhisti	day	0.0006	260.00	0.16
9999	Hire and running charges of mixer	L.S.	0.26	1.49	0.39
9999	Sundries	L.S.	0.13	1.49	0.19
	Labour for plaster				
0155	Mason (average)	day	0.058	287.00	16.65
0115	Coolie	day	0.086	247.00	21.24
0101	Bhisti	day	0.105	260.00	27.30
9999	Extra for removing burr	L.S.	1.56	1.49	2.32
9999	Scaffolding, sundries etc.	L.S.	1.30	1.49	1.94
	(vi) Labour for fixing				
0114	Beldar	day	0.10	247.00	24.70
9999	Carriage to site	L.S.	13.52	1.49	20.14
	TOTAL				935.86
	Add Water Charges @ 1% except on A i.e on (935.86 - 592.93 =) 342.93				3.43
	TOTAL				939.29
	Add CPOH @ 15% except on A i.e on (939.29 - 592.93 =) 346.36				51.95
	Cost of each				991.24
	Say				991.25

16.25 Surface dressing on new surface with paving bitumen of grade VG -10 of approved quality using 2.25 kg of bitumen per sqm with 1.65 cum of stone chippings 13.2 mm nominal size per 100 sqm of road surface, including consolidation with road roller of 6 to 8 tonne capacity etc. complete:

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 sqm				
	Bitumen S-90@2.25kg per sqm. =225 kg = 0.225 tonne				
0309	Paving bitumen of grade VG-10 of approved quality	tonne	0.225	37,000.00	8,325.00
2211	Carriage of tar / bitumen	tonne	0.225	87.60	19.71
	Stone aggregate 13.2mm nominal size @1.65cum. per 100sqm				
2910	Stone chippings/ screenings 12.5/ 13.2 mm nominal size	cum	1.65	1,050.00	1,732.50
2202	Carriage of stone aggregate below 40 mm nominal size	cum	1.65	87.60	144.54
	Steam coal for heating bitumen @2 quintal per tonne of bitumen = 2x0.225=0.450q				
0370	Coal (steam)	quintal	0.45	400.00	180.00
2200	Carriage of steam coal	tonne	0.045	100.11	4.51
	Labour for cleaning the road surface, heating and spraying bitumen and aggregate				
	(a) For cleaning:				
0128	Mate	day	0.11	260.00	28.60
0114	Beldar	day	1.40	247.00	345.80
0115	Coolie	day	1.40	247.00	345.80
	(b) For heating and spraying bitumen				
0130	Mistry	day	0.08	301.00	24.08
0138	Sprayer (for bitumen, tar etc.)	day	0.11	260.00	28.60
0114	Beldar	day	0.93	247.00	229.71
	(c) For screening and spreading aggregate:				
0128	Mate	day	0.11	260.00	28.60
0114	Beldar	day	0.93	247.00	229.71
0115	Coolie	day	1.55	247.00	382.85
	(d) Consolidation Charges				
0113	Chowkidar (at barriers for night watch and for road roller)	day	0.27	247.00	66.69
0101	Bhisti	day	0.11	260.00	28.60
0003	Hire charges of Diesel Road Roller - 8 to 10 tonne	day	0.11	1,500.00	165.00
0001	Hire charges of Coaltar Boiler 900 to 1400 litres	day	0.12	800.00	96.00
0007	Hire charges of Coaltar Sprayer	day	0.11	300.00	33.00
1235	Diesel oil for road roller @ 18 litres	litre	2.00	41.29	82.58
9999	Carriage of diesel	L.S.	2.73	1.49	4.07
	(e) Misc: Brushes etc. for cleaning,				
0364	Wire brush	each	0.11	20.00	2.20
0365	Soft brush	each	0.32	18.00	5.76
9999	Brooms and gunny bags	L.S.	6.76	1.49	10.07

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries	L.S.	6.76	1.49	10.07
	TOTAL				12,554.05
	Add Water Charges @ 1%				125.54
	TOTAL				12,679.59
	Add CPOH @ 15%				1,901.94
	Cost of 100 sqm				14,581.53
	Cost of 1 sqm				145.82
	Say				145.80

16.26 Surface dressing on new surface in two coats with bitumen of grade VG-10 of approved quality using 1.8 kg of bitumen per sqm with 1.5 cum of stone chippings 13.2 mm nominal size per 100 sqm of road surface for first coat and 1.1 kg of bitumen per sqm with 1.00 cum of stone chippings 11.2 mm nominal size per 100 sqm of road surface for second coat, including consolidation of each coat separately with road roller of 6 to 8 tonne capacity etc. complete.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 sqm				
	Bitumen S-90/A-90 @ 1.8kg/sqm.=180kg.=0.18 tonne				
0309	Paving bitumen of grade VG-10 of approved quality	tonne	0.18	37,000.00	6,660.00
2211	Carriage of tar / bitumen	tonne	0.18	87.60	15.77
	Stone chippings 13.2mm nominal size @1.5cum. per 100 sqm				
2910	Stone chippings/ screenings 12.5/ 13.2 mm nominal size	cum	1.50	1,050.00	1,575.00
2202	Carriage of stone aggregate below 40 mm nominal size	cum	1.50	87.60	131.40
	Steam coal for heating bitumen @2 qunital per tonne				
0370	Coal (steam)	quintal	0.36	400.00	144.00
2200	Carriage of steam coal	tonne	0.036	100.11	3.60
	Labour for cleaning the road surface, heating and spraying bitumen and aggregate				
	(a) for cleaning:				
0128	Mate	day	0.11	260.00	28.60
0114	Beldar	day	1.40	247.00	345.80
0115	Coolie	day	1.40	247.00	345.80
	(b) for heating and spraying bitumen:				
0130	Mistry	day	0.08	301.00	24.08
0138	Sprayer (for bitumen, tar etc.)	day	0.11	260.00	28.60
0114	Beldar	day	1.38	247.00	340.86
	(c) for screening and spreading aggregate:				
0128	Mate	day	0.27	260.00	70.20
0114	Beldar	day	0.85	247.00	209.95
0115	Coolie	day	0.85	247.00	209.95
	(d) consolidation charges:				
0113	Chowkidar	day	0.11	247.00	27.17
0101	Bhisti	day	0.11	260.00	28.60

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0003	Hire charges of Diesel Road Roller - 8 to 10 tonne	day	0.11	1,500.00	165.00
0001	Hire charges of Coaltar Boiler 900 to 1400 litres	day	0.12	800.00	96.00
0007	Hire charges of Coaltar Sprayer	day	0.11	300.00	33.00
1235	Diesel oil for road roller @ 18 litres per day	litre	2.00	41.29	82.58
9999	Carriage of diesel	L.S.	2.73	1.49	4.07
	(e) misc: Brushes etc. for cleaning,				
0364	Wire brush (with thick wire)	each	0.11	20.00	2.20
0365	Soft brush	each	0.32	18.00	5.76
9999	Brooms and gunny bags	L.S.	6.76	1.49	10.07
9999	Sundries	L.S.	16.38	1.49	24.41
	Second Coat Bitumen S-90/A-90 @ 1.10kg per sqm = 110kg.=0.11 tonne				
0309	Paving bitumen of grade VG-10 of approved quality	tonne	0.11	37,000.00	4,070.00
2911	Stone chippings/ screenings 10/ 11.2 mm nominal size	cum	1.00	1,050.00	1,050.00
2211	Carriage of tar / bitumen	tonne	0.11	87.60	9.64
2202	Carriage of stone aggregate below 40 mm nominal size	cum	1.00	87.60	87.60
	Steam coal for heating bitumen @2 qunital per tonne of bitumen				
0370	Coal (steam)	quintal	0.22	400.00	88.00
2200	Carriage of steam coal	tonne	0.022	100.11	2.20
	Labour for cleaning the road surface, heating and spraying bitumen and aggregate				
	(a) for cleaning and brushing loose chips:				
0128	Mate	day	0.06	260.00	15.60
0115	Coolie	day	0.97	247.00	239.59
	(b) for heating and spraying bitumen:				
0130	Mistry	day	0.05	301.00	15.05
0138	Sprayer (for bitumen, tar etc.)	day	0.07	260.00	18.20
0114	Beldar	day	0.75	247.00	185.25
	(c) for screening and spreading aggregate:				
0128	Mate	day	0.07	260.00	18.20
0114	Beldar	day	0.62	247.00	153.14
0115	Coolie	day	0.62	247.00	153.14
	(d) consolidation charges:				
0113	Chowkidar	day	0.15	247.00	37.05
0101	Bhisti	day	0.06	260.00	15.60
0003	Hire charges of Diesel Road Roller - 8 to 10 tonne	day	0.06	1,500.00	90.00
0007	Hire charges of Coaltar Sprayer	day	0.07	300.00	21.00
1235	Diesel oil	litre	1.08	41.29	44.59
9999	Carriage of diesel	L.S.	1.43	1.49	2.13
0001	Hire charges of Coaltar Boiler 900 to 1400 litres	day	0.06	800.00	48.00
	(e) misc: Brushes etc. for cleaning,				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0364	Wire brush (with thick wire)	each	0.03	20.00	0.60
0365	Soft brush	each	0.09	18.00	1.62
9999	Sundries	L.S.	9.49	1.49	14.14
	TOTAL				16,992.81
	Add Water Charges @ 1%				169.93
	TOTAL				17,162.74
	Add CPOH @ 15%				2,574.41
	Cost of 100 sqm				19,737.15
	Cost of 1 sqm				197.37
	Say				197.35

16.27 Surface dressing on old surface with hot bitumen of grade VG-10 of approved quality using 1.95 kg of bitumen per sqm with 1.50 cum of stone chippings 11.2 mm nominal size per 100 sqm of road surface including consolidation with road roller of 6 to 8 tonne capacity, etc. complete.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 sqm				
	MATERIAL:				
	Bitumen 1.95kg./sqm.= 195kg. or 0.195t				
0309	Paving bitumen of grade VG-10 of approved quality	tonne	0.195	37,000.00	7,215.00
2911	Stone chippings/ screenings 10/ 11.2 mm nominal size @ 1.50cum. per 100 sqm.	cum	1.50	1,050.00	1,575.00
2211	Carriage of tar / bitumen	tonne	0.195	87.60	17.08
2202	Carriage of stone aggregate below 40 mm nominal size	cum	1.50	87.60	131.40
	Steam coal for heating bitumen @2 quintal per tonne of bitumen				
0370	Coal (steam)	quintal	0.39	400.00	156.00
2200	Carriage of steam coal	tonne	0.039	100.11	3.90
	Labour for cleaning the road surface, heating and spraying bitumen and aggregate etc.				
	(a) for cleaning:				
0128	Mate	day	0.06	260.00	15.60
0114	Beldar	day	0.49	247.00	121.03
0115	Coolie	day	0.97	247.00	239.59
	(b) for heating and spraying bitumen:				
0130	Mistry	day	0.05	301.00	15.05
0138	Sprayer (for bitumen, tar etc.)	day	0.06	260.00	15.60
0114	Beldar	day	0.69	247.00	170.43
	(c) for screening and spreading aggregate:				
0128	Mate	day	0.66	260.00	171.60
0114	Beldar	day	0.51	247.00	125.97
0115	Coolie	day	0.51	247.00	125.97
	(d) consolidation charges:				
0113	Chowkidar	day	0.15	247.00	37.05
0101	Bhisti	day	0.06	260.00	15.60

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0003	Hire charges of Diesel Road Roller - 8 to 10 tonne	day	0.06	1,500.00	90.00
1235	Diesel oil for road roller @ 18 litres per day	litre	1.08	41.29	44.59
9999	Carriage of diesel	L.S.	1.43	1.49	2.13
0007	Hire charges of Coaltar Sprayer	day	0.06	300.00	18.00
0001	Hire charges of Coaltar Boiler 900 to 1400 litres	day	0.06	800.00	48.00
	(e) misc: Brushes etc. for cleaning				
0364	Wire brush (with thick wire)	each	0.05	20.00	1.00
0365	Soft brush	each	0.12	18.00	2.16
9999	Brooms and gunny bags	L.S.	2.73	1.49	4.07
9999	Sundries	L.S.	5.33	1.49	7.94
	TOTAL				10,369.76
	Add Water Charges @ 1%				103.70
	TOTAL				10,473.46
	Add CPOH @ 15%				1,571.02
	Cost of 100 sqm				12,044.48
	Cost of 1 sqm				120.44
	Say				120.45

16.28 Surface dressing one coat on new surface with bitumen of specified grade at a rate of 1.95 kg/sqm of surface area with 1.5 cum of stone chippings 13.2 mm nominal size per 100 sqm of road surface, including consolidation with road roller of 6 to 8 tonne capacity, etc. complete:

16.28.1 Using bitumen emulsion (minimum 50% bitumen content - RS grade conforming to IS : 8887)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 sqm				
0310	Bitumen emulsion	tonne	0.195	28,500.00	5,557.50
2211	Carriage of tar / bitumen	tonne	0.195	87.60	17.08
2910	Stone chippings/ screenings 12.5/ 13.2 mm nominal size @1.50 cum. per 100 sqm. = 1.50cum	cum	1.50	1,050.00	1,575.00
2202	Carriage of stone aggregate below 40 mm nominal size	cum	1.50	87.60	131.40
	Labour for cleaning the road surface, heating and spraying bitumen and aggregate				
	(a) for cleaning:				
0128	Mate	day	0.11	260.00	28.60
0114	Beldar	day	1.40	247.00	345.80
0115	Coolie	day	1.40	247.00	345.80
	(b) for spraying bitumen emulsion				
0130	Mistry	day	0.07	301.00	21.07
0138	Sprayer (for bitumen, tar etc.)	day	0.10	260.00	26.00
0114	Beldar	day	1.00	247.00	247.00
	(c) for screening and spreading aggregate:				
0128	Mate	day	0.11	260.00	28.60

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Beldar	day	0.85	247.00	209.95
0115	Coolie	day	0.85	247.00	209.95
	(d) consolidation charges:				
0113	Chowkidar	day	0.27	247.00	66.69
0101	Bhisti	day	0.27	260.00	70.20
0003	Hire charges of Diesel Road Roller - 8 to 10 tonne	day	0.11	1,500.00	165.00
0007	Hire charges of Coaltar Sprayer	day	0.10	300.00	30.00
1235	Diesel oil @ 18 litres per day	litre	2.00	41.29	82.58
9999	Carriage of diesel	L.S.	2.73	1.49	4.07
	(e) misc:				
	Brushes etc. for cleaning				
0364	Wire brush (with thick wire)	each	0.11	20.00	2.20
0365	Soft brush	each	0.32	18.00	5.76
9999	Brooms and gunny bags	L.S.	6.76	1.49	10.07
9999	Sundries	L.S.	9.49	1.49	14.14
	TOTAL				9,194.46
	Add Water Charges @ 1%				91.94
	TOTAL				9,286.40
	Add CPOH @ 15%				1,392.96
	Cost of 100 sqm				10,679.36
	Cost of 1 sqm				106.79
	Say				106.80

16.29 Surface dressing one coat on old surface with bitumen of specified grade at the rate of 1.22 kg/ sqm of surface area with 1.10 cum of stone chippings 11.2 mm nominal size per 100 sqm of road surface including consolidation with road roller of 6 to 8 tonne capacity etc. complete:

16.29.1 Using bitumen emulsion (minimum 50% bitumen content RS grade conforming to IS : 8887)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 sqm				
	Bitumen emulsion @1.22 kg per Sqm. =122 kg. or 0.122 tonne				
0310	Bitumen emulsion	tonne	0.122	28,500.00	3,477.00
2211	Carriage of tar / bitumen	tonne	0.122	87.60	10.69
	Stone chippings 11.2mm nominal size @ 1.10cum. per 100 sqm				
2911	Stone chippings/ screenings 10/ 11.2 mm nominal size	cum	1.10	1,050.00	1,155.00
2202	Carriage of stone aggregate below 40 mm nominal size	cum	1.10	87.60	96.36
	Labour for cleaning the road surface, heating and spraying bitumen and aggregate :				
	(a) for cleaning:				
0128	Mate	day	0.06	260.00	15.60
0114	Beldar	day	0.49	247.00	121.03
0115	Coolie	day	0.97	247.00	239.59
	(b) for spraying bitumen emulsion				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0130	Mistry	day	0.05	301.00	15.05
0138	Sprayer (for bitumen, tar etc.)	day	0.06	260.00	15.60
0114	Beldar	day	0.63	247.00	155.61
	(c) for screening and spreading aggregate:				
0128	Mate	day	0.07	260.00	18.20
0114	Beldar	day	0.62	247.00	153.14
0115	Coolie	day	0.62	247.00	153.14
	(d) consolidation charges:				
0113	Chowkidar	day	0.15	247.00	37.05
0101	Bhisti	day	0.15	260.00	39.00
0003	Hire charges of Diesel Road Roller - 8 to 10 tonne	day	0.06	1,500.00	90.00
0007	Hire charges of Coaltar Sprayer	day	0.06	300.00	18.00
1235	Diesel oil for road roller @ 18 litres per day	litre	1.08	41.29	44.59
9999	Carriage of diesel	L.S.	1.43	1.49	2.13
	(e) misc: Brushes etc. for cleaning				
0364	Wire brush (with thick wire)	each	0.11	20.00	2.20
0365	Soft brush	each	0.32	18.00	5.76
9999	Brooms and gunny bags	L.S.	2.73	1.49	4.07
9999	Sundries	L.S.	5.33	1.49	7.94
	TOTAL				5,876.75
	Add Water Charges @ 1%				58.77
	TOTAL				5,935.52
	Add CPOH @ 15%				890.33
	Cost of 100 sqm				6,825.85
	Cost of 1 sqm				68.26
	Say				68.25

16.30 Providing and applying tack coat using hot straight run bitumen of grade VG-10, including heating the bitumen, spraying the bitumen with mechanically operated spray unit fitted on bitumen boiler, cleaning and preparing the existing road surface as per specifications:

16.30.1 On W.B.M. @ 0.75 kg/ sqm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 sqm				
2916	Paving Asphalt VG 10 of approved quality	tonne	0.075	37,500.00	2,812.50
2211	Carriage of tar / bitumen	tonne	0.075	87.60	6.57
0370	Coal (steam)	quintal	0.15	400.00	60.00
2200	Carriage of steam coal	tonne	0.015	100.11	1.50
	Materials for cleaning the road surface				
0364	Wire brush (with thick wire)	each	0.05	20.00	1.00
0365	Soft brush	each	0.12	18.00	2.16
9999	Gunny bags	L.S.	7.80	1.49	11.62
0007	Hire charges of Coaltar Sprayer	day	0.03	300.00	9.00
9999	Sundries	L.S.	9.10	1.49	13.56

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	LABOUR:				
	(a) For cleaning:				
0128	Mate	day	0.06	260.00	15.60
0114	Beldar	day	1.46	247.00	360.62
	(b) For heating bitumen:				
0114	Beldar	day	0.19	247.00	46.93
	(c) For applying tack coat:				
0114	Beldar	day	0.47	247.00	116.09
	TOTAL				3,457.15
	Add Water Charges @ 1%				34.57
	TOTAL				3,491.72
	Add CPOH @ 15%				523.76
	Cost of 100 sqm				4,015.48
	Cost of 1 sqm				40.15
	Say				40.15

16.30.2 On bituminous surface @ 0.50 Kg / sqm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 sqm				
2916	Paving Asphalt VG 10 of approved quality	tonne	0.05	37,500.00	1,875.00
2211	Carriage of tar / bitumen	tonne	0.05	87.60	4.38
0370	Coal (steam)	quintal	0.10	400.00	40.00
2200	Carriage of steam coal	tonne	0.01	100.11	1.00
	Materials for cleaning the road surface				
0364	Wire brush	each	0.05	20.00	1.00
	(with thick wire)				
0365	Soft brush	each	0.12	18.00	2.16
9999	Gunny bags	L.S.	7.80	1.49	11.62
0007	Hire charges of Coaltar Sprayer	day	0.03	300.00	9.00
9999	Sundries	L.S.	7.80	1.49	11.62
	LABOUR:				
	(a) For cleaning:				
0128	Mate	day	0.06	260.00	15.60
0114	Beldar	day	1.46	247.00	360.62
	(b) For heating bitumen:				
0114	Beldar	day	0.19	247.00	46.93
	(c) For applying tack coat:				
0114	Beldar	day	0.47	247.00	116.09
	TOTAL				2,495.02
	Add Water Charges @ 1%				24.95
	TOTAL				2,519.97
	Add CPOH @ 15%				378.00
	Cost of 100 sqm				2,897.97
	Cost of 1 sqm				28.98
	Say				29.00

16.31 Providing and applying tack coat using bitumen emulsion conforming to IS: 8887, using emulsion pressure distributer including preparing the surface & cleaning with mechanical broom.

16.31.1 With rapid setting bitumen emulsion

16.31.1.1 On W.B.M / W.M.M. @ 0.4 kg/ sqm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 3500 sqm				
	a) Material:				
7382	Bitumen emulsion rapid setting (R.S.) confirming to IS : 8887	tonne	1.40	27,700.00	38,780.00
2211	Carriage of tar / bitumen	tonne	1.40	87.60	122.64
	b) Machinery:				
0075	Road sweeper (Mechanical Broom) @ 1250 sqm per hour	hour	2.80	360.00	1,008.00
0058	Air compressor	hour	2.80	325.00	910.00
0061	Emulsion Pressure Distributor @ 1750 sqm per hour	hour	2.00	800.00	1,600.00
	c) Labour:				
0128	Mate	day	0.08	260.00	20.80
0114	Beldar	day	2.00	247.00	494.00
	TOTAL				42,935.44
	Add Water Charges @ 1%				429.35
	TOTAL				43,364.79
	Add CPOH @ 15%				6,504.72
	Cost of 3500 sqm				49,869.51
	Cost of 1 sqm				14.25
	Say				14.25

16.31.1.2 On bituminous surface @ 0.25 kg/ sqm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 3500 sqm				
	a) Material:				
7382	Bitumen emulsion rapid setting (R.S.) confirming to IS : 8887	tonne	0.875	27,700.00	24,237.50
2211	Carriage of tar / bitumen	tonne	0.875	87.60	76.65
	b) Machinery:				
0075	Road sweeper (Mechanical Broom) @ 1250 sqm per hour	hour	2.80	360.00	1,008.00
0058	Air compressor	hour	2.80	325.00	910.00
0061	Emulsion Pressure Distributor @ 1750 sqm per hour	hour	2.00	800.00	1,600.00
	c) Labour:				
0128	Mate	day	0.08	260.00	20.80
0114	Beldar	day	2.00	247.00	494.00
	TOTAL				28,346.95
	Add Water Charges @ 1%				283.47
	TOTAL				28,630.42
	Add CPOH @ 15%				4,294.56
	Cost of 3500 sqm				32,924.98
	Cost of 1 sqm				9.41
	Say				9.40

16.31.2 With medium setting bitumen emulsion

16.31.2.1 On W.B.M / W.M.M. @ 0.4 kg/ sqm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 3500 sqm				
	a) Material:				
7742	Bitumen emulsion medium setting (M.S.) confirming to IS : 8887	tonne	1.40	28,200.00	39,480.00
2211	Carriage of tar / bitumen	tonne	1.40	87.60	122.64
	b) Machinery:				
0075	Road sweeper (Mechanical Broom) @ 1250 sqm per hour	hour	2.80	360.00	1,008.00
0058	Air compressor	hour	2.80	325.00	910.00
0061	Emulsion Pressure Distributor @ 1750 sqm per hour	hour	2.00	800.00	1,600.00
	c) Labour:				
0128	Mate	day	0.08	260.00	20.80
0114	Beldar	day	2.00	247.00	494.00
	TOTAL				43,635.44
	Add Water Charges @ 1%				436.35
	TOTAL				44,071.79
	Add CPOH @ 15%				6,610.77
	Cost of 3500 sqm				50,682.56
	Cost of 1 sqm				14.48
	Say				14.50

16.31.2.2 On bituminous surface @ 0.25 kg/ sqm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 3500 sqm				
	a) Material:				
7742	Bitumen emulsion medium setting (M.S.) confirming to IS : 8887	tonne	0.875	28,200.00	24,675.00
2211	Carriage of tar / bitumen	tonne	0.875	87.60	76.65
	b) Machinery:				
0075	Road sweeper (Mechanical Broom) @ 1250 sqm per hour	hour	2.80	360.00	1,008.00
0058	Air compressor	hour	2.80	325.00	910.00
0061	Emulsion Pressure Distributor @ 1750 sqm per hour	hour	2.00	800.00	1,600.00
	c) Labour:				
0128	Mate	day	0.08	260.00	20.80
0114	Beldar	day	2.00	247.00	494.00
	TOTAL				28,784.45
	Add Water Charges @ 1%				287.84
	TOTAL				29,072.29
	Add CPOH @ 15%				4,360.84
	Cost of 3500 sqm				33,433.13
	Cost of 1 sqm				9.55
	Say				9.55

16.32 2 cm premix carpet surfacing with 1.8 cum and 0.90 cum of stone chippings of 13.2 mm size and 11.2 mm size respectively, per 100 sqm and 52 kg and 56 kg of hot bitumen per cum of stone chippings of 13.2 mm and 11.2 mm size respectively including a tack coat with hot straight run bitumen, including consolidation with road roller of 6 to 9 tonne capacity etc. complete (tack coat to be paid for separately).

16.32.1 With paving Asphalt grade VG - 10 heated and then mixed with solvent at the rate of 70 grams per kg of asphalt

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 sqm Asphalt 80/100 (i) Hot bitumen @52kg.per cum. of stone chippings 1.8cum. of 13.2mm nominal size chippings. (ii) Hot bitumen @56kg. per cum. of stone chippings 0.90cum. of 11.2mm nominal size chippings. Bitumen :52xl.8+56x0.9=144kg. or 0.144 tonne				
2916	Paving Asphalt VG 10 of approved quality	tonne	0.144	37,500.00	5,400.00
2211	Carriage of tar / bitumen	tonne	0.144	87.60	12.61
	Solvent 70gms/kg. for 0.144 t = 10.08kg.				
2914	Solvent	Kilogram	10.08	23.00	231.84
2342	Carriage of Solvent / Diesel.	quintal	0.10	8.76	0.88
2910	Stone chippings/ screenings 12.5/ 13.2 mm nominal size @1.80cum. per 100 sqm	cum	1.80	1,050.00	1,890.00
2911	Stone chippings/ screenings 10/ 11.2 mm nominal size @0.90cum. per 100 sqm	cum	0.90	1,050.00	945.00
2202	Carriage of stone aggregate below 40 mm nominal size	cum	2.70	87.60	236.52
	Steam coal for heating bitumen @ 2 qunitals per tonne of bitumen = 2x0.144=0.288q				
0370	Coal (steam)	quintal	0.288	400.00	115.20
2200	Carriage of steam coal	tonne	0.0288	100.11	2.88
	LABOUR: for cleaning the road surface, heating and spraying bitumen and aggregate (a) for cleaning:				
0128	Mate	day	0.08	260.00	20.80
0114	Beldar	day	1.40	247.00	345.80
0115	Coolie	day	1.40	247.00	345.80
	(b) for heating bitumen				
0114	Beldar	day	0.57	247.00	140.79
	(c) for screening and spreading aggregate:				
0130	Mistry	day	0.19	301.00	57.19
0114	Beldar	day	5.00	247.00	1,235.00
	(d) consolidation charges:				
0113	Chowkidar (at barrier for night watch and for road roller)	day	0.27	247.00	66.69

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0101	Bhisti	day	0.11	260.00	28.60
0003	Hire charges of Diesel Road Roller - 8 to 10 tonne	day	0.11	1,500.00	165.00
1235	Diesel oil for road roller @ 18 litres per day	litre	2.00	41.29	82.58
9999	Carriage of diesel	L.S.	2.73	1.49	4.07
0001	Hire charges of Coaltar Boiler 900 to 1400 litres	day	0.13	800.00	104.00
0023	Hot Bitumen Mixer 0.5 cum i/c hand cart	day	0.04	4,000.00	160.00
	(e) misc: Brushes etc. for cleaning				
0364	Wire brush (with thick wire)	each	0.11	20.00	2.20
0365	Soft brush	each	0.32	18.00	5.76
9999	Brooms and gunny bags	L.S.	6.76	1.49	10.07
9999	Sundries	L.S.	9.49	1.49	14.14
	TOTAL				11,623.42
	Add Water Charges @ 1%				116.23
	TOTAL				11,739.65
	Add CPOH @ 15%				1,760.95
	Cost of 100 sqm				13,500.60
	Cost of 1 sqm				135.01
	Say				135.00

16.32.2 With paving Asphalt grade VG - 30 with no solvent

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 sqm Asphalt 60/70 (i) Hot bitumen @52kg.per cum. of stone chippings 1.8cum. of 13.2mm nominal size chippings. (ii) Hot bitumen @56kg. per cum. of stone chippings 0.90cum. of 11.2mm nominal size chippings. Bitumen :52xl.8+56x0.9=144kg. or 0.144 tonne				
7309	Paving Asphalt of grade VG-30 of approved quality	tonne	0.144	38,500.00	5,544.00
2211	Carriage of tar / bitumen	tonne	0.144	87.60	12.61
2910	Stone chippings/ screenings 12.5/ 13.2 mm nominal size @1.80cum. per 100sqm.	cum	1.80	1,050.00	1,890.00
2911	Stone chippings/ screenings 10/ 11.2 mm nominal size @0.90cum. per 100sqm	cum	0.90	1,050.00	945.00
2202	Carriage of stone aggregate below 40 mm nominal size	cum	2.70	87.60	236.52
	Steam coal for heating of bitumen @2 quintals per tonne of bitumen =2x0.144=0.288q				
0370	Coal (steam)	quintal	0.288	400.00	115.20
2200	Carriage of steam coal	tonne	0.0288	100.11	2.88

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	LABOUR: for cleaning the road surface, heating and spraying bitumen and aggregate: (a) for cleaning:				
0128	Mate	day	0.08	260.00	20.80
0114	Beldar	day	1.40	247.00	345.80
0115	Coolie	day	1.40	247.00	345.80
	(b) for heating bitumen				
0114	Beldar	day	0.57	247.00	140.79
	(c) for screening and spreading aggregate:				
0130	Mistry	day	0.19	301.00	57.19
0114	Beldar	day	5.00	247.00	1,235.00
	(d) consolidation charges:				
0113	Chowkidar (at barrier for night watch and for road roller)	day	0.27	247.00	66.69
0101	Bhisti	day	0.11	260.00	28.60
0003	Hire charges of Diesel Road Roller - 8 to 10 tonne	day	0.11	1,500.00	165.00
1235	Diesel oil for road roller @ 18 litres per day	litre	2.00	41.29	82.58
9999	Carriage of diesel	L.S.	2.73	1.49	4.07
0001	Hire charges of Coaltar Boiler 900 to 1400 litres	day	0.13	800.00	104.00
0023	Hot Bitumen Mixer 0.5 cum i/c hand cart	day	0.04	4,000.00	160.00
	(e) misc: Brushes etc. for cleaning,				
0364	Wire brush (with thick wire)	each	0.11	20.00	2.20
0365	Soft brush	each	0.32	18.00	5.76
9999	Brooms and gunny bags	L.S.	6.76	1.49	10.07
9999	Sundries	L.S.	9.49	1.49	14.14
	TOTAL				11,534.70
	Add Water Charges @ 1%				115.35
	TOTAL				11,650.05
	Add CPOH @ 15%				1,747.51
	Cost of 100 sqm				13,397.56
	Cost of 1 sqm				133.98
	Say				134.00

16.32.3 With Refinery Modified Bitumen CRMB 55 conforming to IRC: SP: 53

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 sqm Asphalt 80/100 (i) Hot bitumen @52kg.per cum. of stone chippings 1.8cum. of 13.2mm nominal size chippings. (ii) Hot bitumen @56kg. per cum. of stone chippings 0.90cum. of 11.2mm nominal size chippings. Modified Bitumen CRMB - 55 (Refinary produced) :52xl.8+56x0.9=144kg. or 0.144 tonne				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7739	Modified Bitumen Refinery produced CRMB - 55	tonne	0.144	38,500.00	5,544.00
2211	Carriage of tar / bitumen	tonne	0.144	87.60	12.61
	Solvent 70gms/kg. for 0.144 t = 10.08kg				
2914	Solvent	Kilogram	10.08	23.00	231.84
2342	Carriage of Solvent / Diesel.	quintal	0.10	8.76	0.88
2910	Stone chippings/ screenings 12.5/ 13.2 mm nominal size	cum	1.80	1,050.00	1,890.00
	@1.80cum. per 100sqm.				
2911	Stone chippings/ screenings 10/ 11.2 mm nominal size	cum	0.90	1,050.00	945.00
	@0.90cum. per 100sqm				
2202	Carriage of stone aggregate below 40 mm nominal size	cum	2.70	87.60	236.52
	Steam coal for heating bitumen @ 2 quintals per tonne of bitumen = 2x0.144=0.288q				
0370	Coal (steam)	quintal	0.288	400.00	115.20
2200	Carriage of steam coal	tonne	0.0288	100.11	2.88
	LABOUR:				
	for cleaning the road surface, heating and spraying bitumen and aggregate :				
	(a) for cleaning:				
0128	Mate	day	0.08	260.00	20.80
0114	Beldar	day	1.40	247.00	345.80
0115	Coolie	day	1.40	247.00	345.80
	(b) for heating bitumen				
0114	Beldar	day	0.57	247.00	140.79
	(c) for screening and spreading aggregate:				
0130	Mistry	day	0.19	301.00	57.19
0114	Beldar	day	5.00	247.00	1,235.00
	(d) consolidation charges:				
0113	Chowkidar	day	0.27	247.00	66.69
	(at barrier for night watch and for road roller)				
0101	Bhisti	day	0.11	260.00	28.60
0003	Hire charges of Diesel Road Roller - 8 to 10 tonne	day	0.11	1,500.00	165.00
1235	Diesel oil	litre	2.00	41.29	82.58
	for road roller @ 18 litres per day				
9999	Carriage of diesel	L.S.	2.73	1.49	4.07
0001	Hire charges of Coaltar Boiler 900 to 1400 litres	day	0.13	800.00	104.00
0023	Hot Bitumen Mixer 0.5 cum i/c hand cart	day	0.04	4,000.00	160.00
	(e) misc:				
	Brushes etc. for cleaning,				
0364	Wire brush	each	0.11	20.00	2.20
	(with thick wire)				
0365	Soft brush	each	0.32	18.00	5.76
9999	Brooms and gunny bags	L.S.	6.76	1.49	10.07
9999	Sundries	L.S.	9.49	1.49	14.14
	TOTAL				11,767.42
	Add Water Charges @ 1%				117.67
	TOTAL				11,885.09
	Add CPOH @ 15%				1,782.76
	Cost of 100 sqm				13,667.85
	Cost of 1 sqm				136.68
	Say				136.70

16.33 2.5 cm premix carpet surfacing with 2.25 cum and 1.12 cum of stone chippings of 13.2 mm and 11.2 mm size respectively per 100 sqm and 52 kg and 56 kg of hot bitumen per cum of stone chippings of 13.2 mm and 11.2 mm size respectively, including a tack coat with hot straight run bitumen, including consolidation with road roller of 6 to 9 tonne capacity etc. complete. (tack coat to be paid for separately) :

16.33.1 With paving Asphalt grade VG -10 heated and then mixed with solvent at the rate of 70 grams per kg of asphalt

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 sqm Paving Asphalt 80/100 (i) Hot bitumen @52kg.per cum. of stone chippings @2.25cum. of 13.2mm nominal size chippings. (ii) Hot bitumen @56kg. per cum. of aggregate @ 1.12cum. of 11.2mm nominal size. Bitumen :52x2.25+56x1.12= 180kg				
2916	Paving Asphalt VG 10 of approved quality Solvent 0.07x180=12.60kg.	tonne	0.18	37,500.00	6,750.00
2914	Solvent	Kilogram	12.60	23.00	289.80
2211	Carriage of tar / bitumen	tonne	0.18	87.60	15.77
2342	Carriage of Solvent / Diesel.	quintal	0.126	8.76	1.10
2910	Stone chippings/ screenings 12.5/ 13.2 mm nominal size @1.80cum. per 100 sqm.	cum	2.25	1,050.00	2,362.50
2911	Stone chippings/ screenings 10/ 11.2 mm nominal size @0.90cum. per 100 sqm	cum	1.12	1,050.00	1,176.00
2202	Carriage of stone aggregate below 40 mm nominal size 2.25+1.12=3.37 cum	cum	3.37	87.60	295.21
	Steam coal for heating of bitumen @2 quintals per tonne of bitumen =2x0.18=0.36q				
0370	Coal (steam)	quintal	0.36	400.00	144.00
2200	Carriage of steam coal	tonne	0.036	100.11	3.60
	LABOUR: for cleaning the road surface, heating and spraying bitumen and aggregate : (a) for cleaning:				
0128	Mate	day	0.08	260.00	20.80
0114	Beldar	day	1.40	247.00	345.80
0115	Coolie	day	1.40	247.00	345.80
	(b) for heating bitumen				
0114	Beldar	day	0.71	247.00	175.37
	(c) for screening and spreading premixed aggregate:				
0130	Mistry	day	0.19	301.00	57.19
0114	Beldar	day	6.25	247.00	1,543.75
	(d) consolidation charges:				
0113	Chowkidar	day	0.27	247.00	66.69
0101	Bhisti	day	0.11	260.00	28.60
0003	Hire charges of Diesel Road Roller - 8 to 10 tonne	day	0.11	1,500.00	165.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1235	Diesel oil for road roller @ 18 litres	litre	2.00	41.29	82.58
9999	Carriage of diesel	L.S.	2.73	1.49	4.07
0001	Hire charges of Coaltar Boiler 900 to 1400 litres	day	0.15	800.00	120.00
0023	Hot Bitumen Mixer 0.5 cum i/c hand cart (e) misc:	day	0.04	4,000.00	160.00
0364	Wire brush (with thick wire)	each	0.11	20.00	2.20
0365	Soft brush	each	0.32	18.00	5.76
9999	Brooms and gunny bags	L.S.	6.76	1.49	10.07
9999	Sundries	L.S.	9.49	1.49	14.14
	TOTAL				14,185.80
	Add Water Charges @ 1%				141.86
	TOTAL				14,327.66
	Add CPOH @ 15%				2,149.15
	Cost of 100 sqm				16,476.81
	Cost of 1 sqm				164.77
	Say				164.75

16.33.2 With paving Asphalt grade VG-30 with no solvent

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 sqm Paving Asphalt 60/70 (i) Hot bitumen @52kg.per cum. of stone chippings @2.25cum. of 13.2mm nominal size (ii) Hot bitumen @56kg. per cum. of stone aggregate @ 1.12cum. of 11.2mm nominal size Bitumen :52x2.25+50xl. 12= 180kg				
7309	Paving Asphalt of grade VG-30 of approved quality	tonne	0.18	38,500.00	6,930.00
2211	Carriage of tar / bitumen	tonne	0.18	87.60	15.77
2910	Stone chippings/ screenings 12.5/ 13.2 mm nominal size @2.25cum. per 100sqm	cum	2.25	1,050.00	2,362.50
2911	Stone chippings/ screenings 10/ 11.2 mm nominal size @1.12cum. per 100sqm	cum	1.12	1,050.00	1,176.00
2202	Carriage of stone aggregate below 40 mm nominal size 2.25+1.12=3.37 cum. Steam coal for heating of bitumen @2 quintals per tonne of bitumen =2x0.18=0.36q	cum	3.37	87.60	295.21
0370	Coal (steam)	quintal	0.36	400.00	144.00
2200	Carriage of steam coal	tonne	0.036	100.11	3.60
	LABOUR: for cleaning the road surface, heating and spraying bitumen and aggregate: (a) for cleaning:				
0128	Mate	day	0.08	260.00	20.80
0114	Beldar	day	1.40	247.00	345.80

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0115	Coolie (b) for heating bitumen	day	1.40	247.00	345.80
0114	Beldar 1.05x0.18)/0.267 = 0.71 Nos. (c) for cleaning, mixing and spreading premix aggregate:	day	0.71	247.00	175.37
0130	Mistry	day	0.19	301.00	57.19
0114	Beldar (d) consolidation charges:	day	6.25	247.00	1,543.75
0113	Chowkidar	day	0.27	247.00	66.69
0101	Bhisti	day	0.11	260.00	28.60
0003	Hire charges of Diesel Road Roller - 8 to 10 tonne	day	0.11	1,500.00	165.00
1235	Diesel oil for road roller @ 18 litres per day	litre	2.00	41.29	82.58
9999	Carriage of diesel	L.S.	2.73	1.49	4.07
0001	Hire charges of Coaltar Boiler 900 to 1400 litres	day	0.15	800.00	120.00
0023	Hot Bitumen Mixer 0.5 cum i/c hand cart (e) misc: Brushes etc. for cleaning	day	0.04	4,000.00	160.00
0364	Wire brush (with thick wire)	each	0.11	20.00	2.20
0365	Soft brush	each	0.32	18.00	5.76
9999	Brooms and gunny bags	L.S.	6.76	1.49	10.07
9999	Sundries	L.S.	9.49	1.49	14.14
	TOTAL				14,074.90
	Add Water Charges @ 1%				140.75
	TOTAL				14,215.65
	Add CPOH @ 15%				2,132.35
	Cost of 100 sqm				16,348.00
	Cost of 1 sqm				163.48
	Say				163.50

16.33.3 With Refinery Modified Bitumen CRMB 55 conforming to IRC: SP: 53-1999

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 sqm Paving Asphalt 80/100 (i) Hot bitumen @52kg.per cum. of stone chippings @2.25cum. of 13.2mm nominal size chippings. (ii) Hot bitumen @56kg. per cum. of aggregate @1.12cum. of 11.2mm nominal size 52x2.25+56x1.12=180kg				
7739	Modified Bitumen Refinery produced CRMB - 55 Solvent 0.07x180=12.60kg	tonne	0.18	38,500.00	6,930.00
2914	Solvent	Kilogram	12.60	23.00	289.80
2211	Carriage of tar / bitumen	tonne	0.18	87.60	15.77
2342	Carriage of Solvent / Diesel.	quintal	0.126	8.76	1.10
2910	Stone chippings/ screenings 12.5/ 13.2 mm nominal size	cum	2.25	1,050.00	2,362.50

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	@2.25 cum. per 100sqm				
2911	Stone chippings/ screenings 10/ 11.2 mm nominal size @1.12 cum. per 100sqm	cum	1.12	1,050.00	1,176.00
2202	Carriage of stone aggregate below 40 mm nominal size 2.25+1.12=3.37 cum. Steam coal for heating of bitumen @2 quintals per tonne of bitumen =2x0.18=0.36q	cum	3.37	87.60	295.21
0370	Coal (steam)	quintal	0.36	400.00	144.00
2200	Carriage of steam coal LABOUR: for cleaning the road surface, heating and spraying bitumen and aggregate : (a) for cleaning:	tonne	0.036	100.11	3.60
0128	Mate	day	0.08	260.00	20.80
0114	Beldar	day	1.40	247.00	345.80
0115	Coolie	day	1.40	247.00	345.80
	(b) for heating bitumen				
0114	Beldar	day	0.71	247.00	175.37
	(c) for screening and spreading premixed aggregate:				
0130	Mistry	day	0.19	301.00	57.19
0114	Beldar	day	6.25	247.00	1,543.75
	(d) consolidation charges:				
0113	Chowkidar	day	0.27	247.00	66.69
0101	Bhisti	day	0.11	260.00	28.60
0003	Hire charges of Diesel Road Roller - 8 to 10 tonne	day	0.11	1,500.00	165.00
1235	Diesel oil for road roller @ 18 litres	litre	2.00	41.29	82.58
9999	Carriage of diesel	L.S.	2.73	1.49	4.07
0001	Hire charges of Coaltar Boiler 900 to 1400 litres	day	0.15	800.00	120.00
0023	Hot Bitumen Mixer 0.5 cum i/c hand cart	day	0.04	4,000.00	160.00
	(e) misc: Brushes etc. for cleaning,				
0364	Wire brush (with thick wire)	each	0.11	20.00	2.20
0365	Soft brush	each	0.32	18.00	5.76
9999	Brooms and gunny bags	L.S.	6.76	1.49	10.07
9999	Sundries	L.S.	9.49	1.49	14.14
	TOTAL				14,365.80
	Add Water Charges @ 1%				143.66
	TOTAL				14,509.46
	Add CPOH @ 15%				2,176.42
	Cost of 100 sqm				16,685.88
	Cost of 1 sqm				166.86
	Say				166.85

16.34 2 cm premix carpet surfacing with 2.4 cum of stone chippings 11.2 mm nominal size per 100 sqm and bitumen emulsion (medium setting min. 65% bitumen content) complying with IS : 8887, using 96 kg per cum of chipping, including consolidation with road roller of 6 to 9 tonne capacity etc. complete.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 sqm				
	Bitumen emulsion M.S. @96kg per cum. of aggregate				
	96x2.4=230kg =0.230t				
7742	Bitumen emulsion medium setting (M.S.) confirming to IS : 8887	tonne	0.23	28,200.00	6,486.00
2211	Carriage of tar / bitumen	tonne	0.23	87.60	20.15
2911	Stone chippings/ screenings 10/ 11.2 mm nominal size	cum	2.40	1,050.00	2,520.00
	@ 2.4cum. per 100 sqm				
2202	Carriage of stone aggregate below 40 mm nominal size	cum	2.40	87.60	210.24
	LABOUR:				
	(a) for mixing and spreading premix aggregate				
0130	Mistry	day	0.19	301.00	57.19
0114	Beldar	day	3.54	247.00	874.38
	(b) consolidation charges				
0113	Chowkidar	day	0.27	247.00	66.69
0101	Bhisti	day	0.11	260.00	28.60
0003	Hire charges of Diesel Road Roller - 8 to 10 tonne	day	0.11	1,500.00	165.00
1235	Diesel oil	litre	2.00	41.29	82.58
	for road roller @ 18 litres/day				
9999	Carriage of diesel	L.S.	2.73	1.49	4.07
0023	Hot Bitumen Mixer 0.5 cum i/c hand cart	day	0.04	4,000.00	160.00
9999	Sundries	L.S.	9.49	1.49	14.14
	TOTAL				10,689.04
	Add Water Charges @ 1%				106.89
	TOTAL				10,795.93
	Add CPOH @ 15%				1,619.39
	Cost of 100 sqm				12,415.32
	Cost of 1 sqm				124.15
	Say				124.15

16.35 2.5 cm premix carpet surfacing with 3 cum of stone chippings 10 mm nominal size per 100 sqm and bitumen emulsion (medium setting min. 65% bitumen contents) complying with IS : 8887, using 96 kg per cum of chippings of road surface, including consolidation with road roller etc. complete.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 sqm				
	Bitumen emulsion M.S. @96kg per cum. of aggregate				
	96x3 = 288 kg = 0.288 t				
7742	Bitumen emulsion medium setting (M.S.) confirming to IS : 8887	tonne	0.288	28,200.00	8,121.60
2211	Carriage of tar / bitumen	tonne	0.288	87.60	25.23

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
2911	Stone chippings/ screenings 10/ 11.2 mm nominal size @ 3.00 cum. per 100 sqm	cum	3.00	1,050.00	3,150.00
2202	Carriage of stone aggregate below 40 mm nominal size	cum	3.00	87.60	262.80
	LABOUR: (a) for mixing and spreading premix aggregate				
0130	Mistry	day	0.19	301.00	57.19
0114	Beldar	day	4.10	247.00	1,012.70
	(b) consolidation charges				
0113	Chowkidar	day	0.27	247.00	66.69
0101	Bhisti	day	0.11	260.00	28.60
0003	Hire charges of Diesel Road Roller - 8 to 10 tonne	day	0.11	1,500.00	165.00
1235	Diesel oil for road roller @ 18 litres/day	litre	2.00	41.29	82.58
9999	Carriage of diesel	L.S.	2.73	1.49	4.07
9999	Sundries	L.S.	9.49	1.49	14.14
	TOTAL				12,990.60
	Add Water Charges @ 1%				129.91
	TOTAL				13,120.51
	Add CPOH @ 15%				1,968.08
	Cost of 100 sqm				15,088.59
	Cost of 1 sqm				150.89
	Say				150.90

16.36 Providing and laying Bitumen Penetration Macadam with hard stone aggregate of quality, size and grading as specified, with bitumen of suitable penetration grade, including required key aggregate as specified, spreading coarse aggregate with the help of self propelled / tipper tail mounted aggregate spreader and applying bitumen by a pressure distributor and then spreading key aggregate with the help of aggregate spreader complete, including consolidation with road roller of minimum 8 to 10 tonne capacity to achieve specified values of compaction and surface accuracy:

16.36.1 For 50 mm compacted thickness using coarse aggregate of size 50-20 mm graded @ 0.60 cum per 10 sqm key aggregate of size 12.5 mm graded @ 0.15 cum per 10 sqm with paving asphalt grade VG-10 @ 50 kg/ 10 sqm.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 370 sqm MATERIAL: Taking 40mm = 45% 20mm = 44% 11.2mm = 8% Stone dust = 3%				
0293	Stone Aggregate (Single size) : 40 mm nominal size	cum	9.99	950.00	9,490.50
0295	Stone Aggregate (Single size) : 20 mm nominal size	cum	9.77	1,050.00	10,258.50
0297	Stone Aggregate (Single size) : 10 mm nominal size	cum	1.78	1,050.00	1,869.00
1159	Stone dust	cum	0.60	925.00	555.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0295	Stone Aggregate (Single size) : 20 mm nominal size	cum	2.33	1,050.00	2,446.50
0296	Stone Aggregate (Single size) : 12.5 mm nominal size	cum	2.66	1,050.00	2,793.00
1159	Stone dust	cum	0.56	925.00	518.00
2206	Carriage of stone aggregate 40 mm nominal size and above	cum	9.99	95.22	951.22
2202	Carriage of stone aggregate below 40 mm nominal size i.e. 20mm	cum	12.10	87.60	1,059.96
2202	Carriage of stone aggregate below 40 mm nominal size	cum	4.44	87.60	388.94
2267	Carriage of stone dust	cum	1.16	87.60	101.62
2916	Paving Asphalt VG 10 of approved quality @ 50kg/10 sqm	tonne	1.85	37,500.00	69,375.00
2211	Carriage of tar / bitumen	tonne	1.85	87.60	162.06
	LABOUR:				
0114	Beldar for spreading stone metal	day	16.67	247.00	4,117.49
0114	Beldar for hand packing	day	5.33	247.00	1,316.51
0114	Beldar dry rolling	day	2.67	247.00	659.49
0114	Beldar Bajri spreader	day	1.33	247.00	328.51
0138	Sprayer (for bitumen, tar etc.)	day	0.67	260.00	174.20
0114	Beldar for spreading key aggregate	day	1.33	247.00	328.51
0114	Beldar for spraying bitumen	day	6.67	247.00	1,647.49
0114	Beldar of power roller	day	0.67	247.00	165.49
0128	Mate	day	1.77	260.00	460.20
	MACHINERY:				
0001	Hire charges of Coaltar Boiler 900 to 1400 litres	day	0.45	800.00	360.00
0003	Hire charges of Diesel Road Roller - 8 to 10 tonne	day	0.61	1,500.00	915.00
9999	Misc. items as spray nozzle, joint paper, coconut oil, country soap etc.	L.S.	351.00	1.49	522.99
	FUEL (i) Diesel for boiler @ 10 litres per hour = 40.00 lit + (ii) Diesel for road roller @ 18 lit/day = 18x0.61 = 10.98 lit. Total = 50.98 litres				
1235	Diesel oil	litre	50.98	41.29	2,104.96
9999	Carriage of diesel	L.S.	70.07	1.49	104.40
	TOTAL				1,13,174.54
	Add Water Charges @ 1%				1,131.75
	TOTAL				1,14,306.29
	Add CPOH @ 15%				17,145.94
	Cost of 370 sqm				1,31,452.23
	Cost of 1 sqm				355.28
	Say				355.30

16.36.2 For 75 mm compacted thickness in two layers using stone aggregate of size 63-41 mm graded @ 0.90 cum per 10 sqm key aggregate of size 20.0 mm graded @ 0.18 cum per 10 sqm with paving asphalt grade VG-10 @ 68 kg/10 sqm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 300 sqm MATERIAL: Taking output as 300 sqm. for single layer. Coarse agg. = 300/10x0.90 = 27 cum. Key agg = 300/10x0.18 = 5.4 cum. Bitumen = 300/10x68 = 2.04 t.				
2206	Carriage of stone aggregate 40 mm nominal size and above	cum	8.10	95.22	771.26
0292	Stone Aggregate (Single size) : 50 mm nominal size	cum	8.10	900.00	7,290.00
0295	Stone Aggregate (Single size) : 20 mm nominal size	cum	14.58	1,050.00	15,309.00
0297	Stone Aggregate (Single size) : 10 mm nominal size	cum	4.32	1,050.00	4,536.00
0294	Stone Aggregate (Single size) : 25 mm nominal size	cum	2.05	1,000.00	2,050.00
0296	Stone Aggregate (Single size) : 12.5 mm nominal size	cum	2.57	1,050.00	2,698.50
0297	Stone Aggregate (Single size) : 10 mm nominal size	cum	0.81	1,050.00	850.50
2916	Paving Asphalt VG 10 of approved quality	tonne	2.04	37,500.00	76,500.00
2202	Carriage of stone aggregate below 40 mm nominal size	cum	24.33	87.60	2,131.31
2211	Carriage of tar / bitumen	tonne	2.04	87.60	178.70
	LABOUR:				
0114	Beldar for spreading stone metal	day	25.00	247.00	6,175.00
0114	Beldar for hand packing	day	8.00	247.00	1,976.00
0114	Beldar dry rolling	day	4.00	247.00	988.00
0114	Beldar /Bajri spreader	day	2.00	247.00	494.00
0138	Sprayer (for bitumen, tar etc.)	day	1.00	260.00	260.00
0114	Beldar for spreading key aggregate	day	2.00	247.00	494.00
0114	Beldar for spraying bitumen	day	10.00	247.00	2,470.00
0114	Beldar road roller	day	1.00	247.00	247.00
0128	Mate	day	2.65	260.00	689.00
	MACHINERY:				
0001	Hire charges of Coaltar Boiler 900 to 1400 litres	day	0.50	800.00	400.00
0003	Hire charges of Diesel Road Roller - 8 to 10 tonne	day	0.75	1,500.00	1,125.00
9999	Misc. items as spray nozzle, joint paper, coconut oil, country soap etc.	L.S.	429.00	1.49	639.21
	FUEL (i) Diesel for boiler @ 10 litres per hour = 40.00 lit				
(ii)	Diesel for road roller @ 18 lit./day = 18x0.75 = 13.50 lit. Total = 53.50				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1235	Diesel oil	litre	53.50	41.29	2,209.02
9999	Carriage of diesel	L.S.	73.06	1.49	108.86
	TOTAL				1,30,590.36
	Add Water Charges @ 1%				1,305.90
	TOTAL				1,31,896.26
	Add CPOH @ 15%				19,784.44
	Cost of 300 sqm				1,51,680.70
	Cost of 1 sqm				505.60
	Say				505.60

16.37 Providing and laying bitumen mastic wearing course (as per specifications) with industrial bitumen of grade 85/ 25 conforming to IS : 702, prepared by using mastic cooker and laid to required level and slope, including providing antiskid surface with bitumen precoated fine grained hard stone chipping of approved size at the rate of 0.005 cum per 10 sqm and at approximate spacing of 10 cm centre to centre in both directions, pressed into surface protruding 1 mm to 4 mm over mastic surface, including cleaning the surface, removal of debris etc. all complete. (Considering bitumen using 10.2% as per MORTH specification).

16.37.1 25 mm thick

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for surface area of 17.40 sqm for single layer of 25 mm finished thickness MATERIAL: Taking wearing coat as 1 tonne and density as 2.3 gm/c.c Volume of bitumen mastic = 1000/2300 = 0.435 cum surface area = 0.435/0.025 = 17.4 sqm (i) Bitumen of penetration 85/25 @ 10.2% by weight of mix				
0313	Blown type petroleum bitumen of penetration 85/25 of approved quality	tonne	0.102	37,000.00	3,774.00
2211	Carriage of tar / bitumen	tonne	0.102	87.60	8.94
	(ii) Weight of coarse aggregate @ 40% (1000 - 150) x 40/100 = 340 kg. Stone aggregate : 340/43.38x0.0283 = 0.222 cum				
0295	Stone Aggregate (Single size) : 20 mm nominal size	cum	0.02	1,050.00	21.00
0296	Stone Aggregate (Single size) : 12.5 mm nominal size	cum	0.202	1,050.00	212.10
	(iii) Weight of fine aggregate @ 15% 850x15/100 = 127.5 kg., volume of fine aggregate: 127.5/43.103x0.0283 =0.083 cum				
1159	Stone dust	cum	0.083	925.00	76.78
	(iv) Weight of lime stone dust @ 45% (850-340-127.5) = 382.50 kg., Volume of lime stone dust 382.50/2200 =0.174 cum				
0784	Marble dust/ powder	cum	0.174	1,000.00	174.00
	(v) Precoated stone chipping for surface finish: Volume of chips @ 0.005 cum/10 sqm=17.4x0.005/10 = 0.0087 cum say 0.009 cum				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0297	Stone Aggregate (Single size) : 10 mm nominal size Bitumen for precoated stone chipping @ 2% =0.009x1600x2/100= 0.288 say 0.30 kg.	cum	0.009	1,050.00	9.45
0313	Blown type petroleum bitumen of penetration 85/25 of approved quality	tonne	0.0003	37,000.00	11.10
2211	Carriage of tar / bitumen	tonne	0.0003	87.60	0.03
2202	Carriage of stone aggregate below 40 mm nominal size (0.222 + 0.009) =0.231 cum.	cum	0.231	87.60	20.24
2267	Carriage of stone dust	cum	0.083	87.60	7.27
2208	Carriage of lime	cum	0.174	87.60	15.24
1235	Diesel oil for mastic cooker (Taking capacity of cooker as one tonne)	litre	100.00	41.29	4,129.00
9999	Carriage of diesel	L.S.	136.50	1.49	203.38
	LABOUR:				
0139	Skilled Beldar (for floor rubbing etc.) for surface finish	day	1.50	260.00	390.00
0130	Mistry	day	0.50	301.00	150.50
0138	Sprayer (for bitumen, tar etc.)	day	3.50	260.00	910.00
0139	Skilled Beldar (for floor rubbing etc.)	day	0.25	260.00	65.00
0128	Mate	day	0.50	260.00	130.00
0016	Mastic Cooker	day	0.50	740.00	370.00
9999	Sundries (Sealing of joints, placing angles, wastage materials)	L.S.	153.27	1.49	228.37
	TOTAL				10,906.40
	Add Water Charges @ 1%				109.06
	TOTAL				11,015.46
	Add CPOH @ 15%				1,652.32
	Cost of 17.4 sqm				12,667.78
	Cost of 1 sqm				728.03
	Say				728.05

16.37.2 40 mm thick

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for surface area of 10.875sqm for single layer of 40 mm finished thickness MATERIAL: Taking wearing coat as 1 tonne and density as 2.3 gm/c.c Volume of bitumen mastic = 1000/2300= 0.435 cum Surface Area=0.435/0.040 = 10.875 sqm. (i) Bitumen of penetration 85/25 @ 10.2% by weight of mix				
0313	Blown type petroleum bitumen of penetration 85/25 of approved quality	tonne	0.102	37,000.00	3,774.00
2211	Carriage of tar / bitumen	tonne	0.102	87.60	8.94
	(ii) Weight of coarse aggregate @ 40% (1000 - 150) x 40/100 = 340 kg. Stone aggregate : 340/43.38x0.0283 = 0.222 cum				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0295	Stone Aggregate (Single size) : 20 mm nominal size	cum	0.02	1,050.00	21.00
0296	Stone Aggregate (Single size) : 12.5 mm nominal size (iii) Weight of fine aggregate @ 15% 850x15/100 = 127.5 kg., volume of fine aggregate: 127.5/43.103x0.0283 =0.083 cum	cum	0.202	1,050.00	212.10
1159	Stone dust (iv) Weight of lime stone dust @ 45% (850-340-127.5) = 382.50 kg., Volume of lime stone dust 382.50/2200 =0.174 cum	cum	0.083	925.00	76.78
0784	Marble dust/ powder (v) Precoated stone chipping for surface finish: Volume of chips @ 0.005 cum/10 sqm=17.4x0.005/10 = 0.0087 cum say 0.009 cum	cum	0.174	1,000.00	174.00
0297	Stone Aggregate (Single size) : 10 mm nominal size Bitumen for precoated stone chipping @ 2% =0.009x1600x2/100= 0.288 say 0.30 kg	cum	0.009	1,050.00	9.45
0313	Blown type petroleum bitumen of penetration 85/25 of approved quality	tonne	0.0003	37,000.00	11.10
2211	Carriage of tar / bitumen	tonne	0.0003	87.60	0.03
2202	Carriage of stone aggregate below 40 mm nominal size (0.222 + 0.009) =0.231 cum	cum	0.231	87.60	20.24
2267	Carriage of stone dust	cum	0.083	87.60	7.27
2208	Carriage of lime	cum	0.174	87.60	15.24
1235	Diesel oil for mastic cooker (Taking capacity of cooker as one tonne)	litre	100.00	41.29	4,129.00
9999	Carriage of diesel	L.S.	136.50	1.49	203.38
	LABOUR:				
0139	Skilled Beldar (for floor rubbing etc.)	day	1.50	260.00	390.00
0130	Mistry	day	0.50	301.00	150.50
0138	Sprayer (for bitumen, tar etc.)	day	3.50	260.00	910.00
0139	Skilled Beldar (for floor rubbing etc.) for surface finish.	day	0.25	260.00	65.00
0128	Mate	day	0.50	260.00	130.00
0016	Mastic Cooker	day	0.50	740.00	370.00
9999	Sundries (Sealing of joints, placing angles, wastage materials)	L.S.	153.27	1.49	228.37
	TOTAL				10,906.40
	Add Water Charges @ 1%				109.06
	TOTAL				11,015.46
	Add CPOH @ 15%				1,652.32
	Cost of 10.875 sqm				12,667.78
	Cost of 1 sqm				1,164.85
	Say				1,164.85

16.38 2.5 cm thick bitumastic sheet with hot bitumen of approved quality, using stone chippings (60% with 12.5 mm nominal size and 40% with 10 mm nominal size) @ 1.65 cum per 100 sqm and coarse sand @ 1.65 cum per 100 sqm of road surface and with bitumen @ 56 kg/ cum of stone chippings and @ 128 kg/cum of sand over a tack coat with hot straight run bitumen, including consolidation with road roller of 8 to 10 tonne etc. complete. (tack coat to be paid separately) :

16.38.1 With paving Asphalt grade VG-10 heated and then mixed with solvent at the rate of 70 grams per kg of asphalt

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 sqm. 80/100 bitumen @56kg. per cum. of aggregate and 128kg. per cum. of sand: 56xl.65=92.4kg. = 0.092t + 128x1.65 = 211.2kg =0.211t Total= 0.303t				
2916	Paving Asphalt VG 10 of approved quality Solvent 0.070 kg. x 303 kg. = 21.21kg	tonne	0.303	37,500.00	11,362.50
2914	Solvent	Kilogram	21.21	23.00	487.83
2211	Carriage of tar / bitumen	tonne	0.303	87.60	26.54
2342	Carriage of Solvent / Diesel.	quintal	0.212	8.76	1.86
2910	Stone chippings/ screenings 12.5/ 13.2 mm nominal size	cum	0.99	1,050.00	1,039.50
2911	Stone chippings/ screenings 10/ 11.2 mm nominal size	cum	0.66	1,050.00	693.00
2202	Carriage of stone aggregate below 40 mm nominal size	cum	1.65	87.60	144.54
0370	Coal (steam)	quintal	0.606	400.00	242.40
2200	Carriage of steam coal	tonne	0.0606	100.11	6.07
0982	Coarse sand (zone III)	cum	1.65	1,120.00	1,848.00
2203	Carriage of coarse sand	cum	1.65	87.60	144.54
	LABOUR: for cleaning road surface, heating bitumen mixing and spreading aggregate : (a) for cleaning:				
0128	Mate	day	0.16	260.00	41.60
0114	Beldar	day	1.40	247.00	345.80
0115	Coolie	day	1.40	247.00	345.80
	(b) for heating bitumen				
0114	Beldar	day	1.19	247.00	293.93
	(c) for cleaning, mixing and spreading premix aggregate				
0130	Mistry	day	0.24	301.00	72.24
0114	Beldar	day	6.12	247.00	1,511.64
	(d) consolidation charges:				
0113	Chowkidar (at barriers for night watch and for road roller)	day	0.34	247.00	83.98
0101	Bhisti	day	0.13	260.00	33.80
0003	Hire charges of Diesel Road Roller - 8 to 10 tonne	day	0.13	1,500.00	195.00
0001	Hire charges of Coaltar Boiler 900 to 1400 litres	day	0.21	800.00	168.00
0023	Hot Bitumen Mixer 0.5 cum i/c hand cart	day	0.05	4,000.00	200.00
1235	Diesel oil	litre	2.34	41.29	96.62

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Carriage of diesel	L.S.	5.33	1.49	7.94
	(e) misc:				
	Wire brush (with thick wire)				
0364	Wire brush	each	0.13	20.00	2.60
0365	Soft brush	each	0.40	18.00	7.20
9999	Brooms and gunny bags	L.S.	7.15	1.49	10.65
9999	Sundries	L.S.	8.97	1.49	13.37
	TOTAL				19,426.95
	Add Water Charges @ 1%				194.27
	TOTAL				19,621.22
	Add CPOH @ 15%				2,943.18
	Cost of 100 sqm				22,564.40
	Cost of 1 sqm				225.64
	Say				225.65

16.38.2 With paving Asphalt grade VG-30

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 sqm				
	60/70 bitumen @56kg. per cum. of aggregate and 128kg. per cum. of sand: 56x1.65=92.4kg. = 0.092t + 128x1.65 = 211.2kg = 0.211 t Total= 0.303t				
7309	Paving Asphalt of grade VG-30 of approved quality	tonne	0.303 3	8,500.00	11,665.50
2211	Carriage of tar / bitumen	tonne	0.303	87.60	26.54
2910	Stone chippings/ screenings 12.5/ 13.2 mm nominal size	cum	0.99	1,050.00	1,039.50
2911	Stone chippings/ screenings 10/ 11.2 mm nominal size	cum	0.66	1,050.00	693.00
2202	Carriage of stone aggregate below 40 mm nominal size	cum	1.65	87.60	144.54
	Steam coal for heating bitumen @ 2 quintals per tonne of bitumen = 2x0.303=0.606q				
0370	Coal (steam)	quintal	0.606	400.00	242.40
2200	Carriage of steam coal	tonne	0.0606	100.11	6.07
0982	Coarse sand (zone III)	cum	1.65	1,120.00	1,848.00
2203	Carriage of coarse sand	cum	1.65	87.60	144.54
	LABOUR:				
	for cleaning road surface, heating bitumen mixing and spreading aggregate:				
	(a) for cleaning:				
0128	Mate	day	0.16	260.00	41.60
0114	Beldar	day	1.40	247.00	345.80
0115	Coolie	day	1.40	247.00	345.80
	(b) for heating bitumen				
0114	Beldar	day	1.19	247.00	293.93
	(c) for cleaning, mixing and spreading premix aggregate				
0130	Mistry	day	0.24	301.00	72.24
0114	Beldar	day	6.12	247.00	1,511.64
	(d) consolidation charges:				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0113	Chowkidar (at barriers for night watch and for road roller)	day	0.34	247.00	83.98
0101	Bhisti	day	0.13	260.00	33.80
0003	Hire charges of Diesel Road Roller - 8 to 10 tonne	day	0.13	1,500.00	195.00
0001	Hire charges of Coaltar Boiler 900 to 1400 litres	day	0.21	800.00	168.00
0023	Hot Bitumen Mixer 0.5 cum i/c hand cart	day	0.05	4,000.00	200.00
1235	Diesel oil	litre	2.34	41.29	96.62
9999	Carriage of diesel	L.S.	5.33	1.49	7.94
	(e) misc:				
0364	Wire brush (with thick wire)	each	0.13	20.00	2.60
0365	Soft brush	each	0.40	18.00	7.20
9999	Brooms and gunny bags	L.S.	7.15	1.49	10.65
9999	Sundries	L.S.	8.97	1.49	13.37
	TOTAL				19,240.26
	Add Water Charges @ 1%				192.40
	TOTAL				19,432.66
	Add CPOH @ 15%				2,914.90
	Cost of 100 sqm				22,347.56
	Cost of 1 sqm				223.48
	Say				223.50

16.38.3 With Refinery Modified Bitumen CRMB 55 conforming to IRC: SP : 53-1999

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 sqm				
7739	Modified Bitumen Refinery produced CRMB - 55 @56kg. per cum. of aggregate and 128kg. per cum. of sand: 56xl.65=92.4kg. = 0.092t + 128x1.65 = 211.2kg = 0.211 t Total = 0.303 t	tonne	0.303	38,500.00	11,665.50
2914	Solvent 0.070 kg. x 303 kg. = 21.21kg	Kilogram	21.21	23.00	487.83
2211	Carriage of tar / bitumen	tonne	0.303	87.60	26.54
2342	Carriage of Solvent / Diesel.	quintal	0.212	8.76	1.86
2910	Stone chippings/ screenings 12.5/ 13.2 mm nominal size	cum	0.99	1,050.00	1,039.50
2911	Stone chippings/ screenings 10/ 11.2 mm nominal size	cum	0.66	1,050.00	693.00
2202	Carriage of stone aggregate below 40 mm nominal size	cum	1.65	87.60	144.54
0370	Coal (steam)	quintal	0.606	400.00	242.40
2200	Carriage of steam coal	tonne	0.0606	100.11	6.07
0982	Coarse sand (zone III)	cum	1.65	1,120.00	1,848.00
2203	Carriage of coarse sand	cum	1.65	87.60	144.54
	Labour for cleaning road surface, heating bitumen mixing and spreading aggregate : (a) for cleaning:				
0128	Mate	day	0.16	260.00	41.60
0114	Beldar	day	1.40	247.00	345.80

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0115	Coolie (b) for heating bitumen	day	1.40	247.00	345.80
0114	Beldar (c) for cleaning, mixing and spreading premix aggregate	day	1.19	247.00	293.93
0130	Mistry	day	0.24	301.00	72.24
0114	Beldar (d) consolidation charges:	day	6.12	247.00	1,511.64
0113	Chowkidar (at barriers for night watch and for road roller)	day	0.34	247.00	83.98
0101	Bhisti	day	0.13	260.00	33.80
0003	Hire charges of Diesel Road Roller - 8 to 10 tonne	day	0.13	1,500.00	195.00
0001	Hire charges of Coaltar Boiler 900 to 1400 litres	day	0.21	800.00	168.00
0023	Hot Bitumen Mixer 0.5 cum i/c hand cart	day	0.05	4,000.00	200.00
1235	Diesel oil	litre	2.34	41.29	96.62
9999	Carriage of diesel (e) misc:	L.S.	5.33	1.49	7.94
0364	Wire brush (with thick wire)	each	0.13	20.00	2.60
0365	Soft brush	each	0.40	18.00	7.20
9999	Brooms and gunny bags	L.S.	7.15	1.49	10.65
9999	Sundries	L.S.	8.97	1.49	13.37
	TOTAL				19,729.95
	Add Water Charges @ 1%				197.30
	TOTAL				19,927.25
	Add CPOH @ 15%				2,989.09
	Cost of 100 sqm				22,916.34
	Cost of 1 sqm				229.16
	Say				229.15

16.39 4 cm thick bitumastic sheet with hot bitumen of approved quality using stone chippings (60% with 12.5 mm nominal size and 40% with 10 mm nominal size) @ 2.60 cum per 100 sqm and coarse sand @ 2.60 cum per 100 sqm of road surface and with bitumen @ 56 kg/ cum of stone chippings and @ 128 kg/cum of sand over a tack coat with hot straight run bitumen, including consolidation with road roller of 8 to 10 tonne etc. complete. (tack coat to be paid separately) :

16.39.1 With paving Asphalt grade VG-10 heated and then mixed with solvent at the rate of 70 grams per kg of asphalt

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 sqm				
2916	Paving Asphalt VG 10 of approved quality @56kg. per cum. of aggregate and 128kg. per cum. of sand: 56x2.60=145.6kg. = 0.146t + 128x2.60 = 332.8kg = 0.333t Total = 0.479 t	tonne	0.479	37,500.00	17,962.50
2914	Solvent 0.70kg.x479=33.53kg	Kilogram	33.53	23.00	771.19
2342	Carriage of Solvent / Diesel.	quintal	0.335	8.76	2.93

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
2211	Carriage of tar / bitumen	tonne	0.479	87.60	41.96
2910	Stone chippings/ screenings 12.5/ 13.2 mm nominal size	cum	1.56	1,050.00	1,638.00
2911	Stone chippings/ screenings 10/ 11.2 mm nominal size	cum	1.04	1,050.00	1,092.00
2202	Carriage of stone aggregate below 40 mm nominal size	cum	2.60	87.60	227.76
0982	Coarse sand (zone III)	cum	2.60	1,120.00	2,912.00
2203	Carriage of coarse sand	cum	2.60	87.60	227.76
	Steam coal for heating bitumen @ 2 qunitals per tonne of bitumen = 2x0.479=0.958q				
0370	Coal (steam)	quintal	0.958	400.00	383.20
2200	Carriage of steam coal	tonne	0.0958	100.11	9.59
	LABOUR:				
	for cleaning road surface, heating bitumen mixing and spreading aggregate :				
	(a) for cleaning:				
0128	Mate	day	0.16	260.00	41.60
0114	Beldar	day	1.40	247.00	345.80
0115	Coolie	day	1.40	247.00	345.80
	(b) for heating bitumen				
0114	Beldar	day	1.88	247.00	464.36
	(c) for cleaning, mixing and spreading premix aggregate				
0130	Mistry	day	0.31	301.00	93.31
0114	Beldar	day	9.46	247.00	2,336.62
	(d) consolidation charges:				
0113	Chowkidar	day	0.45	247.00	111.15
0101	Bhisti	day	0.18	260.00	46.80
0003	Hire charges of Diesel Road Roller - 8 to 10 tonne	day	0.18	1,500.00	270.00
1235	Diesel oil for road roller @ 18 litres per day	litre	3.24	41.29	133.78
0001	Hire charges of Coaltar Boiler 900 to 1400 litres	day	0.30	800.00	240.00
0023	Hot Bitumen Mixer 0.5 cum i/c hand cart	day	0.03	4,000.00	120.00
9999	Carriage of diesel	L.S.	4.42	1.49	6.59
	(e) misc:				
0364	Wire brush (with thick wire)	each	0.09	20.00	1.80
0365	Soft brush	each	0.27	18.00	4.86
9999	Brooms and gunny bags	L.S.	5.33	1.49	7.94
9999	Sundries	L.S.	16.12	1.49	24.02
	TOTAL				29,863.32
	Add Water Charges @ 1%				298.63
	TOTAL				30,161.95
	Add CPOH @ 15%				4,524.29
	Cost of 100 sqm				34,686.24
	Cost of 1 sqm				346.86
	Say				346.85

16.39.2 With paving asphalt grade VG-30 with no solvent

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 sqm				
7309	Paving Asphalt of grade VG-30 of approved quality @56 kg per cum of aggregate and 128 kg per cum of sand: 56x2.60=145.6kg. = 0.146t + 128x2.60 = 332.8kg = 0.333t = 0.479 t	tonne	0.479	38,500.00	18,441.50
2211	Carriage of tar / bitumen	tonne	0.479	87.60	41.96
2910	Stone chippings/ screenings 12.5/ 13.2 mm nominal size	cum	1.56	1,050.00	1,638.00
2911	Stone chippings/ screenings 10/ 11.2 mm nominal size	cum	1.04	1,050.00	1,092.00
2202	Carriage of stone aggregate below 40 mm nominal size	cum	2.60	87.60	227.76
0982	Coarse sand (zone III)	cum	2.60	1,120.00	2,912.00
2203	Carriage of coarse sand	cum	2.60	87.60	227.76
	Steam coal for heating bitumen @ 2 qunitals per tonne of bitumen =2x0.479=0.958 qtl				
0370	Coal (steam)	quintal	0.958	400.00	383.20
2200	Carriage of steam coal	tonne	0.0958	100.11	9.59
	LABOUR: for cleaning road surface, heating bitumen mixing and spreading aggregate : (a) for cleaning:				
0128	Mate	day	0.16	260.00	41.60
0114	Beldar	day	1.40	247.00	345.80
0115	Coolie	day	1.40	247.00	345.80
	(b) for heating bitumen				
0114	Beldar	day	1.88	247.00	464.36
	(c) for cleaning, mixing and spreading premix aggregate				
0130	Mistry	day	0.31	301.00	93.31
0114	Beldar	day	9.46	247.00	2,336.62
	(d) consolidation charges:				
0113	Chowkidar	day	0.45	247.00	111.15
0101	Bhisti	day	0.18	260.00	46.80
0003	Hire charges of Diesel Road Roller - 8 to 10 tonne	day	0.18	1,500.00	270.00
1235	Diesel oil for road roller @ 18 litres per day	litre	3.24	41.29	133.78
0001	Hire charges of Coaltar Boiler 900 to 1400 litres	day	0.30	800.00	240.00
0023	Hot Bitumen Mixer 0.5 cum i/c hand cart	day	0.03	4,000.00	120.00
9999	Carriage of diesel	L.S.	4.42	1.49	6.59
	(e) Brushes etc. for cleaning :				
0364	Wire brush (with thick wire)	each	0.09	20.00	1.80
0365	Soft brush	each	0.27	18.00	4.86
9999	Brooms and gunny bags	L.S.	5.33	1.49	7.94

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries	L.S.	16.12	1.49	24.02
	TOTAL				29,568.20
	Add Water Charges @ 1%				295.68
	TOTAL				29,863.88
	Add CPOH @ 15%				4,479.58
	Cost of 100 sqm				34,343.46
	Cost of 1 sqm				343.43
	Say				343.45

16.39.3 With Refinery Modified Bitumen CRMB 55 conforming to IRC: SP: 53-1999.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 sqm				
7739	Modified Bitumen Refinery produced CRMB - 55 @56kg. per cum. of aggregate and 128kg. per cum. of sand: 56x2.60=145.6kg. = 0.146t +128x2.60 = 332.8kg = 0.333t Total = 0.479 tonne	tonne	0.479	38,500.00	18,441.50
2914	Solvent 0.70kg.x479=33.53kg.	Kilogram	33.53	23.00	771.19
2342	Carriage of Solvent / Diesel.	quintal	0.335	8.76	2.93
2211	Carriage of tar / bitumen	tonne	0.479	87.60	41.96
2910	Stone chippings/ screenings 12.5/ 13.2 mm nominal size	cum	1.56	1,050.00	1,638.00
2911	Stone chippings/ screenings 10/ 11.2 mm nominal size	cum	1.04	1,050.00	1,092.00
2202	Carriage of stone aggregate below 40 mm nominal size	cum	2.60	87.60	227.76
0982	Coarse sand (zone III)	cum	2.60	1,120.00	2,912.00
2203	Carriage of coarse sand	cum	2.60	87.60	227.76
	Steam coal for heating bitumen @ 2 qunitals per tonne of bitumen = 2x0.479=0.958q				
0370	Coal (steam)	quintal	0.958	400.00	383.20
2200	Carriage of steam coal	tonne	0.0958	100.11	9.59
	LABOUR: for cleaning road surface, heating bitumen mixing and spreading aggregate: (a) for cleaning:				
0128	Mate	day	0.16	260.00	41.60
0114	Beldar	day	1.40	247.00	345.80
0115	Coolie	day	1.40	247.00	345.80
	(b) for heating bitumen				
0114	Beldar	day	1.88	247.00	464.36
	(c) for cleaning, mixing and spreading premix aggregate				
0130	Mistry	day	0.31	301.00	93.31
0114	Beldar	day	9.46	247.00	2,336.62
	(d) consolidation charges:				
0113	Chowkidar	day	0.45	247.00	111.15
0101	Bhisti	day	0.18	260.00	46.80

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0003	Hire charges of Diesel Road Roller - 8 to 10 tonne	day	0.18	1,500.00	270.00
1235	Diesel oil for road roller @ 18 litres per day	litre	3.24	41.29	133.78
0001	Hire charges of Coaltar Boiler 900 to 1400 litres	day	0.30	800.00	240.00
0023	Hot Bitumen Mixer 0.5 cum i/c hand cart	day	0.03	4,000.00	120.00
9999	Carriage of diesel	L.S.	4.42	1.49	6.59
	(e) misc:				
0364	Wire brush (with thick wire)	each	0.09	20.00	1.80
0365	Soft brush	each	0.27	18.00	4.86
9999	Brooms and gunny bags	L.S.	5.33	1.49	7.94
9999	Sundries	L.S.	16.12	1.49	24.02
	TOTAL				30,342.32
	Add Water Charges @ 1%				303.42
	TOTAL				30,645.74
	Add CPOH @ 15%				4,596.86
	Cost of 100 sqm				35,242.60
	Cost of 1 sqm				352.43
	Say				352.45

16.40 Providing and laying seal coat of premixed fine aggregate (passing 2.36 mm and retained on 180 micron sieve) with bitumen using 128 kg of bitumen of grade VG-10 bitumen per cum of fine aggregate and 0.60 cum of fine aggregate per 100 sqm of road surface including rolling and finishing with road roller all complete.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 sqm				
2916	Paving Asphalt VG 10 of approved quality @ 128kg/cum. of sand 128x0.60 = 76.80kg. = 0.0768 m.t	tonne	0.0768	37,500.00	2,880.00
2211	Carriage of tar / bitumen	tonne	0.0768	87.60	6.73
0982	Coarse sand (zone III)	cum	0.60	1,120.00	672.00
2203	Carriage of coarse sand	cum	0.60	87.60	52.56
	Steam coal for heating bitumen @ 2 qunitals per tonne of bitumen =2x0.768=0.1.536 qtl				
0370	Coal (steam)	quintal	1.536	400.00	614.40
2200	Carriage of steam coal	tonne	0.1536	100.11	15.38
	LABOUR: for cleaning road surface, heating bitumen mixing and spreading aggregate : (a) for cleaning:				
0128	Mate	day	0.06	260.00	15.60
0114	Beldar	day	0.49	247.00	121.03
0115	Coolie	day	0.97	247.00	239.59
	(b) for heating bitumen				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Beldar 0.38/96x76.8 (c) for cleaning, mixing and spreading premix aggregate	day	0.30	247.00	74.10
0114	Beldar 11.39/0.75x0.60	day	1.11	247.00	274.17
0130	Mistry 0.06/0.75x0.60 (d) consolidation charges:	day	0.05	301.00	15.05
0113	Chowkidar (at barrier for night watch and for road roller)	day	0.15	247.00	37.05
0101	Bhisti	day	0.06	260.00	15.60
0003	Hire charges of Diesel Road Roller - 8 to 10 tonne	day	0.06	1,500.00	90.00
0001	Hire charges of Coaltar Boiler 900 to 1400 litres	day	0.05	800.00	40.00
0023	Hot Bitumen Mixer 0.5 cum i/c hand cart	day	0.01	4,000.00	40.00
1235	Diesel oil	litre	1.08	41.29	44.59
9999	Carriage of diesel (e) misc:	L.S.	0.26	1.49	0.39
0364	Wire brush (with thick wire)	each	0.05	20.00	1.00
0365	Soft brush	each	0.12	18.00	2.16
9999	Sundries	L.S.	18.20	1.49	27.12
	TOTAL				5,278.52
	Add Water Charges @ 1%				52.79
	TOTAL				5,331.31
	Add CPOH @ 15%				799.70
	Cost of 100 sqm				6,131.01
	Cost of 1 sqm				61.31
	Say				61.30

16.41 Providing and laying seal coat over prepared surface of road with bitumen heated in bitumen boiler fitted with the spray set spraying using 98 kg of bitumen of grade VG - 10 and blinding surface with 0.90 cum of stone aggregate of 6.7 mm size (Passing 11.2 mm sieve and retained on 2.36 mm sieve) per 100 sqm of road surface including rolling and finishing with power road roller all complete.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 sqm				
2916	Paving Asphalt VG 10 of approved quality	tonne	0.098	37,500.00	3,675.00
2211	Carriage of tar / bitumen	tonne	0.098	87.60	8.58
0298	Stone Aggregate (Single size) : 06 mm nominal size	cum	0.90	1,100.00	990.00
2202	Carriage of stone aggregate below 40 mm nominal size Steam coal for heating bitumen @ 2 qunitals per tonne of bitumen =2x0.0.98=1.96 qtl	cum	0.90	87.60	78.84

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0370	Coal (steam)	quintal	1.96	400.00	784.00
	LABOUR:				
	for cleaning road surface, heating bitumen mixing and spreading aggregate :				
	(a) for heating and spraying bitumen:				
2200	Carriage of steam coal	tonne	0.196	100.11	19.62
0130	Mistry	day	0.04	301.00	12.04
0138	Sprayer (for bitumen, tar etc.)	day	0.06	260.00	15.60
0114	Beldar	day	0.69	247.00	170.43
	(b) for cleaning:				
0128	Mate	day	0.11	260.00	28.60
0114	Beldar	day	1.40	247.00	345.80
0115	Coolie	day	1.40	247.00	345.80
	(c) for screening and spreading aggregate:				
0128	Mate	day	0.05	260.00	13.00
0114	Beldar	day	0.51	247.00	125.97
	(d) consolidation charges:				
0113	Chowkidar (at barrier for night watch and for road roller)	day	0.15	247.00	37.05
0101	Bhisti	day	0.06	260.00	15.60
0003	Hire charges of Diesel Road Roller - 8 to 10 tonne	day	0.06	1,500.00	90.00
0007	Hire charges of Coaltar Sprayer	day	0.06	300.00	18.00
1235	Diesel oil for road roller @ 18 litres per day	litre	1.08	41.29	44.59
0001	Hire charges of Coaltar Boiler 900 to 1400 litres	day	0.06	800.00	48.00
	(e) misc:				
0364	Wire brush (with thick wire)	each	0.05	20.00	1.00
0365	Soft brush	each	0.12	18.00	2.16
9999	Sundries	L.S.	18.20	1.49	27.12
9999	Brooms and gunny bags	L.S.	2.73	1.49	4.07
	TOTAL				6,900.87
	Add Water Charges @ 1%				69.01
	TOTAL				6,969.88
	Add CPOH @ 15%				1,045.48
	Cost of 100 sqm				8,015.36
	Cost of 1 sqm				80.15
	Say				80.15

16.42 Cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 40 mm nominal size) in pavements, laid to required slope and camber in panels as required including consolidation finishing and tamping complete.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum				
	Cement concrete 1:2:4 mix				
0293	Stone Aggregate (Single size) : 40 mm nominal size	cum	0.52	950.00	494.00
0295	Stone Aggregate (Single size) : 20 mm nominal size	cum	0.22	1,050.00	231.00
0297	Stone Aggregate (Single size) : 10 mm nominal size	cum	0.11	1,050.00	115.50
2206	Carriage of stone aggregate 40 mm nominal size and above	cum	0.52	95.22	49.51
2202	Carriage of stone aggregate below 40 mm nominal size	cum	0.33	87.60	28.91
0982	Coarse sand (zone III)	cum	0.445	1,120.00	498.40
2203	Carriage of coarse sand	cum	0.445	87.60	38.98
0367	Portland Cement	tonne	0.32	5,000.00	1,600.00
2209	Carriage of cement	tonne	0.32	77.87	24.92
	LABOUR:				
0155	Mason (average)	day	0.10	287.00	28.70
0114	Beldar	day	1.63	247.00	402.61
0101	Bhisti	day	0.70	260.00	182.00
0002	Hire charges of Concrete Mixer 0.25 to 0.40 cum with Hopper	day	0.077	800.00	61.60
0012	Vibrator (Needle type 40 mm)	day	0.07	300.00	21.00
9999	Sundries	L.S.	26.00	1.49	38.74
	Side shuttering : Taking the slab to be 15cm thick and width to be 6 metre, length of road 27 metre = 9.90/24.30 = 0.407 sqm				
5.9.1	Rate as per Item Number 5.9.1 of SH: Reinforced cement concrete work	sqm	0.407	166.90	67.93 (A)
9999	Sundries	L.S.	1.43	1.49	2.13
	TOTAL				3,885.93
	Add Water Charges @ 1% except on A i.e on (3,885.93 - 67.93 =) 3,818.00				38.18
	TOTAL				3,924.11
	Add CPOH @ 15% except on A i.e on (3,924.11 - 67.93 =) 3,856.18				578.43
	Cost of 1 cum				4,502.54
	Say				4,502.55

16.43 Providing and laying design mix cement concrete of M-30 grade, in roads/ taxi tracks/ runways, using cement content as per design mix, using coarse sand and graded stone aggregate of 40 mm nominal size in appropriate proportions as per approved & specified design criteria, providing dowel bars with sleeve/ tie bars wherever required, laying at site, spreading and compacting mechanically by using needle and surface vibrators, levelling to required slope/ camber, finishing with required texture, including steel form work with sturdy M.S. channel sections, curing, making provision for contraction/ expansion, construction & longitudinal joints (10 mm wide x 50 mm deep) by groove cutting machine, providing and filling joints with approved joint filler and sealants, complete all as per direction of Engineer-in-charge (Item of joint fillers, sealants, dowel bars with sleeve/ tie bars to be

paid separately). Note:- Cement content considered in M-30 is @ 340 kg/cum. Excess/ less cement used as per design mix is payable/ recoverable separately.

16.43.1 Cement concrete prepared with batch mixing machine

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum				
	MATERIAL:				
0367	Portland Cement	tonne	0.34	5,000.00	1,700.00
2209	Carriage of cement	tonne	0.34	77.87	26.48
0293	Stone Aggregate (Single size) : 40 mm nominal size	cum	0.52	950.00	494.00
0295	Stone Aggregate (Single size) : 20 mm nominal size	cum	0.22	1,050.00	231.00
0297	Stone Aggregate (Single size) : 10 mm nominal size	cum	0.11	1,050.00	115.50
0982	Coarse sand (zone III)	cum	0.445	1,120.00	498.40
2206	Carriage of stone aggregate 40 mm nominal size and above	cum	0.52	95.22	49.51
2202	Carriage of stone aggregate below 40 mm nominal size	cum	0.33	87.60	28.91
2203	Carriage of coarse sand	cum	0.445	87.60	38.98
	LABOUR:				
	For mixing and laying				
0114	Beldar	day	2.00	247.00	494.00
0101	Bhisti	day	0.27	260.00	70.20
0123	Mason (brick layer) 1 st class	day	0.05	301.00	15.05
0124	Mason (brick layer) 2nd class	day	0.05	273.00	13.65
0128	Mate	day	0.04	260.00	10.40
	for compaction by vibrator				
0155	Mason (average)	day	0.07	287.00	20.09
0114	Beldar	day	0.07	247.00	17.29
	MACHINERY:				
0004	Production cost of concrete by batch mix plant	cum	1.00	350.00	350.00
0009	Pumping charges of concrete including Hire charges of pump, piping work & accessories etc. (Assuming 25 cum. per day)	cum	1.00	130.00	130.00
0021	Pin vibrator (SHP) with 50 cum. output per day	day	0.025	325.00	8.12
0022	Surface Vibrator with 25 cum. output per day	day	0.05	400.00	20.00
	Fuel Charges:				
1235	Diesel oil for mixer	litre	1.20	41.29	49.55
1235	Diesel oil for Pin vibrator (10 lit. / day assumed)	litre	0.25	41.29	10.32
1235	Diesel oil for Surface vibrator (5 lit./ day assumed)	litre	0.25	41.29	10.32
	Add for steel form work				
16.43B	Rate as per Item Number 16.43B of SH: Road work	cum	1.00	361.85	361.85
9999	Cutting and making joints	L.S.	50.00	1.49	74.50
	TOTAL				4,838.12
	Add Water Charges @ 1%				48.38
	TOTAL				4,886.50
	Add CPOH @ 15%				732.98
	Cost of 1 cum				5,619.48
	Say				5,619.50

16.43.2 Cement concrete manufactured in automatic batching plant (RMC plant) i/c transportation to site in transit mixer

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum				
	MATERIAL:				
0367	Portland Cement	tonne	0.34	5,000.00	1,700.00
2209	Carriage of cement	tonne	0.34	77.87	26.48
0293	Stone Aggregate (Single size) : 40 mm nominal size	cum	0.52	950.00	494.00
0295	Stone Aggregate (Single size) : 20 mm nominal size	cum	0.22	1,050.00	231.00
0297	Stone Aggregate (Single size) : 10 mm nominal size	cum	0.11	1,050.00	115.50
0982	Coarse sand (zone III)	cum	0.445	1,120.00	498.40
2206	Carriage of stone aggregate 40 mm nominal size and above	cum	0.52	95.22	49.51
2202	Carriage of stone aggregate below 40 mm nominal size	cum	0.33	87.60	28.91
2203	Carriage of coarse sand	cum	0.445	87.60	38.98
	LABOUR:				
	For mixing and laying				
0114	Beldar	day	2.00	247.00	494.00
0101	Bhisti	day	0.27	260.00	70.20
0123	Mason (brick layer) 1 st class	day	0.05	301.00	15.05
0124	Mason (brick layer) 2nd class	day	0.05	273.00	13.65
0128	Mate	day	0.04	260.00	10.40
	for compaction by vibrator				
0155	Mason (average)	day	0.07	287.00	20.09
0114	Beldar	day	0.07	247.00	17.29
	MACHINERY:				
0004	Production cost of concrete by batch mix plant	cum	1.00	350.00	350.00
0029	Carriage of concrete by transit mixer	km/cum	10.00	30.00	300.00
0009	Pumping charges of concrete including Hire charges of pump, piping work & accessories etc. (Assuming 25 cum. per day)	cum	1.00	130.00	130.00
0021	Pin vibrator (SHP) with 50 cum. output per day	day	0.025	325.00	8.12
0022	Surface Vibrator with 25 cum. output per day	day	0.05	400.00	20.00
	Fuel Charges:				
1235	Diesel oil for mixer	litre	1.20	41.29	49.55
1235	Diesel oil for Pin vibrator (10 lit. / day assumed)	litre	0.25	41.29	10.32
1235	Diesel oil for Surface vibrator (5 lit./ day assumed)	litre	0.25	41.29	10.32
	Add for steel form work				
16.43B	Rate as per Item Number 16.43B of SH: Road work	cum	1.00	361.85	361.85
9999	Cutting and making joints	L.S.	50.00	1.49	74.50
	TOTAL				5,138.12
	Add Water Charges @ 1%				51.38
	TOTAL				5,189.50
	Add CPOH @ 15%				778.42
	Cost of 1 cum				5,967.92
	Say				5,967.90

16.43A Annexure 'A' to Item number 16.43

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 8.5 cum MATERIAL: (i) Painting with primer (i) Construction joint 6.15m. long 30cm deep 6.15x(0.30+0.01)= 1.91sqm.+ (ii) Dummy joints 4.61m long and 10cm deep 10mm wide 4.6 lx(0.10+0.10+0.01) = 0.97 sqm. = 2.88 sqm. 2.88sqm. @0.26 lit./sqm. = 0.75 lit. + Add 5% wastage = 0.03 Total =0.78 lit				
0316	Bitumen solution primer of approved quality	litre	0.78	40.00	31.20
9999	Carriage of primer	L.S.	0.91	1.49	1.36
	(ii) Joint sealing compound (GradeA) for construction joint 6.15m long 10mm wide 25mm deep. 6.15x2x2.5cm = 3075cucm For dummy joints 461xl.0xl0cm. = 4610cucm. = 7685 cum Add 5% wastage = 384 cucm Total = 8069 cucm Say 8.07 cudm. @1.2kg/cudm = 9.68 kg				
0314	Bitumen hot sealing compound : grade A	kilogram	9.68	26.00	251.68
9999	Carriage of sealing compound	L.S.	0.91	1.49	1.36
0370	Coal (steam)	quintal	0.015	400.00	6.00
9999	Carriage of steam coal	L.S.	0.91	1.49	1.36
	LABOUR: (ii) For applying primer qty. = 2.88 sqm				
0123	Mason (brick layer) 1 st class	day	3.00	301.00 9	03.00
0131	Painter	day	0.10	273.00	27.30
	(iii) Labour for heating and filling sealing compound.				
0124	Mason (brick layer) 2nd class	day	0.25	273.00	68.25
	(iv) Beldar for heating = 0.06 +				
0114	Beldar	day	0.68	247.00	167.96
	TOTAL				1,459.47
	Cost of 8.5 cum				1,459.47
	Cost of 1 cum				171.70
	Say				171.70

16.43B Annexure 'B' to Item number 16.43

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 8.5 cum STEEL FORM WORK: Part-1 Cost of materials : Assuming that pavement 30m long 22.5m wide and 0.30m deep having panel size 6.15x4.6lx0.30m or 8.50cum laid in a day of				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	8 hrs. Hence form work to be provided for 2 days. Material for 61.5m long 46.10m wide pavement 22x30.75 = 676.50 2x46.10 = 92.20 Total = 768.70m. 768.70 @ 83.10 kg/ m = 25.44 M.T. Assuming that channel will become unserviceable after use for 5000 slab (100 times) and salvage value of steel shall fetch 20% of its basic cost. Steel 254.44 qx4/5x 1/5000 = 0.0407104 q Carriage of steel 25.44x4/5x1/5000= 0.00407104 tonne				
1007	Structural steel such as tees, angles channels and R.S. joists	quintal	0.0407104	4,250.00	173.02
2205	Carriage of steel	tonne	0.00407104	77.87	0.32
	Part-II Labour for assembling, erection, dismetelling and cleaning the shuttering. Assuming that 255 labour for steel shuttering shall be required as compared to timber shuttering. Contact area of 50 slabs of steel shuttering. Long channel = 11x20x0.30 = 66.00 = 2x45.10x0.30 = 27.06 Total= 93.06				
0103	Blacksmith 2nd class	day	2.86	273.00	780.78
0114	Beldar	day	2.86	247.00	706.42
	Carriage of steel for extra lead of runway				
0114	Beldar	day	5.73	247.00	1,415.31
	TOTAL				3,075.85
	Cost of 8.5 cum				3,075.85
	Cost of 1 cum				361.86
	Say				361.85

16.44 Extra for providing and mixing hardening compound of approved quality as per manufacturer's specification in cement concrete.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 litre MATERIAL:				
7254	Hardening compound (including cartage)	litre	1.00	37.00	37.00
	TOTAL				37.00
	Add Water Charges @ 1%				0.37
	TOTAL				37.37
	Add CPOH @ 15%				5.61
	Cost of 1 litre				42.98
	Say				43.00

16.45 Providing and fixing in position pre-moulded joint filler in expansion joints.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 18 mm thick, 15cm deep and 300m in length				
0317	Premoulded joint filler 12 mm thick = 300x0.15 = 45 sqm	sqm	45.00	350.00	15,750.00
2211	Carriage of tar / bitumen 45x0.018 =0.81 cum. Weight 256.3kg. per cum. = 256.3x0.81 Total = 207.6kg. say 0.21 tonne	tonne	0.21	87.60	18.40
	Labour for fixing etc.				
0124	Mason (brick layer) 2nd class	day	1.00	273.00	273.00
0114	Beldar	day	3.00	247.00	741.00
9999	Sundries	L.S.	26.91	1.49	40.10
	TOTAL				16,822.50
	Add Water Charges @ 1%				168.22
	TOTAL				16,990.72
	Add CPOH @ 15%				2,548.61
	Cost of 18 mm thick, 15cm deep and 300m in length				19,539.33
	Cost per cm depth per cm width per m length				2.41
	Say				2.40

16.46 Providing and laying in position bitumen hot sealing compound for expansion joints etc.

16.46.1 Using grade 'A' sealing compound

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 20mm wide, 20mm deep and 300 metres in length. Sealing compound- 300x0.02x0.02 = 0.12cum. Weight 256.3kg. per cum. = 256.3x0.12 = 30.76 kg				
0314	Bitumen hot sealing compound : grade A	kilogram	30.76	26.00	799.76
2211	Carriage of tar / bitumen 30.76 = 0.3076 Say 0.03 tonne	tonne	0.03	87.60	2.63
	Labour for filling:				
0124	Mason (brick layer) 2nd class	day	1.00	273.00	273.00
0114	Beldar	day	2.50	247.00	617.50
9999	Sundries	L.S.	20.67	1.49	30.80
	TOTAL				1,723.69
	Add Water Charges @ 1%				17.24
	TOTAL				1,740.93
	Add CPOH @ 15%				261.14
	Cost of 20mm wide, 20mm deep and 300 metres in length.				2,002.07
	Cost per cm depth per cm width per m length				1.67
	Say				1.65

16.47 Painting runway/taxi track/apron marking with adequate nos of coats to give uniform finish with road marking paint of superior make as approved by the Engineer-in-Charge, i/c cleaning the surface of all dirt, scales, oil, grease and other foreign material etc. and lining out complete.

16.47.1 New work (Two or more coats)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10sqm				
	MATERIAL:				
	1st Coat = 1.66 +				
	2nd Coat = 1.13				
	Total = 2.79				
7256	Superior quality road marking paint (water based)	litre	2.79	170.00	474.30
9999	Carriage of paint	L.S.	5.07	1.49	7.55
	LABOUR:				
0131	Painter	day	0.54	273.00	147.42
0114	Beldar	day	0.54	247.00	133.38
9999	Sundries	L.S.	36.40	1.49	54.24
	(including painting brush, wire brush, labour for controlling traffic and other T&P etc.)				
	TOTAL				816.89
	Add Water Charges @ 1%				8.17
	TOTAL				825.06
	Add CPOH @ 15%				123.76
	Cost of 10 sqm				948.82
	Cost of 1 sqm				94.88
	Say				94.90

16.47.2 Old work (One or more coats)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
7256	Superior quality road marking paint (water based)	litre	1.66	170.00	282.20
9999	Carriage of paint	L.S.	1.12	1.49	1.67
	LABOUR:				
0131	Painter	day	0.36	273.00	98.28
0114	Beldar	day	0.36	247.00	88.92
9999	Sundries	L.S.	24.44	1.49	36.42
	(including painting brush, wire brush, labour for controlling traffic and other T&P etc.)				
	TOTAL				507.49
	Add Water Charges @ 1%				5.07
	TOTAL				512.56
	Add CPOH @ 15%				76.88
	Cost of 10 sqm				589.44
	Cost of 1 sqm				58.94
	Say				58.95

16.48 Painting road surface marking with adequate nos of coats to give uniform finish with ready mixed road marking paint conforming to IS : 164, on bituminous surface in white/ yellow shade, including cleaning the surface of all dirt, scales, oil, grease and foreign material etc. complete.

16.48.1 New work (Two or more coats)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
7255	Road marking paint (spirit based) (confirming to IS 164 spirit base)	litre	1.48	120.00	177.60
9999	Carriage of paint (1.48/0.80x0.08x6.9)	L.S.	2.65	1.49	3.95
	LABOUR:				
0128	Mate	day	0.10	260.00	26.00
0131	Painter	day	0.54	273.00	147.42
0114	Beldar for stretching of rope & erecting of barricading	day	1.68	247.00	414.96
9999	Sundries (including painting brush, wire brush, labour for controlling traffic and other T&P etc.)	L.S.	36.40	1.49	54.24
	TOTAL				824.17
	Add Water Charges @ 1%				8.24
	TOTAL				832.41
	Add CPOH @ 15%				124.86
	Cost of 10 sqm				957.27
	Cost of 1 sqm				95.73
	Say				95.75

16.48.2 Old work (One or more coats)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
7255	Road marking paint (spirit based) (confirming to IS 164 spirit base)	litre	0.89	120.00	106.80
9999	Carriage of paint	L.S.	0.65	1.49	0.97
	LABOUR:				
0128	Mate /Supervisor	day	0.06	260.00	15.60
0131	Painter	day	0.36	273.00	98.28
0114	Beldar (stretching of rope & erecting of barricading etc.)	day	1.12	247.00	276.64
9999	Sundries (including painting brush, wire brush, labour for controlling traffic and other T&P etc.)	L.S.	24.44	1.49	36.42
	TOTAL				534.71
	Add Water Charges @ 1%				5.35
	TOTAL				540.06
	Add CPOH @ 15%				81.01
	Cost of 10 sqm				621.07
	Cost of 1 sqm				62.11
	Say				62.10

16.49 Making bell mouth opening / entrance of size 100x50x50 cm for drainage pipe under footpath, including providing cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) for shape of bell mouth, including plastering providing and fixing precast R.C.C. / S.F.R.C. slab including plastering with cement mortar 1:3 (1 cement : 3 fine sand) of 6 mm thickness on exposed surface of the slab & bell mouth including centring, shuttering & neat cement punning inside the bell mouth etc. all complete

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm (i) Earth work in excavation Channel:- 10x1x1.00x0.20x0.15=0.30 + Bell mouth 10x1x1.00x0.50x(0.18+0.075)/2= 0.64 Total = 0.94 cum				
2.8.1	Rate as per Item Number 2.8.1 of SH: Earth work (ii) Cement concrete 1:4:8 Channel :-10x1x1.00x0.20x0.075 = 0.15 cum	cum	0.94	130.80	122.95(A)
4.1.8	Rate as per Item Number 4.1.8 of SH: Concrete work (iii) Cement concrete 1:3:6 Channel 10x1x1.00x0.20x0.075 = 0.15 + Bed of bell mouth : 10x1x1.00x0.50x(0.18+0.075)/2 = 0.64 + Haunches portion 10x2x(0.35+0.075)/2x0.25x0.375 = 0.40 + Rect part :- 10x2x0.35x0.25x0.375 = 0.65 + Quadrant portion :- 10x 1 [(0.30x0.30)-3.142/4(0.30)2x0.30 =0.06+ Central middle part :- 10x1x0.30x0.25x0.075 = 0.05 Total = 1.95 cum	cum	0.15	3,593.30	539.00(A)
4.1.5	Rate as per Item Number 4.1.5 of SH: Concrete work (iv) RCC in shelves 1:2:4 10x1x1.00x0.50x0.05 =0.25cum	cum	1.95	4,024.00	7,846.80(A)
5.3	Rate as per Item Number 5.3 of SH: Reinforced cement concrete work (v) Reinforcement for RCC @100kg/cum. 0.25x100=25kg	cum	0.25	5,494.55	1,373.64(A)
5.22.1	Rate as per Item Number 5.22.1 of SH: Reinforced cement concrete work (vi) Centering and shuttering For shelves (sides) (X)10x2(1.00+0.50)x0.05= 1.50+ Front side of bell mouth : (X)10x2(0.446)x0.375 = 3.34 + Pipe portion: 10x[0.30x0.375-3.142/4(0.30)2] = 0.04 + Out side of bell mouth = 10x(1.00+0.50)x0.45 = 9.00+	kilogram	25.00	56.75	1,418.75(A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Deduct pipe opening =10x0.785x0.30x0.30 = (-) 0.71 = 13.17 sqm				
5.9.1	Rate as per Item Number 5.9.1 of SH: Reinforced cement concrete work (vii) cement plaster on RCC slab 10x1.00x0.50 = 5.00+ 10x2(1.00+0.50)x0.05 = 1.50+ Total = 6.50 sqm.	sqm	13.17	166.90	2,198.07(A)
13.16.1	Rate as per Item Number 13.16.1 of SH: Finishing (viii) Neat cement punning: Qty. same as marked (x) at (vi) above =3.34+0.04 = 3.38 sqm. Channel portion: 10x1x(0.85+0.30)/2x0.25 = 1.43 Total = 4.81	sqm	6.50	101.00	656.50(A)
13.18	Rate as per Item Number 13.18 of SH: Finishing	sqm	4.81	31.10	149.59(A)
0367	Portland Cement	tonne	0.024	5,000.00	120.00
2209	Carriage of cement	tonne	0.024	77.87	1.87
0983	Fine sand (zone IV)	cum	0.05	640.00	32.00
2261	Carriage of fine sand (1 part badarpur sand: 2 parts jamuna sand)	cum	0.05	87.60	4.38
0114	Beldar	day	0.035	247.00	8.65
0101	Bhisti	day	0.003	260.00	0.78
9999	Hire charges of mixer	L.S.	1.27	1.49	1.89
9999	Sundries	L.S.	1.27	1.49	1.89
0155	Mason (average)	day	0.33	287.00	94.71
0115	Coolie	day	0.488	247.00	120.54
0101	Bhisti	day	0.60	260.00	156.00
9999	Extra for removing burr	L.S.	8.71	1.49	12.98
9999	Scaffolding	L.S.	7.62	1.49	11.35
	TOTAL				14,872.34
	Add Water Charges @ 1% except on A i.e on (14,872.34 - 14,305.30 =) 567.04				5.67
	TOTAL				14,878.01
	Add CPOH @ 15% except on A i.e on (14,878.01 - 14,305.30 =) 572.71				85.91
	Cost of 10 nos				14,963.92
	Cost of each				1,496.39
	Say				1,496.40

16.50 Providing and fixing Glow studs of size 100x20 mm made of heavy duty body shall be moulded ASA (Acrylic styrene Acryloretrite) or HIP (High impact polystyrene) or 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 D 4280. The slope of retro-reflective surface shall be 35 (+/-5) degrees to base. The reflective panels on both sides with at least 12cm of reflective area up each side. The luminance intensity should be as per the specification and shall be tested as described in ASTM I : 809 as

recommended in BS: 873 part 4 : 1973. The studs shall be fixed to the Road surface using the adhesive conforming to IS, as per procedure recommended by the manufacturer complete and as per direction of Engineer-in-Charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 15 nos.				
	MATERIAL:				
7426	Cat's eye	each	15.00	180.00	2,700.00
9999	Carriage of cat's eye	L.S.	2.60	1.49	3.87
	LABOUR:				
0124	Mason (brick layer) 2nd class	day	0.50	273.00	136.50
0114	Beldar	day	0.50	247.00	123.50
9999	Sundries (including material required for fixing cats eyes and providing barricading to divert traffic)	L.S.	39.00	1.49	58.11
	TOTAL				3,021.98
	Add Water Charges @ 1%				30.22
	TOTAL				3,052.20
	Add CPOH @ 15%				457.83
	Cost of 15 nos				3,510.03
	Cost of each				234.00
	Say				234.00

16.51 Preparation of sub-base road pavement with commercial dry lime (slaked), fly ash stabilised soil with a mix of 3% lime, 12% fly ash and 85% local suitable soil by weight, so as to achieve minimum field C.B.R. of 20, including mixing, rolling with road roller curing etc. all complete.

16.51.1 Minimum thickness 15 cm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 6.67 sqm. or 1 cum				
	MATERIAL:				
0777	Dry hydrated lime (factory made)	quintal	0.41	220.00	90.20
2208	Carriage of lime	cum	0.068	87.60	5.96
1980	Fly ash	cum	0.277	7.75	2.15
2267	Carriage of stone dust	cum	0.277	87.60	24.27
	LABOUR:				
	(i) For earth work				
0114	Beldar	day	0.116	247.00	28.65
0115	Coolie	day	0.116	247.00	28.65
0979	Royalty for good earth	cum	0.655	30.00	19.65
2241	Carriage of good earth	cum	0.655	109.50	71.72
	(ii) For mixing				
0114	Beldar	day	0.025	247.00	6.18
0115	Coolie	day	0.025	247.00	6.18
	(iii) For rolling layers				
0113	Chowkidar	day	0.0008	247.00	0.20
0003	Hire charges of Diesel Road Roller - 8 to 10 tonne	day	0.0008	1,500.00	1.20
1235	Diesel oil for road roller	litre	0.0144	41.29	0.59
2342	Carriage of Solvent / Diesel.	quintal	0.0002	8.76	0.00
9999	Sundries	L.S.	0.18	1.49	0.27
	(iv) For spreading and watering				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Beldar	day	0.26	247.00	64.22
0115	Coolie	day	0.26	247.00	64.22
0101	Bhisti	day	0.18	260.00	46.80
	TOTAL				461.11
	Add Water Charges @ 1%				4.61
	TOTAL				465.72
	Add CPOH @ 15%				69.86
	Cost of 1 cum				535.58
	Say				535.60

16.52 Providing and fixing precast lime fly ash concrete blocks 1:2:3:6 (1 lime: 2 fly ash: coarse sand : 6 graded stone aggregate 20 mm nominal size), including finishing with 10 mm thick cement mortar 1:3 (1 cement : 3 coarse sand) in foot paths, including preparation of sub grade with a hand rammer, laying 10 mm thick leveling course of fine sand (jamuna sand) and filling the joints with fine sand.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for a path of area 10 sqm. No. of blocks required for 10 sqm = 108nos ie. 0.9 cum				
	(a) Concrete in blocks (108x0.30x0.30x0.09 = 0.875 cum.)				
16.52Y	Rate as per Item Number 16.52Y of SH: Road work	cum	0.875	2,242.15	1,961.88
	(b) Labour for surface excavation				
0114	Beldar	day	0.72	247.00	177.84
0115	Coolie	day	0.60	247.00	148.20
	(c) For levelling course of find sand				
6501	Sand zone V (Jamuna)	cum	0.10	500.00	50.00
2335	Carriage of Jamuna sand	cum	0.10	87.60	8.76
	LABOUR:				
0114	Beldar	day	0.0089	247.00	2.20
0115	Coolie	day	0.0107	247.00	2.64
0101	Bhisti	day	0.0035	260.00	0.91
	(d) For finishing with 10mm thick cement plaster				
	cement plaster with cement mortar 1:3 (1 Cement: 3 Coarse sand)				
	qty. for 9.72sqm. = 0.0972 cum				
3.8	Rate as per Item Number 3.8 of SH: Mortars	cum	0.0972	4,145.55	402.95
0155	Mason (average)	day	0.787	287.00	225.87
0115	Coolie	day	0.787	247.00	194.39
0101	Bhisti	day	0.262	260.00	68.12
9999	Scaffolding and Sundries	L.S.	12.22	1.49	18.21
	(e) For laying blocks and filling joints with Jamuna sand for filling joints 5mm (av.) thick				
6501	Sand zone V (Jamuna)	cum	0.005	500.00	2.50
2335	Carriage of Jamuna sand	cum	0.005	87.60	0.44
0123	Mason (brick layer) 1 st class	day	0.90	301.00	270.90
0115	Coolie	day	1.98	247.00	489.06
0101	Bhisti	day	0.05	260.00	13.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	TOTAL				4,037.87
	Add Water Charges @ 1%				40.38
	TOTAL				4,078.25
	Add CPOH @ 15%				611.74
	Cost of 0.9 cum				4,689.99
	Cost of 1 cum				5,211.10
	Say				5,211.10

16.52X Sub Analysis X for sub analysis Item Number 16.52Y

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum of lime fly ash mortar 1:2:3 (lime:2 flyash:3 coarse sand)				
	MATERIAL:				
0773	Unslaked lime	quintal	1.52	300.00	456.00
1980	Fly ash	cum	0.48	7.75	3.72
0982	Coarse sand (zone III)	cum	0.72	1,120.00	806.40
2208	Carriage of lime	cum	0.24	87.60	21.02
2262	Carriage of flyash	cum	0.48	87.60	42.05
2203	Carriage of coarse sand	cum	0.72	87.60	63.07
	Labour for slaking the lime making, lime putty, grinding, measuring, carrying, depositing and mixing.				
0114	Beldar	day	0.90	247.00	222.30
0101	Bhisti	day	0.45	260.00	117.00
9999	Running and upkeep of mortar mill	L.S.	26.91	1.49	40.10
9999	Sundries	L.S.	13.52	1.49	20.14
	TOTAL				1,791.80
	Cost of 1 cum				1,791.80
	Say				1,791.80

16.52Y Sub Analysis Y for Item Number 16.52

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum of cement concrete				
	MATERIAL:				
	Lime Flyash mortar				
16.52X	Rate as per Item Number 16.52X of SH: Road work	cum	0.40	1,791.80	716.72
0295	Stone Aggregate (Single size) : 20 mm nominal size	cum	0.64	1,050.00	672.00
0297	Stone Aggregate (Single size) : 10 mm nominal size	cum	0.21	1,050.00	220.50
2202	Carriage of stone aggregate below 40 mm nominal size	cum	0.85	87.60	74.46
	LABOUR:				
0114	Beldar	day	0.65	247.00	160.55
0115	Coolie	day	0.60	247.00	148.20
0101	Bhisti	day	0.27	260.00	70.20
0123	Mason (brick layer) 1 st class	day	0.05	301.00	15.05
0124	Mason (brick layer) 2nd class	day	0.05	273.00	13.65

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0128	Mate	day	0.04	260.00	10.40
9999	Hire and running charges of mixer	L.S.	26.91	1.49	40.10
9999	Sundries	L.S.	13.52	1.49	20.14
9999	Hire charges of steel moulds, table vibrators, rammers, both, nuts and washers etc.	L.S.	53.82	1.49	80.19
	TOTAL				2,242.16
	Cost of 1 cum				2,242.16
	Say				2,242.15

16.53 Providing and fixing concertina coil fencing with punched tape concertina coil 600 mm dia 10 metre openable length (total length 90 m), having 50 nos rounds per 6 metre length, upto 3 m height of wall with existing angle iron 'Y' shaped placed 2.4 m or 3.00 m apart and with 9 horizontal R.B.T. reinforced barbed wire, stud tied with G.I. staples and G.I. clips to retain horizontal, including necessary bolts or G.I. barbed wire tied to angle iron, all complete as per direction of Engineer-in-charge, with reinforced barbed tape(R.B.T.) / Spring core (2.5 mm thick) wire of high tensile strength of 165 kg/ sq mm with tape (0.52 mm thick) and weight 43.478 gm/ metre (cost of M.S. angle, C.C. blocks shall be paid separately

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 30 metre length				
	MATERIAL:				
8691	Punched tape concertina coil 600 m dia 10 m openable length (Total length 90 m) (Having 50 Nos. of rounds per 6 meter = 1 bundles) Therefore, Nos. of bundles 30/6=5 bundles Therefore, Nos. of bundles 30/10=3bundles	bundle	5.00	730.00	3,650.00
8692	RBT reinforced barbed wire 9 rounds = 9x30 = 270m	metre	270.00	8.50	2,295.00
8693	Turn buckle and strengthening bolt	each set	10.00	40.00	400.00
9999	G.I. staples clips etc.	L.S.	49.40	1.49	73.61
	LABOUR: for fixing straightening cutting of tape/ coils & wire				
0114	Beldar 0.50x2 = 1.00 Nos (Taken double due to height)	day	1.00	247.00	247.00
0102	Blacksmith 1 st class	day	0.50	301.00	150.50
0103	Blacksmith 2nd class	day	0.50	273.00	136.50
	TOTAL				6,952.61
	Add Water Charges @ 1%				69.53
	TOTAL				7,022.14
	Add CPOH @ 15%				1,053.32
	Cost of 30 metre				8,075.46
	Cost of 1 metre				269.18
	Say				269.20

16.54 Providing and laying Dense Graded Bituminous Macadam using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equiped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers as per specificatons to achieve the desired compaction and density, complete as per specificatons and directions of Engineer-in-Charge.

16.54.1 50 to 100 mm average compacted thickness with bitumen of grade VG-30 @5% (percentage by weight of total mix) and lime filler @ 2% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 195 cum (450 tonnes)				
	(A) MATERIAL:				
7309	Paving Asphalt of grade VG-30 of approved quality	tonne	22.50	38,500.00	8,66,250.00
	(percentage by weight of total mix)				
2211	Carriage of tar / bitumen	tonne	22.50	87.60	1,971.00
	Aggregate				
	Total weight of mix = 450 tonnes				
	Weight of bitumen = 22.50 tonnes				
	Weight of aggregate = 450 -22.50 = 427.50 tonnes				
	Taking density of aggregate = 1.5 tonne/cum				
	Volume of aggregate =427.50/1.5 =285cum				
	Grading - II/19 mm (Nominal Size)				
	25 - 10mm size = 30% of 285 = 85.5 cum				
	10 - 5mm size = 28% of 285 = 79.8 cum				
	5mm and below = 40% of 285 = 114 cum				
0294	Stone Aggregate (Single size) : 25 mm nominal size	cum	42.75	1,000.00	42,750.00
	Qty = 85.5 x 50 /100				
0297	Stone Aggregate (Single size) : 10 mm nominal size	cum	42.75	1,050.00	44,887.50
	Qty = 85.5 x 50 /100				
0297	Stone Aggregate (Single size) : 10 mm nominal size	cum	39.90	1,050.00	41,895.00
	Qty = 79.8 x 50 /100				
0298	Stone Aggregate (Single size) : 06 mm nominal size	cum	39.90	1,100.00	43,890.00
	Qty = 79.8 x 50 /100				
2903	Stone chippings/ screenings 4.75 mm nominal size	cum	114.00	1,150.00	1,31,100.00
	Qty = 285 x 40 /100				
2202	Carriage of stone aggregate below 40 mm nominal size	cum	279.30	87.60	24,466.68
	Lime Filler @ 2% (percentage by weight of aggregate)				
0777	Dry hydrated lime (factory made)	quintal	85.50	220.00	18,810.00
2208	Carriage of lime	cum	6.63	87.60	580.79
	(consitering density of lime as 1.29 T per cum)				
	V =8.55/1.29 = 6.63 cum				
	(B) Machinery				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0062	Hot mix Plant -120 TPH capacity	hour	3.00	23,700.00	71,100.00
0063	Hot mix Plant 100 TPH Capacity	hour	3.00	17,500.00	52,500.00
0064	Paver finisher Hydrostatic with sensor control 100 TPH	hour	6.00	2,700.00	16,200.00
0069	Generator 250 KVA	hour	6.00	900.00	5,400.00
0052	Front end loader 1 cum bucket capacity (incl POL)	hour	6.00	800.00	4,800.00
0053	Tipper -5 Cum	tonne km	4,500.00	3.00	13,500.00(X)
	Add 10 per cent of cost of carriage to cover cost of loading and unloading				
	X x 10 / 100 = 13500.00 x 10 / 100 1,350.00				
0055	Smooth Wheeled Roller 8 to 10 tonne for initial break down rolling.(6 x 0.65)	hour	3.90	460.00	1,794.00
0054	Vibratory roller 8 to 10 tonne for intermediate rolling.(6 x 0.65)	hour	3.90	1,550.00	6,045.00
	Finish rolling with 6-8 tonnes smooth wheeled tandem roller.(6 x 0.65)				
0056	Tandem Road Roller	hour	3.90	1,150.00	4,485.00
	(C) Labour				
0128	Mate	day	0.84	260.00	218.40
0114	Beldar working with HMP, mechanical broom, paver, roller, asphalt cutter and assistance for setting out lines, levels and layout of construction	day	14.00	247.00	3,458.00
0139	Skilled Beldar (for floor rubbing etc.) for checking line & levels	day	5.00	260.00	1,300.00
	TOTAL				13,98,751.37
	Add Water Charges @ 1%				13,987.51
	TOTAL				14,12,738.88
	Add CPOH @ 15%				2,11,910.83
	Cost of 63.91 cum				16,24,649.71
	Cost of 1 cum				8,331.54
	Say				8,331.55

16.54.2 50 to 100 mm average compacted thickness with bitumen of grade VG-30 @ 5% (percentage by weight of total mix) and lime filler @ 2% (percentage by weight of Aggregate) prepared in Drum Type Hot Mix Plant of 60-90 TPH capacity

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 195 cum (450 tonnes)				
	(A) MATERIAL:				
7309	Paving Asphalt of grade VG-30 of approved quality	tonne	22.50	38,500.00	8,66,250.00
	(percentage by weight of total mix)				
2211	Carriage of tar / bitumen	tonne	22.50	87.60	1,971.00
	Aggregate				
	Total weight of mix = 450 tonnes				
	Weight of bitumen = 22.50 tonnes				
	Weight of aggregate = 450 -22.50 = 427.50 tonnes				
	Taking density of aggregate = 1.5 tonne/cum				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Volume of aggregate =427.50/1.5 =285cum Grading - II/19 mm (Nominal Size) 25 - 10mm size = 30% of 285 = 85.5 cum 10 - 5mm size = 28% of 285 = 79.8 cum 5mm and below = 40% of 285 = 114 cum				
0294	Stone Aggregate (Single size) : 25 mm nominal size Qty = 85.5 x 50 /100	cum	42.75	1,000.00	42,750.00
0297	Stone Aggregate (Single size) : 10 mm nominal size Qty = 85.5 x 50 /100	cum	42.75	1,050.00	44,887.50
0297	Stone Aggregate (Single size) : 10 mm nominal size Qty = 79.8 x 50 /100	cum	39.90	1,050.00	41,895.00
0298	Stone Aggregate (Single size) : 06 mm nominal size Qty = 79.8 x 50 /100	cum	39.90	1,100.00	43,890.00
2903	Stone chippings/ screenings 4.75 mm nominal size Qty = 285 x 40 /100	cum	114.00	1,150.00	1,31,100.00
2202	Carriage of stone aggregate below 40 mm nominal size Lime Filler @ 2% (percentage by weight of aggregate)	cum	279.30	87.60	24,466.68
0777	Dry hydrated lime (factory made)	quintal	85.50	220.00	18,810.00
2208	Carriage of lime (consitering density of lime as 1.29 T per cum) V =8.55/1.29 = 6.63 cum	cum	6.63	87.60	580.79
	(B) Machinery				
0076	Drum Type HMP of 60-90 TPH capacity @75 tonne per hour actual output	hour	6.00	14,000.00	84,000.00
0064	Paver finisher Hydrostatic with sensor control 100 TPH	hour	6.00	2,700.00	16,200.00
0069	Generator 250 KVA	hour	6.00	900.00	5,400.00
0052	Front end loader 1 cum bucket capacity (incl POL)	hour	6.00	800.00	4,800.00
0053	Tipper -5 Cum Add 10 per cent of cost of carriage to cover cost of loading and unloading X x 10 / 100 = 13500.00 x 10 / 100	tonne km	4,500.00	3.00	13,500.00(X) 1,350.00
0055	Smooth Wheeled Roller 8 to 10 tonne for initial break down rolling.(6 x 0.65)	hour	3.90	460.00	1,794.00
0054	Vibratory roller 8 to 10 tonne for intermediate rolling.(6 x 0.65) Finish rolling with 6-8 tonnes smooth wheeled tandem roller.(6 x 0.65)	hour	3.90	1,550.00	6,045.00
0056	Tandem Road Roller	hour	3.90	1,150.00	4,485.00
	(C) Labour				
0128	Mate	day	0.84	260.00	218.40
0114	Beldar working with HMP, mechanical broom, paver, roller, asphalt cutter and assistance for setting out lines, levels and layout of construction	day	14.00	247.00	3,458.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0139	Skilled Beldar (for floor rubbing etc.) for checking line & levels	day	5.00	260.00	1,300.00
	TOTAL				13,59,151.37
	Add Water Charges @ 1%				13,591.51
	TOTAL				13,72,742.88
	Add CPOH @ 15%				2,05,911.43
	Cost of 195 cum				15,78,654.31
	Cost of 1 cum				8,095.66
	Say				8,095.65

16.55 Providing and laying bituminous macadam using crushed stone aggregates of specified grading premixed with bituminous binder, transported to site by tippers, laid over a previously prepared surface with paver finisher equiped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers as per specifications to achieve the desired compaction and density, complete as per specificatons and directions of Engineer-in-Charge.

16.55.1 50 to 100 mm average compacted thickness with bitumen of grade VG-30 @ 3.50% (percentage by weight of total mix) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 205 cum (450 tonnes)				
	(A) MATERIAL:				
7309	Paving Asphalt of grade VG-30 of approved quality	tonne	15.75	38,500.00	6,06,375.00
	3.5% of 450 MT = 15.75 MT				
2211	Carriage of tar / bitumen	tonne	15.75	87.60	1,379.70
	Weight of mix = 205 x 2.5 = 450 tonnes				
	Aggregate				
	Total weight of mix = 450 tonnes				
	Weight of bitumen = 15.75 tonnes				
	Weight of aggregate = 450 -15.75 = 434.25 tonnes				
	Taking density of aggregate = 1.5 tonne/cum				
	Volume of aggregate =434.25/1.5 =289.50cum				
	Grading - II/19 mm (Nominal Size)				
	25 - 10mm size = 40% of 289.50 = 115.8 cum				
	10 - 5mm size = 40% of 289.50 = 115.8 cum				
	5mm and below = 20% of 289.50 = 57.9 cum				
0294	Stone Aggregate (Single size) : 25 mm nominal size	cum	57.90	1,000.00	57,900.00
	Qty = 115.8 x 50 /100				
0297	Stone Aggregate (Single size) : 10 mm nominal size	cum	57.90	1,050.00	60,795.00
	Qty = 115.8 x 50 /100				
0297	Stone Aggregate (Single size) : 10 mm nominal size	cum	57.90	1,050.00	60,795.00
	Qty = 115.8 x 50 /100				
0298	Stone Aggregate (Single size) : 06 mm nominal size	cum	57.90	1,100.00	63,690.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Qty = 115.8 x 50 /100				
2903	Stone chippings/ screenings 4.75 mm nominal size	cum	57.90	1,150.00	66,585.00
	Qty = 289.50 x 20 /100				
2202	Carriage of stone aggregate below 40 mm nominal size	cum	289.50	87.60	25,360.20
	(B) Machinery				
0062	Hot mix Plant -120 TPH capacity @75tonne per hour actual output	hour	3.00	23,700.00	71,100.00
0063	Hot mix Plant 100 TPH Capacity @75tonne per hour actual output	hour	3.00	17,500.00	52,500.00
0064	Paver finisher Hydrostatic with sensor control 100 TPH @75tonne per hour actual output	hour	6.00	2,700.00	16,200.00
0069	Generator 250 KVA	hour	6.00	900.00	5,400.00
0052	Front end loader 1 cum bucket capacity (incl POL)	hour	6.00	800.00	4,800.00
0053	Tipper -5 Cum	tonne km	4,500.00	3.00	13,500.00(X)
	Add 10 per cent of cost of carriage to cover cost of loading and unloading				
	X x 10 / 100 = 13500.00 x 10 / 100				1,350.00
0055	Smooth Wheeled Roller 8 to 10 tonne for initial break down rolling.(6 x 0.65)	hour	3.90	460.00	1,794.00
0054	Vibratory roller 8 to 10 tonne for intermediate rolling.(6 x 0.65)	hour	3.90	1,550.00	6,045.00
	Finish rolling with 6-8 tonnes smooth wheeled tandem roller.(6 x 0.65)				
0056	Tandem Road Roller	hour	3.90	1,150.00	4,485.00
	(C) Labour				
0128	Mate	day	0.84	260.00	218.40
0114	Beldar working with HMP, mechanical broom, paver, roller, asphalt cutter and assistance for setting out lines, levels and layout of construction	day	14.00	247.00	3,458.00
0139	Skilled Beldar (for floor rubbing etc.) for checking line & levels	day	5.00	260.00	1,300.00
	TOTAL				11,25,030.30
	Add Water Charges @ 1%				11,250.30
	TOTAL				11,36,280.60
	Add CPOH @ 15%				1,70,442.09
	Cost of 66.81 cum				13,06,722.69
	Cost of 1 cum				6,374.26
	Say				6,374.25

16.55.2 50 to 100 mm average compacted thickness with bitumen of grade VG-30 @ 3.50% (percentage by weight of total mix) prepared in Drum Type Hot Mix Plant of 60-90 TPH capacity.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 205 cum (450 tonnes)				
	(A) MATERIAL:				
7309	Paving Asphalt of grade VG-30 of approved quality	tonne	15.75	38,500.00	6,06,375.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	3.5% of 450 MT = 15.75 MT				
2211	Carriage of tar / bitumen Weight of mix = 205 x 2.5 = 450 tonnes Aggregate Total weight of mix = 450 tonnes Weight of bitumen = 15.75 tonnes Weight of aggregate = 450 -15.75 = 434.25 tonnes Taking density of aggregate = 1.5 tonne/cum Volume of aggregate =434.25/1.5 =289.50cum Grading - II/19 mm (Nominal Size) 25 - 10mm size = 40% of 289.50 = 115.8 cum 10 - 5mm size = 40% of 289.50 = 115.8 cum 5mm and below = 20% of 289.50 = 57.9 cum	tonne	15.75	87.60	1,379.70
0294	Stone Aggregate (Single size) : 25 mm nominal size Qty = 115.8 x 50 /100	cum	57.90	1,000.00	57,900.00
0297	Stone Aggregate (Single size) : 10 mm nominal size Qty = 115.8 x 50 /100	cum	57.90	1,050.00	60,795.00
0297	Stone Aggregate (Single size) : 10 mm nominal size Qty = 115.8 x 50 /100	cum	57.90	1,050.00	60,795.00
0298	Stone Aggregate (Single size) : 06 mm nominal size Qty = 115.8 x 50 /100	cum	57.90	1,100.00	63,690.00
2903	Stone chippings/ screenings 4.75 mm nominal size Qty = 289.50 x 20 /100	cum	57.90	1,150.00	66,585.00
2202	Carriage of stone aggregate below 40 mm nominal size (B) Machinery	cum	289.50	87.60	25,360.20
0076	Drum Type HMP of 60-90 TPH capacity @ 75 tonne per hour actual output @75tonne per hour actual output	hour	6.00	14,000.00	84,000.00
0064	Paver finisher Hydrostatic with sensor control 100 TPH @75tonne per hour actual output	hour	6.00	2,700.00	16,200.00
0069	Generator 250 KVA	hour	6.00	900.00	5,400.00
0052	Front end loader 1 cum bucket capacity (incl POL)	hour	6.00	800.00	4,800.00
0053	Tipper -5 Cum Add 10 per cent of cost of carriage to cover cost of loading and unloading X x 10 / 100 = 13500.00 x 10 / 100	tonne km	4,500.00	3.00	13,500.00(X) 1,350.00
0055	Smooth Wheeled Roller 8 to 10 tonne for initial break down rolling.(6 x 0.65)	hour	3.90	460.00	1,794.00
0054	Vibratory roller 8 to 10 tonne for intermediate rolling.(6 x 0.65) Finish rolling with 6-8 tonnes smooth wheeled tandem roller.(6 x 0.65)	hour	3.90	1,550.00	6,045.00
0056	Tandem Road Roller (C) Labour	hour	3.90	1,150.00	4,485.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0128	Mate	day	0.84	260.00	218.40
0114	Beldar working with HMP, mechanical broom, paver, roller, asphalt cutter and assistance for setting out lines, levels and layout of construction	day	14.00	247.00	3,458.00
0139	Skilled Beldar (for floor rubbing etc.) for checking line & levels	day	5.00	260.00	1,300.00
	TOTAL				10,85,430.30
	Add Water Charges @ 1%				10,854.30
	TOTAL				10,96,284.60
	Add CPOH @ 15%				1,64,442.69
	Cost of 205 cum				12,60,727.29
	Cost of 1 cum				6,149.89
	Say				6,149.90

16.56 Providing and laying semi- dense Bituminous concrete using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equiped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction and density as per specification, complete and as per directions of Engineer-in-Charge.

16.56.1 25 mm compacted thickness with bitumen of grade VG-30 @ 5% (percentage by weight of total mix) and lime filler @ 2% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 195 cum (450 tonnes) *Area covered for 25 mm thickness=7800 sqm* (A) MATERIAL:				
7309	Paving Asphalt of grade VG-30 of approved quality 5% of 450 MT = 22.50 MT	tonne	22.50	38,500.00	8,66,250.00
2211	Carriage of tar / bitumen Aggregate Total weight of mix = 450 tonnes Weight of bitumen = 22.50 tonnes Weight of aggregate = 450 - 22.50 = 427.50 tonnes Taking density of aggregate = 1.5 tonne/cum Volume of aggregate =427.50/1.5 =285cum Grading - II/19 mm (Nominal Size) 9.5 - 4.75 mm size = 57% of 285 = 162.45 cum 4.75mm and below = 41% of 285 = 116.85 cum	tonne	22.50	87.60	1,971.00
0296	Stone Aggregate (Single size) : 12.5 mm nominal size Qty = 162.45 x 50 /100	cum	81.225	1,050.00	85,286.25

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0297	Stone Aggregate (Single size) : 10 mm nominal size Qty = 162.45 x 50 /100	cum	81.225	1,050.00	85,286.25
2903	Stone chippings/ screenings 4.75 mm nominal size Qty = 285 x 41 /100	cum	116.85	1,150.00	1,34,377.50
2202	Carriage of stone aggregate below 40 mm nominal size Lime Filler @ 2% (percentage by weight of aggregate)	cum	279.30	87.60	24,466.68
0777	Dry hydrated lime (factory made)	quintal	85.50	220.00	18,810.00
2208	Carriage of lime (consitering density of lime as 1.29 T per cum) V =8.55/1.29 = 9.89 cum	cum	6.63	87.60	580.79
	(B) Machinery				
0062	Hot mix Plant -120 TPH capacity @75tonne per hour actual output	hour	3.00	23,700.00	71,100.00
0063	Hot mix Plant 100 TPH Capacity @75tonne per hour actual output	hour	3.00	17,500.00	52,500.00
0064	Paver finisher Hydrostatic with sensor control 100 TPH @75tonne per hour actual output	hour	6.00	2,700.00	16,200.00
0069	Generator 250 KVA	hour	6.00	900.00	5,400.00
0052	Front end loader 1 cum bucket capacity (incl POL)	hour	6.00	800.00	4,800.00
0053	Tipper -5 Cum	tonne km	4,500.00	3.00	13,500.00(X)
	Add 10 per cent of cost of carriage to cover cost of loading and unloading X x 10 / 100 = 13500.00 x 10 / 100				1,350.00
0055	Smooth Wheeled Roller 8 to 10 tonne for initial break down rolling.(6 x 0.65)	hour	3.90	460.00	1,794.00
0054	Vibratory roller 8 to 10 tonne for intermediate rolling.(6 x 0.65) Finish rolling with 6-8 tonnes smooth wheeled tandem roller.(6 x 0.65)	hour	3.90	1,550.00	6,045.00
0056	Tandem Road Roller	hour	3.90	1,150.00	4,485.00
	(C) Labour				
0128	Mate	day	0.84	260.00	218.40
0114	Beldar working with HMP, mechanical broom, paver, roller, asphalt cutter and assistance for setting out lines, levels and layout of construction	day	14.00	247.00	3,458.00
	TOTAL				13,97,878.87
	Add Water Charges @ 1%				13,978.79
	TOTAL				14,11,857.66
	Add CPOH @ 15%				2,11,778.65
	Cost of 62.29 cum				16,23,636.31
	Cost of 1 sqm				208.16
	Say				208.15

16.56.2 25 mm compacted thickness with bitumen of grade VG-30 @ 5% (percentage by weight of total mix) and lime filler @ 2% (percentage by weight of Aggregate) prepared in Drum Type Hot Mix Plant of 60-90 TPH capacity.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 195 cum (450 tonnes) *Area covered for 25 mm thickness=7800 sqm* (A) MATERIAL:				
7309	Paving Asphalt of grade VG-30 of approved quality 5% of 450 MT = 22.50 MT	tonne	22.50	38,500.00	8,66,250.00
2211	Carriage of tar / bitumen Aggregate Total weight of mix = 450 tonnes Weight of bitumen = 22.50 tonnes Weight of aggregate = 450 - 22.50 = 427.50 tonnes Taking density of aggregate = 1.5 tonne/cum Volume of aggregate =427.50/1.5 =285cum Grading - II/19 mm (Nominal Size) 9.5 - 4.75 mm size = 57% of 285 = 162.45 cum 4.75mm and below = 41% of 285 = 116.85 cum	tonne	22.50	87.60	1,971.00
0296	Stone Aggregate (Single size) : 12.5 mm nominal size Qty = 162.45 x 50 /100	cum	81.225	1,050.00	85,286.25
0297	Stone Aggregate (Single size) : 10 mm nominal size Qty = 162.45 x 50 /100	cum	81.225	1,050.00	85,286.25
2903	Stone chippings/ screenings 4.75 mm nominal size Qty = 285 x 41 /100	cum	116.85	1,150.00	1,34,377.50
2202	Carriage of stone aggregate below 40 mm nominal size Lime Filler @ 2% (percentage by weight of aggregate)	cum	279.30	87.60	24,466.68
0777	Dry hydrated lime (factory made)	quintal	85.50	220.00	18,810.00
2208	Carriage of lime (consitering density of lime as 1.29 T per cum) V =8.55/1.29 = 9.89 cum	cum	6.63	87.60	580.79
	(B) Machinery				
0076	Drum Type HMP of 60-90 TPH capacity @ 75 tonne per hour actual output @75tonne per hour actual output	hour	6.00	14,000.00	84,000.00
0064	Paver finisher Hydrostatic with sensor control 100 TPH @75tonne per hour actual output	hour	6.00	2,700.00	16,200.00
0069	Generator 250 KVA	hour	6.00	900.00	5,400.00
0052	Front end loader 1 cum bucket capacity (incl POL)	hour	6.00	800.00	4,800.00
0053	Tipper -5 Cum tonne Add 10 per cent of cost of carriage to cover cost of loading and unloading X x 10 / 100 = 13500.00 x 10 / 100	km	4,500.00	3.00	13,500.00(X) 1,350.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0055	Smooth Wheeled Roller 8 to 10 tonne for initial break down rolling.(6 x 0.65)	hour	3.90	460.00	1,794.00
0054	Vibratory roller 8 to 10 tonne for intermediate rolling.(6 x 0.65) Finish rolling with 6-8 tonnes smooth wheeled tandem roller.(6 x 0.65)	hour	3.90	1,550.00	6,045.00
0056	Tandem Road Roller	hour	3.90	1,150.00	4,485.00
	(C) Labour				
0128	Mate	day	0.84	260.00	218.40
0114	Beldar working with HMP, mechanical broom, paver, roller, asphalt cutter and assistance for setting out lines, levels and layout of construction	day	14.00	247.00	3,458.00
	TOTAL				13,58,278.87
	Add Water Charges @ 1%				13,582.79
	TOTAL				13,71,861.66
	Add CPOH @ 15%				2,05,779.25
	Cost of 7800 sqm				15,77,640.91
	Cost of 1 sqm				202.26
	Say				202.25

16.57 Providing and laying Bituminous concrete using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equiped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction and density as per specification, complete and as per directions of Engineer-in-Charge.

16.57.1 40/ 50 mm compacted thickness with bitumen of grade VG-30 @ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 191 cum (450 tonnes)				
	(A) MATERIAL:				
7309	Paving Asphalt of grade VG-30 of approved quality @5.50% (percentage by weight of total mix)	tonne	24.75	38,500.00	9,52,875.00
2211	Carriage of tar / bitumen	tonne	24.75	87.60	2,168.10
	Aggregate Total weight of mix = 450 tonnes Weight of bitumen = 24.75 tonnes Weight of aggregate = 450 -24.75 = 425.25 tonnes Taking density of aggregate = 1.5 tonne/cum Volume of aggregate =425.25/1.5 =283.50cum Grading - II/19 mm (Nominal Size) 13.2 - 10mm size = 30% of 283.50 = 85.05 cum				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	10 - 5mm size = 25% of 283.50 = 70.88 cum 5mm and below = 42% of 283.50 = 119.07 cum				
0296	Stone Aggregate (Single size) : 12.5 mm nominal size Qty = 85.05 x 50 /100	cum	42.525	1,050.00	44,651.25
0297	Stone Aggregate (Single size) : 10 mm nominal size Qty = 85.05 x 50 /100	cum	42.525	1,050.00	44,651.25
0297	Stone Aggregate (Single size) : 10 mm nominal size Qty = 70.88 x 50 /100	cum	35.44	1,050.00	37,212.00
0298	Stone Aggregate (Single size) : 06 mm nominal size Qty = 70.88 x 50 /100	cum	35.44	1,100.00	38,984.00
2903	Stone chippings/ screenings 4.75 mm nominal size Qty = 283.50 x 42 /100	cum	119.07	1,150.00	1,36,930.50
2202	Carriage of stone aggregate below 40 mm nominal size Lime Filler @ 3% (percentage by weight of aggregate)	cum	275.00	87.60	24,090.00
0777	Dry hydrated lime (factory made)	quintal	127.60	220.00	28,072.00
2208	Carriage of lime (consitering density of lime as 1.29 T per cum) V =12.758/1.29 = 6.63 cum	cum	9.89	87.60	866.36
	(B) Machinery				
0062	Hot mix Plant -120 TPH capacity	hour	3.00	23,700.00	71,100.00
0063	Hot mix Plant 100 TPH Capacity	hour	3.00	17,500.00	52,500.00
0064	Paver finisher Hydrostatic with sensor control 100 TPH	hour	6.00	2,700.00	16,200.00
0069	Generator 250 KVA	hour	6.00	900.00	5,400.00
0052	Front end loader 1 cum bucket capacity (incl POL)	hour	6.00	800.00	4,800.00
0053	Tipper -5 Cum Add 10 per cent of cost of carriage to cover cost of loading and unloading X x 10 / 100 = 13500.00 x 10 / 100	tonne km	4,500.00	3.00	13,500.00(X) 1,350.00
0055	Smooth Wheeled Roller 8 to 10 tonne for initial break down rolling.(6 x 0.65)	hour	3.90	460.00	1,794.00
0054	Vibratory roller 8 to 10 tonne for intermediate rolling.(6 x 0.65) Finish rolling with 6-8 tonnes smooth wheeled tandem roller.(6 x 0.65)	hour	3.90	1,550.00	6,045.00
0056	Tandem Road Roller	hour	3.90	1,150.00	4,485.00
	(C) Labour				
0128	Mate	day	0.84	260.00	218.40
0114	Beldar working with HMP, mechanical broom, paver, roller, asphalt cutter and assistance for setting out lines, levels and layout of construction	day	14.00	247.00	3,458.00
0139	Skilled Beldar (for floor rubbing etc.) for checking line & levels	day	5.00	260.00	1,300.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	TOTAL				14,92,650.86
	Add Water Charges @ 1%				14,926.51
	TOTAL				15,07,577.37
	Add CPOH @ 15%				2,26,136.61
	Cost of 62.29 cum				17,33,713.98
	Cost of 1 cum				9,077.04
	Say				9,077.05

16.57.2 40/ 50 mm compacted thickness with bitumen of grade VG-30 @ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) and waste plastic additive @ 8% (percentage by weight of bitumen) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 191 cum (450 tonnes)				
	(A) MATERIAL:				
7309	Paving Asphalt of grade VG-30 of approved quality	tonne	24.75	38,500.00	9,52,875.00
	@5.50% (percentage by weight of total mix)				
2211	Carriage of tar / bitumen	tonne	24.75	87.60	2,168.10
	Aggregate				
	Total weight of mix = 450 tonnes				
	Weight of bitumen = 24.75 tonnes				
	Weight of aggregate = 450 -24.75 = 425.25 tonnes				
	Taking density of aggregate = 1.5 tonne/cum				
	Volume of aggregate =425.25/1.5 =283.50cum				
	Grading - II/19 mm (Nominal Size)				
	13.2 - 10mm size = 30% of 283.50 = 85.05 cum				
	10 - 5mm size = 25% of 283.50 = 70.88 cum				
	5mm and below = 42% of 283.50 = 119.07 cum				
	Waste Plastic @ 8% of the weigh of bitumen i.e. 24.75 x 8%				
7280	Waste plastic additive	tonne	1.98	40,000.00	79,200.00
0296	Stone Aggregate (Single size) : 12.5 mm nominal size	cum	42.525	1,050.00	44,651.25
	Qty = 85.05 x 50 /100				
0297	Stone Aggregate (Single size) : 10 mm nominal size	cum	42.525	1,050.00	44,651.25
	Qty = 85.05 x 50 /100				
0297	Stone Aggregate (Single size) : 10 mm nominal size	cum	35.44	1,050.00	37,212.00
	Qty = 70.88 x 50 /100				
0298	Stone Aggregate (Single size) : 06 mm nominal size	cum	35.44	1,100.00	38,984.00
	Qty = 70.88 x 50 /100				
2903	Stone chippings/ screenings 4.75 mm nominal size	cum	119.07	1,150.00	1,36,930.50
	Qty = 283.50 x 42 /100				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
2202	Carriage of stone aggregate below 40 mm nominal size Lime Filler @ 3% (percentage by weight of aggregate)	cum	275.00	87.60	24,090.00
0777	Dry hydrated lime (factory made)	quintal	127.60	220.00	28,072.00
2208	Carriage of lime (consitering density of lime as 1.29 T per cum) V =12.758/1.29 = 6.63 cum	cum	9.89	87.60	866.36
	(B) Machinery				
0062	Hot mix Plant -120 TPH capacity	hour	3.00	23,700.00	71,100.00
0063	Hot mix Plant 100 TPH Capacity	hour	3.00	17,500.00	52,500.00
0064	Paver finisher Hydrostatic with sensor control 100 TPH	hour	6.00	2,700.00	16,200.00
0069	Generator 250 KVA	hour	6.00	900.00	5,400.00
0052	Front end loader 1 cum bucket capacity (incl POL)	hour	6.00	800.00	4,800.00
0053	Tipper -5 Cum	tonne km	4,500.00	3.00	13,500.00(X)
	Add 10 per cent of cost of carriage to cover cost of loading and unloading X x 10 / 100 = 13500.00 x 10 / 100				1,350.00
0055	Smooth Wheeled Roller 8 to 10 tonne for initial break down rolling.(6 x 0.65)	hour	3.90	460.00	1,794.00
0054	Vibratory roller 8 to 10 tonne for intermediate rolling.(6 x 0.65) Finish rolling with 6-8 tonnes smooth wheeled tandem roller.(6 x 0.65)	hour	3.90	1,550.00	6,045.00
0056	Tandem Road Roller	hour	3.90	1,150.00	4,485.00
	(C) Labour				
0128	Mate	day	0.84	260.00	218.40
0114	Beldar working with HMP, mechanical broom, paver, roller, asphalt cutter and assistance for setting out lines, levels and layout of construction	day	14.00	247.00	3,458.00
0139	Skilled Beldar (for floor rubbing etc.) for checking line & levels	day	5.00	260.00	1,300.00
	TOTAL				15,71,850.86
	Add Water Charges @ 1%				15,718.51
	TOTAL				15,87,569.37
	Add CPOH @ 15%				2,38,135.41
	Cost of 191 cum				18,25,704.78
	Cost of 1 cum				9,558.66
	Say				9,558.65

16.57.3 40/ 50 mm compacted thickness with bitumen of grade PMB-40 @5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 191 cum (450 tonnes) (A) MATERIAL:				
0312	Bitumen grade PMB - 40 @5.50% (percentage by weight of total mix)	tonne	24.75	41,400.00	10,24,650.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
2211	Carriage of tar / bitumen Aggregate Total weight of mix = 450 tonnes Weight of bitumen = 24.75 tonnes Weight of aggregate = 450 -24.75 = 425.25 tonnes Taking density of aggregate = 1.5 tonne/cum Volume of aggregate =425.25/1.5 =283.50cum Grading - II/19 mm (Nominal Size) 13.2 - 10mm size = 30% of 283.50 = 85.05 cum 10 - 5mm size = 25% of 283.50 = 70.88 cum 5mm and below = 42% of 283.50 = 119.07 cum	tonne	24.75	87.60	2,168.10
0296	Stone Aggregate (Single size) : 12.5 mm nominal size Qty = 85.05 x 50 /100	cum	42.525	1,050.00	44,651.25
0297	Stone Aggregate (Single size) : 10 mm nominal size Qty = 85.05 x 50 /100	cum	42.525	1,050.00	44,651.25
0297	Stone Aggregate (Single size) : 10 mm nominal size Qty = 70.88 x 50 /100	cum	35.44	1,050.00	37,212.00
0298	Stone Aggregate (Single size) : 06 mm nominal size Qty = 70.88 x 50 /100	cum	35.44	1,100.00	38,984.00
2903	Stone chippings/ screenings 4.75 mm nominal size Qty = 283.50 x 42 /100	cum	119.07	1,150.00	1,36,930.50
2202	Carriage of stone aggregate below 40 mm nominal size Lime Filler @ 3% (percentage by weight of aggregate)	cum	275.00	87.60	24,090.00
0777	Dry hydrated lime (factory made)	quintal	127.60	220.00	28,072.00
2208	Carriage of lime (consitering density of lime as 1.29 T per cum) V =12.758/1.29 = 6.63 cum	cum	9.89	87.60	866.36
	(B) Machinery				
0062	Hot mix Plant -120 TPH capacity	hour	3.00	23,700.00	71,100.00
0063	Hot mix Plant 100 TPH Capacity	hour	3.00	17,500.00	52,500.00
0064	Paver finisher Hydrostatic with sensor control 100 TPH	hour	6.00	2,700.00	16,200.00
0069	Generator 250 KVA	hour	6.00	900.00	5,400.00
0052	Front end loader 1 cum bucket capacity (incl POL)	hour	6.00	800.00	4,800.00
0053	Tipper -5 Cum Add 10 per cent of cost of carriage to cover cost of loading and unloading X x 10 / 100 = 13500.00 x 10 / 100	tonne km	4,500.00	3.00	13,500.00(X) 1,350.00
0055	Smooth Wheeled Roller 8 to 10 tonne for initial break down rolling.(6 x 0.65)	hour	3.90	460.00	1,794.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0054	Vibratory roller 8 to 10 tonne for intermediate rolling.(6 x 0.65) Finish rolling with 6-8 tonnes smooth wheeled tandem roller.(6 x 0.65)	hour	3.90	1,550.00	6,045.00
0056	Tandem Road Roller (C) Labour	hour	3.90	1,150.00	4,485.00
0128	Mate	day	0.84	260.00	218.40
0114	Beldar working with HMP, mechanical broom, paver, roller, asphalt cutter and assistance for setting out lines, levels and layout of construction	day	14.00	247.00	3,458.00
0139	Skilled Beldar (for floor rubbing etc.) for checking line & levels	day	5.00	260.00	1,300.00
	TOTAL				15,64,425.86
	Add Water Charges @ 1%				15,644.26
	TOTAL				15,80,070.12
	Add CPOH @ 15%				2,37,010.52
	Cost of 191 cum				18,17,080.64
	Cost of 1 cum				9,513.51
	Say				9,513.50

16.57.4 40/ 50 mm compacted thickness with bitumen of grade CRMB-60 @ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 191 cum (450 tonnes) (A) MATERIAL:				
7741	Modified Bitumen Refinery produced CRMB - 60 @5.50% (percentage by weight of total mix)	tonne	24.75	38,800.00	9,60,300.00
2211	Carriage of tar / bitumen Aggregate Total weight of mix = 450 tonnes Weight of bitumen = 24.75 tonnes Weight of aggregate = 450 -24.75 = 425.25 tonnes Taking density of aggregate = 1.5 tonne/cum Volume of aggregate =425.25/1.5 =283.50cum Grading - II/19 mm (Nominal Size) 13.2 - 10mm size = 30% of 283.50 = 85.05 cum 10 - 5mm size = 25% of 283.50 = 70.88 cum 5mm and below = 42% of 283.50 = 119.07 cum	tonne	24.75	87.60	2,168.10
0296	Stone Aggregate (Single size) : 12.5 mm nominal size Qty = 85.05 x 50 /100	cum	42.525	1,050.00	44,651.25
0297	Stone Aggregate (Single size) : 10 mm nominal size Qty = 85.05 x 50 /100	cum	42.525	1,050.00	44,651.25

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0297	Stone Aggregate (Single size) : 10 mm nominal size Qty = 70.88 x 50 /100	cum	35.44	1,050.00	37,212.00
0298	Stone Aggregate (Single size) : 06 mm nominal size Qty = 70.88 x 50 /100	cum	35.44	1,100.00	38,984.00
2903	Stone chippings/ screenings 4.75 mm nominal size Qty = 283.50 x 42 /100	cum	119.07	1,150.00	1,36,930.50
2202	Carriage of stone aggregate below 40 mm nominal size Lime Filler @ 3% (percentage by weight of aggregate)	cum	275.00	87.60	24,090.00
0777	Dry hydrated lime (factory made)	quintal	127.60	220.00	28,072.00
2208	Carriage of lime (consitering density of lime as 1.29 T per cum) V =12.758/1.29 = 6.63 cum	cum	9.89	87.60	866.36
	(B) Machinery				
0062	Hot mix Plant -120 TPH capacity	hour	3.00	23,700.00	71,100.00
0063	Hot mix Plant 100 TPH Capacity	hour	3.00	17,500.00	52,500.00
0064	Paver finisher Hydrostatic with sensor control 100 TPH	hour	6.00	2,700.00	16,200.00
0069	Generator 250 KVA	hour	6.00	900.00	5,400.00
0052	Front end loader 1 cum bucket capacity (incl POL)	hour	6.00	800.00	4,800.00
0053	Tipper -5 Cum Add 10 per cent of cost of carriage to cover cost of loading and unloading X x 10 / 100 = 13500.00 x 10 / 100	tonne km	4,500.00	3.00	13,500.00(X) 1,350.00
0055	Smooth Wheeled Roller 8 to 10 tonne for initial break down rolling.(6 x 0.65)	hour	3.90	460.00	1,794.00
0054	Vibratory roller 8 to 10 tonne for intermediate rolling.(6 x 0.65) Finish rolling with 6-8 tonnes smooth wheeled tandem roller.(6 x 0.65)	hour	3.90	1,550.00	6,045.00
0056	Tandem Road Roller	hour	3.90	1,150.00	4,485.00
	(C) Labour				
0128	Mate	day	0.84	260.00	218.40
0114	Beldar working with HMP, mechanical broom, paver, roller, asphalt cutter and assistance for setting out lines, levels and layout of construction	day	14.00	247.00	3,458.00
0139	Skilled Beldar (for floor rubbing etc.) for checking line & levels	day	5.00	260.00	1,300.00
	TOTAL				15,00,075.86
	Add Water Charges @ 1%				15,000.76
	TOTAL				15,15,076.62
	Add CPOH @ 15%				2,27,261.49
	Cost of 191 cum				17,42,338.11
	Cost of 1 cum				9,122.19
	Say				9,122.20

16.57.5 40/ 50 mm compacted thickness with bitumen of grade VG-30 @ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in drum Type Hot Mix Plant of 60-90 TPH capacity.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 191 cum (450 tonnes)				
	(A) MATERIAL:				
7309	Paving Asphalt of grade VG-30 of approved quality	tonne	24.75	38,500.00	9,52,875.00
	@5.50% (percentage by weight of total mix)				
2211	Carriage of tar / bitumen	tonne	24.75	87.60	2,168.10
	Aggregate				
	Total weight of mix = 450 tonnes				
	Weight of bitumen = 24.75 tonnes				
	Weight of aggregate = 450 -24.75 = 425.25 tonnes				
	Taking density of aggregate = 1.5 tonne/cum				
	Volume of aggregate =425.25/1.5 =283.50cum				
	Grading - II/19 mm (Nominal Size)				
	13.2 - 10mm size = 30% of 283.50 = 85.05 cum				
	10 - 5mm size = 25% of 283.50 = 70.88 cum				
	5mm and below = 42% of 283.50 = 119.07 cum				
0296	Stone Aggregate (Single size) : 12.5 mm nominal size	cum	42.525	1,050.00	44,651.25
	Qty = 85.05 x 50 /100				
0297	Stone Aggregate (Single size) : 10 mm nominal size	cum	42.525	1,050.00	44,651.25
	Qty = 85.05 x 50 /100				
0297	Stone Aggregate (Single size) : 10 mm nominal size	cum	35.44	1,050.00	37,212.00
	Qty = 70.88 x 50 /100				
0298	Stone Aggregate (Single size) : 06 mm nominal size	cum	35.44	1,100.00	38,984.00
	Qty = 70.88 x 50 /100				
2903	Stone chippings/ screenings 4.75 mm nominal size	cum	119.07	1,150.00	1,36,930.50
	Qty = 283.50 x 42 /100				
2202	Carriage of stone aggregate below 40 mm nominal size	cum	275.00	87.60	24,090.00
	Lime Filler @ 3% (percentage by weight of aggregate)				
0777	Dry hydrated lime (factory made)	quintal	127.60	220.00	28,072.00
2208	Carriage of lime	cum	9.89	87.60	866.36
	(consitering density of lime as 1.29 T per cum)				
	V =12.758/1.29 = 6.63 cum				
	(B) Machinery				
0076	Drum Type HMP of 60-90 TPH capacity @ 75 tonne per hour actual output	hour	6.00	14,000.00	84,000.00
0064	Paver finisher Hydrostatic with sensor control 100 TPH	hour	6.00	2,700.00	16,200.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0069	Generator 250 KVA	hour	6.00	900.00	5,400.00
0052	Front end loader 1 cum bucket capacity (incl POL)	hour	6.00	800.00	4,800.00
0053	Tipper -5 Cum	tonne km	4,500.00	3.00	13,500.00(X)
	Add 10 per cent of cost of carriage to cover cost of loading and unloading				
	X x 10 / 100 = 13500.00 x 10 / 100				1,350.00
0055	Smooth Wheeled Roller 8 to 10 tonne for initial break down rolling.(6 x 0.65)	hour	3.90	460.00	1,794.00
0054	Vibratory roller 8 to 10 tonne for intermediate rolling.(6 x 0.65)	hour	3.90	1,550.00 6	,045.00
	Finish rolling with 6-8 tonnes smooth wheeled tandem roller.(6 x 0.65)				
0056	Tandem Road Roller	hour	3.90	1,150.00	4,485.00
	(C) Labour				
0128	Mate	day	0.84	260.00	218.40
0114	Beldar working with HMP, mechanical broom, paver, roller, asphalt cutter and assistance for setting out lines, levels and layout of construction	day	14.00	247.00	3,458.00
0139	Skilled Beldar (for floor rubbing etc.) for checking line & levels	day	5.00	260.00	1,300.00
	TOTAL				14,53,050.86
	Add Water Charges @ 1%				14,530.51
	TOTAL				14,67,581.37
	Add CPOH @ 15%				2,20,137.21
	Cost of 191 cum				16,87,718.58
	Cost of 1 cum				8,836.22
	Say				8,836.20

16.57.6 40/ 50 mm compacted thickness with bitumen of grade VG-30 @ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) and waste plastic additive @ 8% (percentage by weight of bitumen) prepared in drum Type Hot Mix Plant of 60-90 TPH capacity.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 191 cum (450 tonnes)				
	(A) MATERIAL:				
7309	Paving Asphalt of grade VG-30 of approved quality	tonne	24.75	38,500.00	9,52,875.00
	@5.50% (percentage by weight of total mix)				
2211	Carriage of tar / bitumen	tonne	24.75	87.60	2,168.10
	Waste Plastic @ 8% of the weigh of bitumen i.e. 24.75 x 8%				
7280	Waste plastic additive	tonne	1.98	40,000.00	79,200.00
	Aggregate				
	Total weight of mix = 450 tonnes				
	Weight of bitumen = 24.75 tonnes				
	Weight of aggregate = 450 -24.75 = 425.25 tonnes				
	Taking density of aggregate = 1.5 tonne/cum				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Volume of aggregate =425.25/1.5 =283.50cum Grading - II/19 mm (Nominal Size) 13.2 - 10mm size = 30% of 283.50 = 85.05 cum 10 - 5mm size = 25% of 283.50 = 70.88 cum 5mm and below = 42% of 283.50 = 119.07 cum				
0296	Stone Aggregate (Single size) : 12.5 mm nominal size Qty = 85.05 x 50 /100	cum	42.525	1,050.00	44,651.25
0297	Stone Aggregate (Single size) : 10 mm nominal size Qty = 85.05 x 50 /100	cum	42.525	1,050.00	44,651.25
0297	Stone Aggregate (Single size) : 10 mm nominal size Qty = 70.88 x 50 /100	cum	35.44	1,050.00	37,212.00
0298	Stone Aggregate (Single size) : 06 mm nominal size Qty = 70.88 x 50 /100	cum	35.44	1,100.00	38,984.00
2903	Stone chippings/ screenings 4.75 mm nominal size Qty = 283.50 x 42 /100	cum	119.07	1,150.00	1,36,930.50
2202	Carriage of stone aggregate below 40 mm nominal size Lime Filler @ 3% (percentage by weight of aggregate)	cum	275.00	87.60	24,090.00
0777	Dry hydrated lime (factory made)	quintal	127.60	220.00	28,072.00
2208	Carriage of lime (consitering density of lime as 1.29 T per cum) V =12.758/1.29 = 6.63 cum	cum	9.89	87.60	866.36
	(B) Machinery				
0076	Drum Type HMP of 60-90 TPH capacity @ 75 tonne per hour actual output	hour	6.00	14,000.00	84,000.00
0064	Paver finisher Hydrostatic with sensor control 100 TPH	hour	6.00	2,700.00	16,200.00
0069	Generator 250 KVA	hour	6.00	900.00	5,400.00
0052	Front end loader 1 cum bucket capacity (incl POL)	hour	6.00	800.00	4,800.00
0053	Tipper -5 Cum	tonne km	4,500.00	3.00	13,500.00(X)
	Add 10 per cent of cost of carriage to cover cost of loading and unloading X x 10 / 100 = 13500.00 x 10 / 100				1,350.00
0055	Smooth Wheeled Roller 8 to 10 tonne for initial break down rolling.(6 x 0.65)	hour	3.90	460.00	1,794.00
0054	Vibratory roller 8 to 10 tonne for intermediate rolling.(6 x 0.65) Finish rolling with 6-8 tonnes smooth wheeled tandem roller.(6 x 0.65)	hour	3.90	1,550.00	6,045.00
0056	Tandem Road Roller	hour	3.90	1,150.00	4,485.00
	(C) Labour				
0128	Mate	day	0.84	260.00	218.40

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Beldar working with HMP, mechanical broom, paver, roller, asphalt cutter and assistance for setting out lines, levels and layout of construction	day	14.00	247.00	3,458.00
0139	Skilled Beldar (for floor rubbing etc.) for checking line & levels	day	5.00	260.00	1,300.00
	TOTAL				15,32,250.86
	Add Water Charges @ 1%				15,322.51
	TOTAL				15,47,573.37
	Add CPOH @ 15%				2,32,136.01
	Cost of 191 cum				17,79,709.38
	Cost of 1 cum				9,317.85
	Say				9,317.85

16.57.7 40/50 mm compacted thickness with bitumen of grade PMB-40 @ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in drum Type Hot Mix Plant of 60-90 TPH capacity.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 191 cum (450 tonnes) (A) MATERIAL:				
0312	Bitumen grade PMB - 40 @5.50% (percentage by weight of total mix)	tonne	24.75	41,400.00	10,24,650.00
2211	Carriage of tar / bitumen Aggregate Total weight of mix = 450 tonnes Weight of bitumen = 24.75 tonnes Weight of aggregate = 450 -24.75 = 425.25 tonnes Taking density of aggregate = 1.5 tonne/cum Volume of aggregate =425.25/1.5 =283.50cum Grading - II/19 mm (Nominal Size) 13.2 - 10mm size = 30% of 283.50 = 85.05 cum 10 - 5mm size = 25% of 283.50 = 70.88 cum 5mm and below = 42% of 283.50 = 119.07 cum	tonne	24.75	87.60	2,168.10
0296	Stone Aggregate (Single size) : 12.5 mm nominal size Qty = 85.05 x 50 /100	cum	42.525	1,050.00	44,651.25
0297	Stone Aggregate (Single size) : 10 mm nominal size Qty = 85.05 x 50 /100	cum	42.525	1,050.00	44,651.25
0297	Stone Aggregate (Single size) : 10 mm nominal size Qty = 70.88 x 50 /100	cum	35.44	1,050.00	37,212.00
0298	Stone Aggregate (Single size) : 06 mm nominal size Qty = 70.88 x 50 /100	cum	35.44	1,100.00	38,984.00
2903	Stone chippings/ screenings 4.75 mm nominal size Qty = 283.50 x 42 /100	cum	119.07	1,150.00	1,36,930.50
2202	Carriage of stone aggregate below 40 mm nominal size Lime Filler @ 3% (percentage by weight of aggregate)	cum	275.00	87.60	24,090.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0777	Dry hydrated lime (factory made)	quintal	127.60	220.00	28,072.00
2208	Carriage of lime (consitering density of lime as 1.29 T per cum) V =12.758/1.29 = 6.63 cum	cum	9.89	87.60	866.36
	(B) Machinery				
0076	Drum Type HMP of 60-90 TPH capacity @ 75 tonne per hour actual output	hour	6.00	14,000.00	84,000.00
0064	Paver finisher Hydrostatic with sensor control 100 TPH	hour	6.00	2,700.00	16,200.00
0069	Generator 250 KVA	hour	6.00	900.00	5,400.00
0052	Front end loader 1 cum bucket capacity (incl POL)	hour	6.00	800.00	4,800.00
0053	Tipper -5 Cum	tonne km	4,500.00	3.00	13,500.00(X)
	Add 10 per cent of cost of carriage to cover cost of loading and unloading X x 10 / 100 = 13500.00 x 10 / 100				1,350.00
0055	Smooth Wheeled Roller 8 to 10 tonne for initial break down rolling.(6 x 0.65)	hour	3.90	460.00	1,794.00
0054	Vibratory roller 8 to 10 tonne for intermediate rolling.(6 x 0.65) Finish rolling with 6-8 tonnes smooth wheeled tandem roller.(6 x 0.65)	hour	3.90	1,550.00	6,045.00
0056	Tandem Road Roller	hour	3.90	1,150.00	4,485.00
	(C) Labour				
0128	Mate	day	0.84	260.00	218.40
0114	Beldar working with HMP, mechanical broom, paver, roller, asphalt cutter and assistance for setting out lines, levels and layout of construction	day	14.00	247.00	3,458.00
0139	Skilled Beldar (for floor rubbing etc.) for checking line & levels	day	5.00	260.00	1,300.00
	TOTAL				15,24,825.86
	Add Water Charges @ 1%				15,248.26
	TOTAL				15,40,074.12
	Add CPOH @ 15%				2,31,011.12
	Cost of 191 cum				17,71,085.24
	Cost of 1 cum				9,272.70
	Say				9,272.70

16.57.8 40/50 mm compacted thickness with bitumen of grade CRMB-60 @ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in Drum Type Hot Mix Plant of 60-90 TPH capacity.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 191 cum (450 tonnes) (A) MATERIAL:				
7741	Modified Bitumen Refinery produced CRMB - 60 @5.50% (percentage by weight of total mix)	tonne	24.75	38,800.00	9,60,300.00
2211	Carriage of tar / bitumen Aggregate Total weight of mix = 450 tonnes Weight of bitumen = 24.75 tonnes Weight of aggregate = 450 -24.75 = 425.25 tonnes Taking density of aggregate = 1.5 tonne/cum	tonne	24.75	87.60	2,168.10

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Volume of aggregate =425.25/1.5 =283.50cum Grading - II/19 mm (Nominal Size) 13.2 - 10mm size = 30% of 283.50 = 85.05 cum 10 - 5mm size = 25% of 283.50 = 70.88 cum 5mm and below = 42% of 283.50 = 119.07 cum				
0296	Stone Aggregate (Single size) : 12.5 mm nominal size Qty = 85.05 x 50 /100	cum	42.525	1,050.00	44,651.25
0297	Stone Aggregate (Single size) : 10 mm nominal size Qty = 85.05 x 50 /100	cum	42.525	1,050.00	44,651.25
0297	Stone Aggregate (Single size) : 10 mm nominal size Qty = 70.88 x 50 /100	cum	35.44	1,050.00	37,212.00
0298	Stone Aggregate (Single size) : 06 mm nominal size Qty = 70.88 x 50 /100	cum	35.44	1,100.00	38,984.00
2903	Stone chippings/ screenings 4.75 mm nominal size Qty = 283.50 x 42 /100	cum	119.07	1,150.00	1,36,930.50
2202	Carriage of stone aggregate below 40 mm nominal size Lime Filler @ 3% (percentage by weight of aggregate)	cum	275.00	87.60	24,090.00
0777	Dry hydrated lime (factory made)	quintal	127.60	220.00	28,072.00
2208	Carriage of lime (consitering density of lime as 1.29 T per cum) V =12.758/1.29 = 6.63 cum	cum	9.89	87.60	866.36
	(B) Machinery				
0076	Drum Type HMP of 60-90 TPH capacity @ 75 tonne per hour actual output	hour	6.00	14,000.00	84,000.00
0064	Paver finisher Hydrostatic with sensor control 100 TPH	hour	6.00	2,700.00	16,200.00
0069	Generator 250 KVA	hour	6.00	900.00	5,400.00
0052	Front end loader 1 cum bucket capacity (incl POL)	hour	6.00	800.00	4,800.00
0053	Tipper -5 Cum	tonne km	4,500.00	3.00	13,500.00(X)
	Add 10 per cent of cost of carriage to cover cost of loading and unloading X x 10 / 100 = 13500.00 x 10 / 100				1,350.00
0055	Smooth Wheeled Roller 8 to 10 tonne for initial break down rolling.(6 x 0.65)	hour	3.90	460.00	1,794.00
0054	Vibratory roller 8 to 10 tonne for intermediate rolling.(6 x 0.65) Finish rolling with 6-8 tonnes smooth wheeled tandem roller.(6 x 0.65)	hour	3.90	1,550.00	6,045.00
0056	Tandem Road Roller	hour	3.90	1,150.00	4,485.00
	(C) Labour				
0128	Mate	day	0.84	260.00	218.40

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Beldar working with HMP, mechanical broom, paver, roller, asphalt cutter and assistance for setting out lines, levels and layout of construction	day	14.00	247.00	3,458.00
0139	Skilled Beldar (for floor rubbing etc.) for checking line & levels	day	5.00	260.00	1,300.00
	TOTAL				14,60,475.86
	Add Water Charges @ 1%				14,604.76
	TOTAL				14,75,080.62
	Add CPOH @ 15%				2,21,262.09
	Cost of 191 cum				16,96,342.71
	Cost of 1 cum				8,881.38
	Say				8,881.40

16.58 Deleted.

16.59 Manufacturing, supplying and fixing retro reflective sign boards made up of 2 mm thick aluminium sheet, face to be fully covered with high intensity encapsulated type heat activated retro reflective sheeting conforming to type - IV of ASTM-D 4956-01 in blue and silver white or other colour combination including subject matter, message (bi-lingual), symbols and borders etc. as per IRC: 67-2001, pasted on substrate by an adhesive backing which shall be activated by applying heat and pressure conforming to class-2 of ASTM-D-4956-01 and fixing the same with suitable sized aluminium alloy rivets @ 20 cm c/c to back support frame of M.S. angle iron of size 25x25x3 mm along with theft resistant measures, mounted and fixed with 2 Nos M.S. angles of size 35x35x5 mm to a vertical post made up to M.S. Tee section ISMT 50x50x6 mm welded with base plate of size 100x100x 5 mm at the bottom end and including making holes in pipes, angles flats, providing & fixing M.S. message plate of required size, steel work to be painted with two or more coats of synthetic enamel paint of required shade and of approved brand & manufacture over priming coat of zinc chromate yellow primer (vertical MS-Tee support to be painted in black and white colours). Backside of aluminium sheet to be painted with two or more coats of epoxy paint over and including appropriate priming coat including all leads and lifts etc. complete as per drawing , specification and direction of Engineer-in-Charge.

16.59.1 Mandatory / Regulatory sign boards of 900 mm diametre with support length of 3750 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no of 0.636 sqm MATERIAL: 3.14/4x(0.90x0.90)= 0.636 sqm Aluminium sheet 2 mm thick add 10% wastage = 0.064 i.e. 0.700sqm @ 5.60kg/sqm = 3.92kg				
2704	Aluminium Strip 40 mm wide and 2 mm thick	kilogram	3.92	210.00	823.20
2302	Carriage of G.I.sheet and accessories 3.92kg or 0.00392 MT	tonne	0.00392	77.87	0.31

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	High intensity retro reflective sheet = 0.70 sqm. High intensity sheet for lettering / sign and border etc. Taking 40% Area =0.28sqm Total = 0.70 + 0.28= 0.98 sqm				
8690	High intensity retro - reflective sheet	sqm	0.98	1,525.00	1,494.50
	Steel work Supporting frame 25x25x3mm for 900mm dia board: 3.14 D=3.1416x0.90=2.83 metre @1.10kg/m =3.11kg Angle iron 35x35x5mm for fixing the support frame with vertical Tee-iron support post = 2x0.05=0.10m @ 2.6 kg/m = 0.26kg Vertical post of M.S. tee of section ISNT 50x50x6mm = 3.75 metre @4.50kg/m= 16.88 kg Base plate to be welded at bottom end of tee (As hold fast) (100xl00x5mm)x7850/69)=0.39kg Total = 3.11 + 0.26 +16.88 + 0.39 = 20.64kg. Add wastage @ 5% = 1.03 kg Total = 20.64 + 1.03 = 21.67kg.				
10.2	Rate as per Item Number 10.2 of SH: Steel work	kg	21.67	66.50	1,441.06(A)
	LABOUR:				
0128	Mate	day	0.01	260.00	2.60
0114	Beldar	day	0.25	247.00	61.75
9999	Cost of material for drilling holes, nut bolts & rivets, Fabrication etc.	L.S.	65.00	1.49	96.85
	Painting with synthetic enamel paint on steel work support frame 25x25x3mm =2.83x0.10=0.283 sqm Fixing angle 35x35x5mm = 2x0.50x0.14=0.014 sqm Vertical post Tee 50x50x6mm =3.75x0.20=0.750sqm Baseplate 100xl00x5mm Surface area = 2x[0.10x0.10] =0.02 4x0.10x0.005 = 0.002 Total = 1.069 sqm				
13.61.1	Rate as per Item Number 13.61.1 of SH: Finishing	sqm	1.07	53.85	57.62(A)
	Painting with epoxy paint on back side of aluminium sheet.				
13.52.1	Rate as per Item Number 13.52.1 of SH: Finishing	sqm	0.636	105.50	67.10(A)
9999	Sundries and hold Fast etc.	L.S.	78.00	1.49	116.22
	TOTAL				4,161.21
	Add Water Charges @ 1% except on A i.e on (4,161.21 - 1,565.78 =) 2,595.43				25.95
	TOTAL				4,187.16
	Add CPOH @ 15% except on A i.e on (4,187.16 - 1,565.78 =) 2,621.38				393.21
	Cost of each				4,580.37
	Say				4,580.35

16.59.2 Cautionary / warning sign boards of equilateral triangular shape having each side of 900 mm with support length of 3650 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 board of 0.35 sqm MATERIAL: Area of aluminium sheet 2 mm thick = ½x(0.90x0.78)= 0.35 sqm add 10% wastage = 0.04 Total = 0.39sqm @ 5.60kg/sqm = 2.18kg				
2704	Aluminium Strip 40 mm wide and 2 mm thick	kilogram	2.18	210.00	457.80
2302	Carriage of G.I.sheet and accessories 2.18kg or 0.00218 MT	tonne	0.00218	77.87	0.17
	High intensity retro reflective sheet = 0.39 sqm. High intensity sheet for lettering / sign/ symbol/ border etc. Taking 40% area =0.16sqm Total = 0.39 + 0.16 = 0.55 sqm				
8690	High intensity retro - reflective sheet	sqm	0.55	1,525.00	838.75
	Angle iron frame 25x25x3mm 3x0.90=2.70 metre @ 1.10kg/m=2.97kg Angle iron 35x35x5mm for fixing the support frame to Tee- iron support post 2x0.05=0.10m @ 2.6 kg/m = 0.26kg Vertical post of M.S. tee of section ISNT 50x50x6mm = 1x3.65=3.65m @ 4.50kg/m= 16.43kg Base plate 100x100x5mm connected to bottom end of vertical tee. 0.10x0.10x0.005x7850kg =0.39kg Total = 2.97 + 0.26 + 16.43 + 0.39 = 20.05kg Add wastage @ 5% = 1.00 Total = 20.05 + 1.00 = 21.05kg				
10.2	Rate as per Item Number 10.2 of SH: Steel work	kg	21.05	66.50	1,399.82(A)
	LABOUR:				
0128	Mate	day	0.01	260.00	2.60
0114	Beldar	day	0.25	247.00	61.75
9999	Cost of material for drilling holes, nut bolts & rivets, Fabrication etc.	L.S.	65.00	1.49	96.85
	Painting with synthetic enamel paint on angle iron support frame 25x25x3mm =1x2.7x0.10=0.27 sqm. Angle 35x35x5mm = 2x0.50x0.14=0.014 sqm Tee 50x50x6mm = 1x3.65x0.20 =0.73sqm Base plate to be welded at bottom end of Tee 100x100x5mm = 0.022 sqm Total = 1.036 sqm				
13.61.1	Rate as per Item Number 13.61.1 of SH: Finishing	sqm	1.036	53.85	55.79(A)
	Painting with epoxy paint on back side of aluminium sheet. 0.35 sqm				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
13.52.1	Rate as per Item Number 13.52.1 of SH: Finishing	sqm	0.35	105.50	36.92(A)
9999	Sundries and hold fast etc.	L.S.	65.00	1.49	96.85
	TOTAL				3,047.30
	Add Water Charges @ 1% except on A i.e on (3,047.30 - 1,492.53 =) 1,554.77				15.55
	TOTAL				3,062.85
	Add CPOH @ 15% except on A i.e on (3,062.85 - 1,492.53 =) 1,570.32				235.55
	Cost of 1 sqm				3,298.40
	Say				3,298.40

16.60 Manufacturing, supplying and fixing retro reflective overhead signage boards made up of 2 mm thick aluminium sheet, face to be fully covered with high intensity and encapsulated lens type heat activated retro reflective sheeting conforming to type - III of ASTM-D-4956-01 as approved by Engineer-in-Charge, letters, borders etc. as per IRC: 67-2001 in silver white with blue colour back ground and with high intensity grade, pasted on substrate by pressure sensitive adhesive backing which shall be activated by applying pressure conforming to class II of ASTM-D-4956-01 and fixing the same to the plate of structural frame work by means of suitable sized aluminium alloys, rivets or bolts & nuts @ 300 mm centre to centre all along the periphery as well as in two vertical rows along with theft resistant measures, including the cost of painting with two or more coats of epoxy paint in grey colour on the back side of aluminium sheet including appropriate priming coat. The rate includes the cost of rounding off the corners, lowering down the structural frame work from the gantry, fixing and erecting the same in position all complete as per drawings, specification and direction of the Engineer-in-Charge.(Structural frame work including M.S. plate to be provided separately. Rectangular area of the sheet only shall be measured for payment).

16.60.1 Overhead informatory road signage

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for boards area 3.00x1.20=3.60 sqm				
2704	Aluminium Strip 40 mm wide and 2 mm thick =3.60 sqm @ 5.60kg/sqm = 20.16 kg Add 5% wastage = 1.01 kg Total = 20.16+1.01= 21.17 kg	kilogram	21.17	210.00	4,445.70
2302	Carriage of G.I.sheet and accessories High intensity retro reflective sheet = 3.60 sqm High itensity sheet for written matter Taking 40% = 3.60x40% = 1.44 sqm. Total = 3.60 + 1.44 = 5.04 sqm	tonne	0.02117	77.87	1.65
8690	High intensity retro - reflective sheet	sqm	5.04	1,525.00	7,686.00
0588	Chromium plated Brass screws 25 mm for peripheries = 2x(300+120)/30=28 Nos. For vertical Rows = 2x (120/30-2)=4 Nos. Total= 28 + 4 = 32Nos.	100 nos	34.00	115.00	39.10

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	For wastage @ 5% =2 Nos. Total = 32 +2 = 34 Nos. Labour charges for drilling holes				
9999	Hire charges of drill machine and sundries	L.S.	52.00	1.49	77.48
9999	Hoisting Board	L.S.	390.00	1.49	581.10
	Labour charges for manufacturing of board including.				
9999	Fixing retro reflective sheet	L.S.	564.20	1.49	840.66
	Painting with epoxy paint on back side of Aluminium sheet				
13.52.1	Rate as per Item Number 13.52.1 of SH: Finishing	sqm	3.60	105.50	379.80(A)
	TOTAL				14,051.49
	Add Water Charges @ 1% except on A i.e on (14,051.49 - 379.80 =) 13,671.69				136.72
	TOTAL				14,188.21
	Add CPOH @ 15% except on A i.e on (14,188.21 - 379.80 =) 13,808.41				2,071.26
	Cost of 3.6 sqm				16,259.47
	Cost of 1 sqm				4,516.52
	Say				4,516.50

16.61 Providing Retro-reflective regulatory sign board of size 900 mm diameter made out of 2 mm thick aluminium sheet, face to be fully covered with high intensity encapsulated lens type retro-reflective sheeting as approved by Engineer-in-Charge. Letter, symbols, borders etc. will be as per IRC - 67 with required colour scheme on the boards and with the high intensity grade A. The aluminium sheet to be riveted to M.S. frame of angle iron of size 40x40x4 mm. The boards will be fixed to 1 No. 50x50mm square post made of M.S. angle 50x50x 4mm, 4m long welded to the frame with adequate anti-theft arrangement. Sheet work to be painted with two or more coats of synthetic enamel paint over an under coat (primer) and back side of aluminium sheet to be painted with two or more coats of epoxy paint including appropriate priming coat complete in all respects as per direction of Engineer-in-Charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 board of 0.635 sqm Aluminium sheet 2mm thick = 0.635 sqm. Add 10% wastage = 0.06 sqm Total = 0.635 + 0.06 = 0 695 sqm Say 0.70 sqm @ 5.60 kg/sqm =3.98 kg (X)				
2704	Aluminium Strip 40 mm wide and 2 mm thick High intensity retro reflective sheet = 0.70 sqm high intensity sheet for lettering/ sing and border etc. Taking 40% Area=0.28 sqm Total = 0.70 + 0.28 = 0.98 sqm (Y)	kilogram	3.98	210.00	835.80

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8690	High intensity retro - reflective sheet Angle iron 40x40x4mm = 4x0.60=2.40 @ 2.4kg/m = 5.76 kg 50x50x5 mm = 2x4m=8m@3kg/m =24.00 kg Total = 5.76 + 24.00 = 29.76 kg (Z)	sqm	0.98	1,525.00	1,494.50
10.2	Rate as per Item Number 10.2 of SH: Steel work LABOUR:	kg	29.76	66.50	1,979.04 (A)
0128	Mate	day	0.01	260.00	2.60
0114	Beldar	day	0.25	247.00	61.75
9999	Cost of material for drilling holes, nut bolts & rivets, fabrication etc. @ 2 % on (X + Y + Z) Painting with synthetic enamel paint 1x2.40x0.12=0.29 sqm 1x4.00x0.12=0.80 sqm Total = 0.29 + 0.80 = 1.09 sqm	L.S.	70.23	1.49	104.64
13.61.1	Rate as per Item Number 13.61.1 of SH: Finishing Painting with epoxy paint on back side of aluminium sheet	sqm	1.09	53.85	58.70(A)
13.52.1	Rate as per Item Number 13.52.1 of SH: Finishing	sqm	0.635	105.50	66.99(A)
9999	Sundries and hold fast etc.	L.S.	31.20	1.49	46.49
	TOTAL				4,650.51
	Add Water Charges @ 1% except on A i.e on (4,650.51 - 2,104.73 =) 2,545.78				25.46
	TOTAL				4,675.97
	Add CPOH @ 15% except on A i.e on (4,675.97 - 2,104.73 =) 2,571.24				385.69
	Cost of each				5,061.66
	Say				5,061.65

16.62 Providing and applying 2.5 mm thick road marking strips (retro-reflective) of specified shade / colour using hot thermoplastic material by fully / semi automatic thermoplastic paint applicator machine fitted with profile shoe, glass beads dispenser, propane tank heater and profile shoe heater, driven by experienced operator on road surface including cost of material, labour ,T&P, cleaning the road surface of all dirt, seals, oil, grease and foreign material etc. complete as per direction of Engineer-incharge and accordance with applicable specifications.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 sqm (Area covered on one day) MATERIAL: Thermoplastic paint screeded in paint form for 2.5 mm thick road making stripe including glass beads etc. as per specifications. 100sqm @ 5kg/5sqm =500kg. Wastage @ 5% = 25 kg Total = 525 kg				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8687	Thermoplastic paint Glass beads (B-class) to be sprayed over the paint stripe @ 250 gms per sqm = 100x0.25=25 kg	kg	525.00	63.00	33,075.00
8688	Glass beads MACHINERY:	kg	25.00	62.00	1,550.00
0033	Paint applicator	day	1.00	750.00	750.00
0005	Hire charges of Diesel Truck - 9 tonne for local shifting LPG cylinder for heating (Commercial cylinder of 19.00 kg capacity)	day	1.00	1,600.00	1,600.00
1241	Commercial LPG in cylinder LABOUR:	kg	71.06	51.00	3,624.06
0157	Operator (Pile/ Special machine)	day	1.00	327.00	327.00
0139	Skilled Beldar (for floor rubbing etc.)	day	4.00	260.00	1,040.00
9999	Labour for Cleaning for road surface	L.S.	364.00	1.49	542.36
0114	Beldar for erecting barricades, traffic diversions, stretching ropes etc.	day	4.20	247.00	1,037.40
	TOTAL				43,545.82
	Add Water Charges @ 1%				435.46
	TOTAL				43,981.28
	Add CPOH @ 15%				6,597.19
	Cost of 100 sqm				50,578.47
	Cost of 1 sqm				505.78
	Say				505.80

16.63 Providing, laying and making kerb channel 30 cm wide and 50 mm thick with cement concrete 1:3:6 (1 cement : 3 coarse sand :6 graded stone aggregate 20 mm nominal size) over 75 mm bed of dry brick ballast 40 mm nominal size, well rammed and consolidated and grouted with fine sand, including finishing the top smooth etc. complete and as per direction of Engineer-in-Charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm MATERIAL:				
0287	Brick Aggregate (Single size) : 40 mm nominal size	cum	1.00	500.00	500.00
2260	Carriage of brick aggregate	cum	1.00	95.22	95.22
6501	Sand zone V (Jamuna)	cum	0.08	500.00	40.00
2335	Carriage of Jamuna sand LABOUR: for spreading, ramming and consolidation	cum	0.08	87.60	7.01
0114	Beldar	day	0.35	247.00	86.45
0115	Coolie	day	0.26	247.00	64.22
0101	Bhisti Cement concrete-1:3:6	day	0.18	260.00	46.80
4.1.6	Rate as per Item Number 4.1.6 of SH: Concrete work	cum	0.50	3,888.20	1,944.10(A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	TOTAL				2,783.80
	Add Water Charges @ 1% except on A i.e on (2,783.80 - 1,944.10 =) 839.70				8.40
	TOTAL				2,792.20
	Add CPOH @ 15% except on A i.e on (2,792.20 - 1,944.10 =) 848.10				127.22
	Cost of 10 metre				2,919.42
	Cost of 1 sqm				291.94
	Say				291.95

16.64 Providing and laying 75 mm thick compacted bed of dry brick aggregate of 40 mm thick nominal size including spreading, well ramming, consolidating and grouting with jamuna sand, including finishing smooth etc. complete as per direction of Engineer-in-Charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
0287	Brick Aggregate (Single size) : 40 mm nominal size	cum	1.00	500.00	500.00
2260	Carriage of brick aggregate	cum	1.00	95.22	95.22
6501	Sand zone V (Jamuna)	cum	0.08	500.00	40.00
2335	Carriage of Jamuna sand	cum	0.08	87.60	7.01
	LABOUR:				
	for spreading, ramming and consolidation:				
0114	Beldar	day	0.35	247.00	86.45
0115	Coolie	day	0.26	247.00	64.22
0101	Bhisti	day	0.18	260.00	46.80
	TOTAL				839.70
	Add Water Charges @ 1%				8.40
	TOTAL				848.10
	Add CPOH @ 15%				127.22
	Cost of 10 sqm				975.32
	Cost of 1 sqm				97.53
	Say				97.55

16.65 Providing and fixing post delineators made of ABS round body fitted with 2 nos 100 mm dia high reflective reflectors and mounted on MS pipe of 65 mm dia duly powder coated anti-rust and anti theft steel to be installed as per direction of Engineer-in-Charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
8685	Delineator	each	1.00	310.00	310.00
9999	Fixing Charges	L.S.	78.00	1.49	116.22
9999	Fixing Material	L.S.	39.00	1.49	58.11
	TOTAL				484.33
	Add Water Charges @ 1%				4.84
	TOTAL				489.17
	Add CPOH @ 15%				73.38
	Cost of each				562.55
	Say				562.55

16.66 Excavating holes upto 0.10 cum including getting out the excavated soil, then returning the soil as deported in layers not exceeding 20 cm in depth, including consolidating and deposited layer by ramming watering etc., disposing of surplus excavated soil as directed with in a lead of 50 mm and lift upto 1.5 m.

16.66.1 All kind of soil

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 30 holes				
	Earth work 30x0.10=3.00 cum				
	Extra labour for fillng and ramming				
2.8.1	Rate as per Item Number 2.8.1 of SH: Earth work	cum	3.00	130.80	392.40(A)
9999	Sundries	L.S.	13.52	1.49	20.14
	TOTAL				412.54
	Add Water Charges @ 1% except on A i.e on (412.54 - 392.40 =) 20.14				0.20
	TOTAL				412.74
	Add CPOH @ 15% except on A i.e on (412.74 - 392.40 =) 20.34				3.05
	Cost of 30 nos				415.79
	Cost of each				13.86
	Say				13.85

16.67 Providing and fixing at or near ground level factory made RCC pavement slab of M-30 grade of size 450x450x50 mm, including reinforcement with 6 mm dia M.S. bars 4 nos on each side, including setting in position in footpath to the required level and line over a bed of 20 mm average thick cement mortar 1:5 (1 cement : 5 coarse sand), having joint thickness not more than 5 mm except on curve, including filling of joints with same cement mortar and making grooves etc. complete as per direction of Engineer-in-Charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
8694	Precast pavement slab 450 x 450 x 50 mm (M - 30)	each	48.00	55.00	2,640.00
9999	Carriage of slab	L.S.	52.00	1.49	77.48
	20mm (bed and joints) CM. 1:5 (1 cement: 5 coarse sand)				
3.10	Rate as per Item Number 3.10 of SH: Mortars	cum	0.25	3,129.95	782.49
	LABOUR:				
0155	Mason (average)	day	1.10	287.00	315.70
0100	Bandhani	day	1.10	260.00	286.00
0114	Beldar	day	0.55	247.00	135.85
0101	Bhisti	day	0.27	260.00	70.20
9999	Sundries	L.S.	10.79	1.49	16.08
	TOTAL				4,323.80
	Add Water Charges @ 1%				43.24
	TOTAL				4,367.04
	Add CPOH @ 15%				655.06
	Cost of 10 sqm				5,022.10
	Cost of 1 sqm				502.21
	Say				502.20

16.68 Providing and laying 60 mm thick factory made cement concrete interlocking paver block of M -30 grade made by block making machine with strong vibratory compaction, of approved size, design & shape, laid in required colour and pattern over and including 50 mm thick compacted bed of coarse sand, filling the joints with fine sand etc. all complete as per the direction of Engineer-in-charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10sqm				
	MATERIAL:				
8689	Interlocking C.C. paver block (60 mm thick, M-30)	sqm	10.00	325.00	3,250.00
	Bedding Layer 50mm thick				
0982	Coarse sand (zone III) =10x0.050=0.50 cum	cum	0.50	1,120.00	560.00
2203	Carriage of coarse sand	cum	0.50	87.60	43.80
0983	Fine sand (zone IV)	cum	0.15	640.00	96.00
2261	Carriage of fine sand (1 part badarpur sand: 2 parts jamuna sand)	cum	0.15	87.60	13.14
	Laying charges (Based on actual observation)				
0123	Mason (brick layer) 1 st class	day	0.50	301.00	150.50
0124	Mason (brick layer) 2nd class	day	0.50	273.00	136.50
0114	Beldar	day	1.00	247.00	247.00
0115	Coolie	day	0.50	247.00	123.50
	TOTAL				4,620.44
	Add Water Charges @ 1%				46.20
	TOTAL				4,666.64
	Add CPOH @ 15%				700.00
	Cost of 10 sqm				5,366.64
	Cost of 1 sqm				536.66
	Say				536.65

16.69 Providing and laying at or near ground level factory made kerb stone of M-25 grade cement concrete in position to the required line, level and curvature jointed with cement mortar 1:3 (1 cement : 3 coarse sand), including making joints with or without grooves (thickness of joints except at sharp curve shall not to more than 5 mm), including making drainage opening wherever required complete etc. as per direction of Engineer-in-Charge (length of finished kerb edging shall be measured for payment). (Precast C.C. kerb stone shall be approved by Engineer-in-Charge).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 metre i.e.				
	MATERIAL:				
	100x0.375x0.20=7.50 cum				
	No. of kerb stones = 100/0.405=247 Nos				
	Precast C.C. Kerb stone M - 25 = 247x0.40x0.375x0.20=7.41 cum				
8686	Precast C.C. Kerb stone M - 25	cum	7.41	4,025.00	29,825.25
	Mortar 1:3 for fixing joints =246x[(0.115+0.20)/2] x0.375x0.005 = 0.073 cum				
	CM.1 :3 (1 cement: 3 coarse sand)				
3.8	Rate as per Item Number 3.8 of SH: Mortars	cum	0.073	4,145.55	302.63
	Labour for fixing of Kerb stone				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0123	Mason (brick layer) 1 st class	day	2.50	301.00	752.50
0124	Mason (brick layer) 2nd class	day	2.50	273.00	682.50
0114	Beldar	day	2.50	247.00	617.50
0115	Coolie	day	1.65	247.00	407.55
	TOTAL				32,587.93
	Add Water Charges @ 1%				325.88
	TOTAL				32,913.81
	Add CPOH @ 15%				4,937.07
	Cost of 7.5 cum				37,850.88
	Cost of 1 cum				5,046.78
	Say				5,046.80

16.70 Providing and fixing G.I. chain link fabric fencing of required width in mesh size 50x50 mm including strengthening with 2 mm dia wire or nuts, bolts and washers as required complete as per the direction of Engineer-in-charge.

16.70.1 Made of G.I. wire of dia 4 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10sqm MATERIAL: G.I. chain link 50x50 mm mesh = 10.00 sqm. Wastage @ 5% = 0.50 sqm Total= 10.50 sqm				
8695	Chain link fabric fencing mesh of size 50x50 mm made of G.I. wire of dia 4 mm	sqm	10.50	258.00	2,709.00
9999	Carriage	L.S.	156.00	1.49	232.44
	LABOUR:				
0103	Blacksmith 2nd class	day	2.14	273.00	584.22
0114	Beldar	day	1.62	247.00	400.14
9999	Sundries including G.I. wire, nuts and bolts and washers	L.S.	174.75	1.49	260.38
	TOTAL				4,186.18
	Add Water Charges @ 1%				41.86
	TOTAL				4,228.04
	Add CPOH @ 15%				634.21
	Cost of 10 sqm				4,862.25
	Cost of 1 sqm				486.23
	Say				486.20

16.70.2 Made of G.I. wire of dia 4 mm, PVC coated to achieve outer dia. not less than 5 mm in required colour and shade

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10sqm MATERIAL: G.I. chain link 50x50 mm mesh PVC coated = 10sqm Wastage @ 5%= 0.50 sqm Total = 10.50 sqm				
8696	Chain link fabric fencing mesh of size 50x50 mm made of G.I. wire of dia 4 mm, PVC coated to outer dia 5 mm	sqm	10.50	285.00	2,992.50

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Carriage	L.S.	156.00	1.49	232.44
	LABOUR:				
0103	Blacksmith 2nd class	day	2.14	273.00	584.22
0114	Beldar	day	1.62	247.00	400.14
9999	Sundries including G.I. wire, nuts and bolts and washers	L.S.	174.75	1.49	260.38
	TOTAL				4,469.68
	Add Water Charges @ 1%				44.70
	TOTAL				4,514.38
	Add CPOH @ 15%				677.16
	Cost of 10 sqm				5,191.54
	Cost of 1 sqm				519.15
	Say				519.15

16.71 Providing and fixing G.I. chain link fabric fencing of required width in mesh size 25x25 mm made of G.I. wire of dia 3 mm including strengthening with 2 mm dia wire or nuts, bolts and washers as required complete as per the direction of Engineer-in-Charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10sqm				
	MATERIAL:				
	G.I. chain link 25x25 mm mesh = 10.00 sqm.				
	Wastage @ 5%= 0.50 sqm				
	Total = 10.50 sqm				
8697	Chain link fabric fencing mesh of size 25x25 mm made of G.I. wire of dia 3 mm	sqm	10.50	340.00	3,570.00
9999	Carriage	L.S.	156.00	1.49	232.44
0103	Blacksmith 2nd class	day	2.14	273.00	584.22
0114	Beldar	day	1.62	247.00	400.14
9999	Sundries including G.I. wire, nuts and bolts and washers	L.S.	174.75	1.49	260.38
	TOTAL				5,047.18
	Add Water Charges @ 1%				50.47
	TOTAL				5,097.65
	Add CPOH @ 15%				764.65
	Cost of 10 sqm				5,862.30
	Cost of 1 sqm				586.23
	Say				586.25

16.72 Supplying and stacking of hard stone (for stone pitching) 22.5 cm thick at site.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 2.25cum				
	MATERIAL:				
	22.5 cm thick stone (Hard)				
1158	Stone for pitching 15 cm x 22.5 cm	cum	2.25	420.00	945.00
	Carriage by mechanical transport i/c loading unloading and stacking				
2215	Carriage of Soling stone & masonry stone	cum	2.25	103.06	231.89

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	TOTAL				1,176.89
	Add Water Charges @ 1%				11.77
	TOTAL				1,188.66
	Add CPOH @ 15%				178.30
	Cost of 2.25 cum				1,366.96
	Cost of 1 cum				607.54
	Say				607.55

16.73 Dry stone pitching 22.5 cm thick laid in courses and required profile with hammer dressed stones having no side less than 15 cm, with minimum depth of 20 cm including preparing the bedding surface etc. all complete (Payment for stone to be made separately).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10sqm				
	LABOUR:				
0123	Mason (brick layer) 1 st class	day	1.08	301.00	325.08
0124	Mason (brick layer) 2nd class	day	1.08	273.00	294.84
0114	Beldar	day	2.15	247.00	531.05
0115	Coolie	day	1.61	247.00	397.67
9999	Sundries	L.S.	6.76	1.49	10.07
	TOTAL				1,558.71
	Add Water Charges @ 1%				15.59
	TOTAL				1,574.30
	Add CPOH @ 15%				236.14
	Cost of 10 sqm				1,810.44
	Cost of 1 sqm				181.04
	Say				181.05

16.74 75 mm thick back filling for pitching including supplying of required materials and consolidation etc. complete with:

16.74.1 Moorum

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100sqm				
	MATERIAL:				
0810	Moorum	cum	7.50	450.00	3,375.00
	Carriage by mechanical transport i/c loading unloading and stacking				
2265	Carriage of moorum	cum	7.50	87.60	657.00
	LABOUR:				
0114	Beldar	day	1.64	247.00	405.08
0101	Bhisti	day	0.13	260.00	33.80
	TOTAL				4,470.88
	Add Water Charges @ 1%				44.71
	TOTAL				4,515.59
	Add CPOH @ 15%				677.34
	Cost of 100 sqm				5,192.93
	Cost of 1 sqm				51.93
	Say				51.95

16.74.2 Stone aggregate 20 mm nominal size

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100sqm				
	MATERIAL:				
0295	Stone Aggregate (Single size) : 20 mm nominal size	cum	7.50	1,050.00	7,875.00
	100sqm x7.50cm= 7.50 cum				
2202	Carriage of stone aggregate below 40 mm nominal size	cum	7.50	87.60	657.00
	LABOUR:				
0114	Beldar	day	2.05	247.00	506.35
0101	Bhisti	day	0.13	260.00	33.80
	TOTAL				9,072.15
	Add Water Charges @ 1%				90.72
	TOTAL				9,162.87
	Add CPOH @ 15%				1,374.43
	Cost of 100 sqm				10,537.30
	Cost of 1 sqm				105.37
	Say				105.35

16.74.3 Stone aggregate 40 mm nominal size

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100sqm				
	MATERIAL:				
0293	Stone Aggregate (Single size) : 40 mm nominal size	cum	7.50	950.00	7,125.00
	100sqm x7.50cm= 7.50 cum				
2206	Carriage of stone aggregate 40 mm nominal size and above	cum	7.50	95.22	714.13
	LABOUR:				
0114	Beldar	day	2.05	247.00	506.35
0101	Bhisti	day	0.13	260.00	33.80
	TOTAL				8,379.28
	Add Water Charges @ 1%				83.79
	TOTAL				8,463.07
	Add CPOH @ 15%				1,269.46
	Cost of 100 sqm				9,732.53
	Cost of 1 sqm				97.33
	Say				97.35

16.75 Providing and laying C.C. pavement of mix M-25 with ready mixed concrete from batching plant. The ready mixed concrete shall be laid and finished with screed board vibrator, vacuum dewatering process and finally finished by floating, brooming with wire brush etc. complete as per specifications and directions of Engineer-in-charge (The panel shuttering work shall be paid for separately).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum				
	MATERIAL:				
	Ready mix concrete M 25 = 1.00 cum. including placing of concrete, vibrating, leveling etc.				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
5.37.1	Rate as per Item Number 5.37.1 of SH: Reinforced cement concrete work	cum	1.00	5,590.60	5,590.60(A)
9999	Operational charges for vacuum dewatering system including screed vibration , placing of filter mat, top mat, vacuum process, floating , troweling, brooming etc.	L.S.	57.20	1.49	85.23
9999	T & P charges including consumable power charges, loading , unloading and hire charges of equipments	L.S.	41.60	1.49	61.98
	TOTAL				5,737.81
	Add Water Charges @ 1% except on A i.e on (5,737.81 - 5,590.60 =) 147.21				1.47
	TOTAL				5,739.28
	Add CPOH @ 15% except on A i.e on (5,739.28 - 5,590.60 =) 148.68				22.30
	Cost of 1 cum				5,761.58
	Say				5,761.60

16.76 Deduct for using of M-20 grade concrete instead of M-25 grade concrete in C.C. pavement.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum				
	Cement for M-25 mix = 0.410 t				
	Cement for M- 20 mix = 0.383 t				
	Difference = 0.027 t				
0367	Portland Cement	tonne	0.027	5,000.00	135.00
2209	Carriage of cement	tonne	0.027	77.87	2.10
	Plasticizer for M-25 mix = 2.050 kg				
	Plasticizer for M- 20 mix= 1.915 kg				
	Difference = 0.135 kg				
7318	Plasticizer / super plasticizer	kilogram	0.135	36.50	4.93
	TOTAL				142.03
	Add Water Charges @ 1%				1.42
	TOTAL				143.45
	Add CPOH @ 15%				21.52
	Cost of 1 cum				164.97
	Say				164.95

16.77 Scarifying the existing bituminous road surface to a depth of 50 mm and disposal of scarified material within all lifts and lead upto 1 km (by mechanical means).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100sqm				
	LABOUR:				
0128	Mate	day	0.01	260.00	2.60
0114	Beldar	day	0.25	247.00	61.75
	MACHINERY:				
0038	Tractor with ripper attachment	day	0.01	1,350.00	13.50
0014	Front end loader capacity 1.00 cum	day	0.025	5,000.00	125.00
0017	Hire and running charges of tipper	day	0.02875	1,700.00	48.88

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	TOTAL				251.73
	Add Water Charges @ 1%				2.52
	TOTAL				254.25
	Add CPOH @ 15%				38.14
	Cost of 100 sqm				292.39
	Cost of 1 sqm				2.92
	Say				2.90

16.78 Construction of granular sub-base by providing close graded Material conforming to specifications, mixing in a mechanical mix plant at OMC, carriage of mixed material by tippers to work site, for all leads & lifts, spreading in uniform layers of specified thickness with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge.

16.78.1 With material conforming to Grade-I (size range 75 mm to 0.075 mm) having CBR Value-30

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 225 cum (450 tonnes) (A) Material Close graded graunlar sub-base material as per Grading-I of specifications Close graded graunlar sub-base material as per Grading-I of specifications 53mm to 9.5mm @ 50% = 144 cum 9.5 mm to 2.36mm @ 20% = 57 cum 2.36mm below @ 30% = 86.40 cum				
0292	Stone Aggregate (Single size) : 50 mm nominal size	cum	72.00	900.00	64,800.00
0297	Stone Aggregate (Single size) : 10 mm nominal size	cum	72.00	1,050.00	75,600.00
2206	Carriage of stone aggregate 40 mm nominal size and above	cum	72.00	95.22	6,855.65
2202	Carriage of stone aggregate below 40 mm nominal size	cum	72.00	87.60	6,307.20
1179	Crushed stone 2.36 mm to 12.5 mm size	cum	57.00	915.00	52,155.00
2202	Carriage of stone aggregate below 40 mm nominal size	cum	57.00	87.60	4,993.20
2903	Stone chippings/ screenings 4.75 mm nominal size	cum	43.20	1,150.00	49,680.00
2904	Stone chippings/ screenings 150 micron nominal size	cum	43.20	1,150.00	49,680.00
2203	Carriage of coarse sand (B) Machinery	cum	86.40	87.60	7,568.64
0059	Wet Mix Plant 60 TPH @75 tonne capacity	hour	6.00	1,200.00	7,200.00
0070	Generator 100 KVA/125 KVA	hour	6.00	700.00	4,200.00
0057	Water Tanker 5 to 6 KL capacity 5 km lead with one trip per hour	hour	4.50	150.00	675.00
0052	Front end loader 1 cum bucket capacity (incl POL)	hour	6.00	800.00	4,800.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Tipper 10 tonne capacity(taking lead= 10 Km) =450x10 =4500 t.Km				
0053	Tipper -5 Cum tonne	km	4,500.00	3.00	13,500.00(X)
	Add 10% of cost of carriage to cover loading and unloading				
	X x 10 / 100 = 13500.00 x 10 / 100				1,350.00
0050	Motor Grader 3.35 metre blade 110 HP	hour	6.00	2,450.00	14,700.00
0054	Vibratory roller 8 to 10 tonne	hour	6.00	1,550.00	9,300.00
	(C) Labour				
0128	Mate	day	0.40	260.00	104.00
0139	Skilled Beldar (for floor rubbing etc.)	day	2.00	260.00	520.00
0114	Beldar	day	8.00	247.00	1,976.00
	TOTAL				3,75,964.69
	Add Water Charges @ 1%				3,759.65
	TOTAL				3,79,724.34
	Add CPOH @ 15%				56,958.65
	Cost of 225 cum				4,36,682.99
	Cost of 1 cum				1,940.81
	Say				1,940.80

16.78.2 With material conforming to Grade-II (size range 53 mm to 0.075 mm) having CBR Value-25

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 225 cum (450 tonnes)				
	(A) Material				
	Close graded graunlar sub-base material as per Grading-I of specifications				
	Close graded graunlar sub-base material as per Grading-I of specifications				
	26.5mm to 9.5mm @ 35% = 100.80 cum				
	9.5 mm to 2.36mm @ 25% = 72 cum				
	2.36mm below @ 40% = 115.20 cum				
0294	Stone Aggregate (Single size) : 25 mm nominal size	cum	50.40	1,000.00	50,400.00
0297	Stone Aggregate (Single size) : 10 mm nominal size	cum	50.40	1,050.00	52,920.00
2206	Carriage of stone aggregate 40 mm nominal size and above	cum	50.40	95.22	4,798.96
2202	Carriage of stone aggregate below 40 mm nominal size	cum	50.40	87.60	4,415.04
1179	Crushed stone 2.36 mm to 12.5 mm size	cum	72.00	915.00	65,880.00
2202	Carriage of stone aggregate below 40 mm nominal size	cum	72.00	87.60	6,307.20
2903	Stone chippings/ screenings 4.75 mm nominal size	cum	57.60	1,150.00	66,240.00
2904	Stone chippings/ screenings 150 micron nominal size	cum	57.60	1,150.00	66,240.00
2203	Carriage of coarse sand	cum	115.20	87.60	10,091.52
	(B) Machinery				
0059	Wet Mix Plant 60 TPH 75 tonne capacity	hour	6.00	1,200.00	7,200.00
0070	Generator 100 KVA/125 KVA	hour	6.00	700.00	4,200.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0057	Water Tanker 5 to 6 KL capacity 5 km lead with one trip per hour	hour	4.50	150.00	675.00
0052	Front end loader 1 cum bucket capacity (incl POL) Tipper 10 tonne capacity(taking lead= 10 Km) =450x10 =4500 t.Km	hour	6.00	800.00	4,800.00
0053	Tipper -5 Cum tonne Add 10% of cost of carriage to cover loading and unloading X x 10 / 100 = 13500.00 x 10 / 100 110 HP	km	4,500.00	3.00	13,500.00(X) 1,350.00
0050	Motor Grader 3.35 metre blade	hour	6.00	2,450.00	14,700.00
0054	Vibratory roller 8 to 10 tonne (C) Labour	hour	6.00	1,550.00	9,300.00
0128	Mate	day	0.40	260.00	104.00
0139	Skilled Beldar (for floor rubbing etc.)	day	2.00	260.00	520.00
0114	Beldar	day	8.00	247.00	1,976.00
	TOTAL				3,85,617.72
	Add Water Charges @ 1%				3,856.18
	TOTAL				3,89,473.90
	Add CPOH @ 15%				58,421.08
	Cost of 225 cum				4,47,894.98
	Cost of 1 cum				1,990.64
	Say				1,990.65

16.78.3 With material conforming to Grade-III (size range 26.5 mm to 0.075 mm) having CBR Value-20

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 225 cum (450 tonnes) (A) Material Close graded graunlar sub-base material as per Grading-III of specifications 9.5mm to 4.75mm @ 35% = 100.80 cum 4.75 mm to 2.36mm @ 12.5% = 36.00 cum 2.36mm below @ 52.5% = 151.20 cum				
1179	Crushed stone 2.36 mm to 12.5 mm size	cum	100.80	915.00	92,232.00
2202	Carriage of stone aggregate below 40 mm nominal size	cum	100.80	87.60	8,830.08
1179	Crushed stone 2.36 mm to 12.5 mm size	cum	36.00	915.00	32,940.00
2202	Carriage of stone aggregate below 40 mm nominal size	cum	36.00	87.60	3,153.60
2903	Stone chippings/ screenings 4.75 mm nominal size	cum	75.60	1,150.00	86,940.00
2904	Stone chippings/ screenings 150 micron nominal size	cum	75.60	1,150.00	86,940.00
2203	Carriage of coarse sand (B) Machinery	cum	151.20	87.60	13,245.12
0059	Wet Mix Plant 60 TPH 75 tonne capacity	hour	6.00	1,200.00	7,200.00
0070	Generator 100 KVA/125 KVA	hour	6.00	700.00	4,200.00
0057	Water Tanker 5 to 6 KL capacity	hour	4.50	150.00	675.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0052	Front end loader 1 cum bucket capacity (incl POL) Tipper 10 tonne capacity(taking lead= 10 Km) =450x10 =4500 t.Km	hour	6.00	800.00	4,800.00
0053	Tipper -5 Cum	tonne km	4,500.00	3.00	13,500.00(X)
	Add 10% of cost of carriage to cover loading and unloading X x 10 / 100 = 13500.00 x 10 / 100				1,350.00
0050	Motor Grader 3.35 metre blade 110 HP	hour	6.00	2,450.00	14,700.00
0054	Vibratory roller 8 to 10 tonne	hour	6.00	1,550.00	9,300.00
	(C) Labour				
0128	Mate	day	0.40	260.00	104.00
0139	Skilled Beldar (for floor rubbing etc.)	day	2.00	260.00	520.00
0114	Beldar	day	8.00	247.00	1,976.00
	TOTAL				3,82,605.80
	Add Water Charges @ 1%				3,826.06
	TOTAL				3,86,431.86
	Add CPOH @ 15%				57,964.78
	Cost of 225 cum				4,44,396.64
	Cost of 1 cum				1,975.10
	Say				1,975.10

16.79 Providing, laying, spreading and compacting graded stone aggregate (size range 53 mm to 0.075 mm) to wet mix macadam (WMM) specification including premixing the material with water at OMC in mechanical mix plant, carriage of mixed material by tipper to site, for all leads & lifts, laying in uniform layers with mechanical paver finisher in sub- base / base course on well prepared surface and compacting with vibratory roller of 8 to 10 tonne capacity to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 225 cum (495 tonne) (A) Material Conforming to table …… 45mm to22.4mm @ 30% = 89.10 cum Qty for 0292,0293,0294,0295 codes = 89.10 / 4 = 22.275 cum Qty for 2206, 2202 codes = 89.10 /2 = 44.55 cum 22.4 mm to 2.36mm @ 40% = 118.80 cum Qty for 0294,0295 codes = 118.80 /4 = 29.70 cum Qty for 1179 code = 118.80 /2 = 59.40 cum 2.36 mm to 75 microon @ 30% = 89.10 cum Qty for 2903, 2904 codes = 89.10 / 2 = 44.55 cum				
0292	Stone Aggregate (Single size) : 50 mm nominal size	cum	22.275	900.00	20,047.50
0293	Stone Aggregate (Single size) : 40 mm nominal size	cum	22.275	950.00	21,161.25
0294	Stone Aggregate (Single size) : 25 mm nominal size	cum	22.275	1,000.00	22,275.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0295	Stone Aggregate (Single size) : 20 mm nominal size	cum	22.275	1,050.00	23,388.75
2206	Carriage of stone aggregate 40 mm nominal size and above	cum	44.55	95.22	4,241.94
2202	Carriage of stone aggregate below 40 mm nominal size	cum	44.55	87.60	3,902.58
0294	Stone Aggregate (Single size) : 25 mm nominal size	cum	29.70	1,000.00	29,700.00
0295	Stone Aggregate (Single size) : 20 mm nominal size	cum	29.70	1,050.00	31,185.00
1179	Crushed stone 2.36 mm to 12.5 mm size	cum	59.40	915.00	54,351.00
2202	Carriage of stone aggregate below 40 mm nominal size	cum	118.80	87.60	10,406.88
2903	Stone chippings/ screenings 4.75 mm nominal size	cum	44.55	1,150.00	51,232.50
2904	Stone chippings/ screenings 150 micron nominal size	cum	44.55	1,150.00	51,232.50
2203	Carriage of coarse sand	cum	89.10	87.60	7,805.16
	(B) Machinery				
0059	Wet Mix Plant 60 TPH @75 tonne capacity	hour	6.60	1,200.00	7,920.00
0070	Generator 100 KVA/125 KVA	hour	6.00	700.00	4,200.00
0057	Water Tanker 5 to 6 KL capacity 5 km lead with one trip per hour	hour	3.00	150.00	450.00
0052	Front end loader 1 cum bucket capacity (incl POL)	hour	6.00	800.00	4,800.00
	Tipper 10 tonne capacity(taking lead= 10 Km) =495 x 10 =4950 t.km				
0053	Tipper -5 Cum	tonne km	4,950.00	3.00	14,850.00(X)
	Add 10% of cost of carriage to cover loading and unloading				
	X x 10 / 100 = 14850.00 x 10 / 100				1,485.00
0065	Paver finisher Mechanical 100 TPH	hour	6.00	1,000.00	6,000.00
0054	Vibratory roller 8 to 10 tonne	hour	3.90	1,550.00	6,045.00
	(C) Labour				
0128	Mate	day	0.48	260.00	124.80
0139	Skilled Beldar (for floor rubbing etc.)	day	2.00	260.00	520.00
0114	Beldar	day	10.00	247.00	2,470.00
	TOTAL				3,79,794.86
	Add Water Charges @ 1%				3,797.95
	TOTAL				3,83,592.81
	Add CPOH @ 15%				57,538.92
	Cost of 225 cum				4,41,131.73
	Cost of 1 cum				1,960.59
	Say				1,960.60

16.80 Construction of dry lean cement concrete sub base over a prepared sub-grade with coarse and fine aggregate conforming to IS:383, the size of coarse aggregate not exceeding 25 mm, aggregate cement ratio not to exceed 15:1, aggregate gradation after blending to be as per specifications, 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, for all leads & lifts, laid with a mechanical paver, compacting with 8-10 tonne vibratory roller, finishing and curing etc. complete as per direction of Engineer-in-charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 450 cum (990 tonne)				
	(A) Material				
	Crushed stone coarse aggregate of 25mm & 12.5 mm nominal sizes graded as per specifications @ 0.90 cum/cum of concrete conforming to specification. = 405 cum				
	Coarse Sand @0.45 m3 per cum of concrete = 203 cum				
	Cement @150 Kg. per cum of concrete = 67.50 cum				
	Qty for 0294,0296 codes = 405 / 2 = 202.50 cum				
0294	Stone Aggregate (Single size) : 25 mm nominal size	cum	202.50	1,000.00	2,02,500.00
0296	Stone Aggregate (Single size) : 12.5 mm nominal size	cum	202.50	1,050.00	2,12,625.00
0982	Coarse sand (zone III)	cum	203.00	1,120.00	2,27,360.00
0367	Portland Cement	tonne	67.50	5,000.00	3,37,500.00
2202	Carriage of stone aggregate below 40 mm nominal size	cum	405.00	87.60	35,478.00
2203	Carriage of coarse sand	cum	203.00	87.60	17,782.80
2209	Carriage of cement	tonne	67.50	77.87	5,256.20
	(B) Machinery				
0052	Front end loader 1 cum bucket capacity (incl POL)	hour	6.00	800.00	4,800.00
0066	Batching and Mixing Plant @ 75 cum per hour	hour	6.00	2,500.00	15,000.00
0069	Generator 250 KVA	hour	6.00	900.00	5,400.00
0065	Paver finisher Mechanical 100 TPH	hour	6.00	1,000.00	6,000.00
0054	Vibratory roller 8 to 10 tonne	hour	8.00	1,550.00	12,400.00
0057	Water Tanker 5 to 6 KL capacity	hour	8.00	150.00	1,200.00
	Tipper (990 tonne x 10 km)				
0053	Tipper -5 Cum tonne	km	9,900.00	3.00	29,700.00(X)
	Add 10% of cost of carriage to cover loading and unloading				
	X x 10 / 100 = 29700.00 x 10 / 100				2,970.00
	(C) Labour				
0128	Mate	day	1.12	260.00	291.20
0139	Skilled Beldar (for floor rubbing etc.)	day	6.00	260.00	1,560.00
0114	Beldar	day	22.00	247.00	5,434.00
	TOTAL				11,23,257.20
	Add Water Charges @ 1%				11,232.57
	TOTAL				11,34,489.77
	Add CPOH @ 15%				1,70,173.47
	Cost of 450 cum				13,04,663.24
	Cost of 1 cum				2,899.25
	Say				2,899.25

16.81 Providing and erecting 2.00 metre high temporary barricading at site as per drawing/ direction of Engineer-in-Charge which includes writing and painting, arrangement for traffic diversion such as traffic signals during construction at site for day and night, glow lamps, reflective signs, marking, flags, caution tape as directed by the Engineer-in-Charge. The barricading provided shall be retained in position at site continuously i/c shifting of barricading from one location to another location as many times as required during the execution of the entire work till its completion. Rate include its maintenance for damages, painting, all incidentals, labour materials, equipments and works required to execute the job. The barricading shall not be removed without prior approval of Engineer-in-Charge. (Note :- One time payment shall be made for providing barricading from start of work till completion of work i/c shifting. The barricading provided shall remain to be the property of the contractor on completion of the work).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 2.5metre (for one no. barricading board of size 2.50 X 2.00 m)				
	(A) Material				
16.81X	Material as per Item No. 16.81X of SH: Road Work	metre	2.50	39.05	97.62
	(B) Fabrication Charges				
16.81Y	Fabrication charges as per Item No. 16.81Y of SH: Road Work	metre	2.50	607.20	1,518.00
	(C) Priming coat = 2x2.50 x2.00 x 1.10 = 11.00 Sqm.				
13.50.3	Rate as per Item Number 13.50.3 of SH: Finishing	sqm	11.00	20.70	227.70 (A)
	(D) Painting with synthetic enamel paint = 2x2.50 x2.00 x 1.10 = 11.00 sqm				
13.61.1	Rate as per Item Number 13.61.1 of SH: Finishing	sqm	11.00	53.85	592.35 (A)
	TOTAL				2,435.67
	Add Water Charges @ 1% except on A i.e on (2,435.67 - 820.05 =) 1,615.62				16.16
	TOTAL				2,451.83
	Add CPOH @ 15% except on A i.e on (2,451.83 - 820.05 =) 1,631.78				244.77
	Cost of 2.5 metre				2,696.60
	Cost of 1 metre				1,078.64
	Say				1,078.65

16.81X Sub analysis item for material component of Item No. 16.81

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 2.5 metre MATERIAL: M.S. Sheet 1.63mm thick = 1x2.50x2.00 = 5.00 sqm @ 12.80 kg/sqm = 64.00 kg wastage @ 5%= 3.20 kg Total = 67.20 kg				
1013	Mild steel sheets for tanks MS Angle - 40 x 40 x 6 mm Outframe=2x(2.50+2.00)=9.00 m Vertical extra = 2x0.300 = 0.60 m Horizontal = 1x2.50 =2.50 m Bracing = 1x3.20 = 3.20 m Bracing at bottom = 2x0.50 = 1.00 m Total = 16.30 m @ 3.50 kg/m = 57.05 kg +	quintal	0.672	4,600.00	3,091.20

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	wastage @ 5% = 2.85 kg Total = 59.90 kg				
1007	Structural steel such as tees, angles channels and R.S. joists M.S. Channel = 2x0.50 =1.00 m @ 5.70 kg/m = 5.70 kg+ wastage @ 5% = 0.29 kg Total = 5.99 kg	quintal	0.599	4,250.00	2,545.75
1007	Structural steel such as tees, angles channels and R.S. joists M.S. Flat 30x5 mm Horizontal = 3x2.50 = 7.50 m Vertical = 2x2.00 = 4.00 m Total = 11.50 m @ 1.20 kg/m = 13.80 kg + wastage @ 5% = 0.69 kg Total = 14.49 kg	quintal	0.0599	4,250.00	254.58
1008	Flats up to 10 mm in thickness	quintal	0.1449	4,200.00	608.58
2205	Carriage of steel	tonne	0.148	77.87	11.52
	TOTAL = 6511.63				6,511.63 (P)
	Add for maintenance @ 10% on P P x 10 /100 = 6511.63 x 10 /100				651.16 (Q)
	Less for salvage value of material @ 50% on P P x 50 /100 = 6511.63 x 50 /100				3,255.82 (R)
	Total P + Q - R = 6511.63 + 651.16 - 3255.82				3,906.97 (S)
	Assuming that material will become unserviceable after using 40 times, cost of 2.5 metre using once = S/40 S / 40 = 3906.97 / 40 97.67				
	Cost of 2.5 metre				97.67
	Cost of 1 metre				39.07
	Say				39.05

16.81Y Sub analysis item for fabrication charges of Item No. 16.81

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 2.5 metre				
1215	Welding by electric plant	cm	165.00	1.50	247.50
	Cutting, assembling and erection charges				
0102	Blacksmith 1 st class	day	0.115	301.00	34.62
0103	Blacksmith 2nd class	day	0.115	273.00	31.40
0100	Bandhani	day	0.11	260.00	28.60
0114	Beldar	day	0.83	247.00	205.01
9999	Sundries	L.S.	12.10	1.49	18.03
	Labour for riveting / bolting / cutting etc.				
0116	Fitter (grade 1)	day	0.41	301.00	123.41
0103	Blacksmith 2nd class	day	0.54	273.00	147.42
0100	Bandhani	day	0.70	260.00	182.00
0114	Beldar	day	0.54	247.00	133.38
0139	Skilled Beldar (for floor rubbing etc.)	day	0.81	260.00	210.60
9999	Sundries	L.S.	12.10	1.49	18.03
	TOTAL = 1380.00				1,380.00 (P)
	Shifting including transportation, re-erection etc. @ 10% on P				138.00 (Q)
	P x 10 /100 = 1380.00 x 10 /100				
	Total P + Q = 1380.00 + 138.00				1,518.00
	Cost of 2.5 metre				1,518.00
	Cost of 1 metre				607.20
	Say				607.20

16.82 Taking out existing kerb stones of all types from footpath/ central verge, including removal of mortar etc., disposal of unserviceable material to the dumping ground, for which payment shall be made separately and stacking of serviceable material within 50 metre lead as per direction of Engineer-in-Charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 metres				
	LABOUR:				
0114	Beldar	day	0.75	247.00	185.25
0115	Coolie	day	3.00	247.00	741.00
9999	Sundries	L.S.	2.00	1.49	2.98
	TOTAL				929.23
	Add Water Charges @ 1%				9.29
	TOTAL				938.52
	Add CPOH @ 15%				140.78
	Cost of 100 metre				1,079.30
	Cost of 1 metre				10.79
	Say				10.80

16.83 Taking out existing CC interlocking paver blocks from footpath/ central verge, including removal of rubbish etc., disposal of unserviceable material to the dumping ground, for which payment shall be made separately and stacking of serviceable material within 50 metre lead as per direction of Engineer-in-Charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	LABOUR:				
0114	Beldar	day	0.25	247.00	61.75
0115	Coolie	day	1.00	247.00	247.00
9999	Sundries	L.S.	2.70	1.49	4.02
	TOTAL				312.77
	Add Water Charges @ 1%				3.13
	TOTAL				315.90
	Add CPOH @ 15%				47.38
	Cost of 10 sqm				363.28
	Cost of 1 sqm				36.33
	Say				36.35

16.84 Laying old cement cocrete interlocking paver blocks of any design/shape laid in required line, level, curvature, colour and pattern over and including 50 mm thick compacted bed of coarse sand, filling the joints with fine sand etc. all complete as per the direction of Engineer-in-charge. (Old CC paver blocks shall be supplied by the department free of cost).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
	Bedding layer 50mm thick				
0982	Coarse sand (zone III)	cum	0.50	1,120.00	560.00
	Qty = 10 x 0.05 = 0.50 cum				
2203	Carriage of coarse sand	cum	0.50	87.60	43.80
0983	Fine sand (zone IV)	cum	0.15	640.00	96.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
2261	Carriage of fine sand (1 part badarpur sand: 2 parts jamuna sand)	cum	0.15	87.60	13.14
	LABOUR:				
0123	Mason (brick layer) 1 st class	day	0.50	301.00	150.50
0124	Mason (brick layer) 2nd class	day	0.50	273.00	136.50
0114	Beldar	day	1.00	247.00	247.00
0115	Coolie	day	0.50	247.00	123.50
	TOTAL				1,370.44
	Add Water Charges @ 1%				13.70
	TOTAL				1,384.14
	Add CPOH @ 15%				207.62
	Cost of 10 sqm				1,591.76
	Cost of 1 sqm				159.18
	Say				159.20

16.85 Laying at or near ground level old kerb stones of all types in position to the required line, level and curvature, jointed with cement mortar 1:3 (1 cement : 3 coarse sand), including making joints with or without grooves (thickness of joints, except at sharp curve, shall not be more than 5 mm), including making drainage opening wherever required etc. complete as per direction of Engineer-in-charge. (Length of finished kerb edging shall be measured for payment). (Old kerb stones shall be supplied by the department free of cost)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 metres				
	MATERIAL:				
	Number of kerb stones = 100 / 0.405 = 247 Nos.				
	Qty. = 247 x 0.40 x 0.375 x 0.20 = 7.41cum				
	No. of joints = 247 - 1 = 246 Nos.				
	Cement Mortar 1:3 for fixing joints = 246 x [(0.115 + 0.20)/2 x 0.375 x 0.005] = 0.073 cum				
3.8	Rate as per Item Number 3.8 of SH: Mortars	cum	0.073	4,145.55	302.63
	LABOUR:				
0123	Mason (brick layer) 1 st class	day	2.50	301.00	752.50
0124	Mason (brick layer) 2nd class	day	2.50	273.00	682.50
0114	Beldar	day	2.50	247.00	617.50
0115	Coolie	day	1.65	247.00	407.55
	TOTAL				2,762.68
	Add Water Charges @ 1%				27.63
	TOTAL				2,790.31
	Add CPOH @ 15%				418.55
	Cost of 100 metre				3,208.86
	Cost of 1 metre				32.09
	Say				32.10

SUB HEAD : 17

SANITARY INSTALLATIONS

17.1 Providing and fixing water closet squatting pan (Indian type W.C. pan) with 100 mm Sand Cast Iron P or S trap, 10 litre low level white P.V.C. flushing cistern, including flush pipe, manually controlled device (handle lever) conforming to IS : 7231, with all fittings and fixtures complete, including cutting and making good the walls and floors wherever required:

17.1.1 White Vitreous china Orissa pattern W.C. pan of size 580x440 mm with integral type foot rests

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 pan				
	MATERIAL:				
1954	Vitreous china orrisa type W.C. pan size 580 mm	each	1.00	750.00	750.00
7358	Flushing Cistern P.V.C. 10 litre capacity (low level) (White) (with fittings, accessories and flush pipe)	each	1.00	640.00	640.00
1896	100 mm S.C.I. trap with vent heel	each	1.00	308.00	308.00
9999	Cement, sand and grit etc.	L.S.	26.91	1.49	40.10
9999	Carriage of materials	L.S.	26.91	1.49	40.10
	LABOUR:				
0116	Fitter (grade 1)	day	1.25	301.00	376.25
0123	Mason (brick layer) 1 st class	day	0.50	301.00	150.50
0114	Beldar	day	1.00	247.00	247.00
	TOTAL				2,551.95
	Add Water Charges @ 1%				25.52
	TOTAL				2,577.47
	Add CPOH @ 15%				386.62
	Cost of each				2,964.09
	Say				2,964.10

17.1.2 Stainless Steel AISI-304(18/8) Orissa pattern W.C. pan of size 585x480 mm with flush pipe and integrated type foot rests

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 pan				
	MATERIAL:				
7805	Salem Stainless steel AISI - 304 (18/8) Orrisa pattern W.C. pan 724 mm X 578 mm	each	1.00	3,630.00	3,630.00
7358	Flushing Cistern P.V.C. 10 litre capacity (low level) (White) (with fittings, accessories and flush pipe)	each	1.00	640.00	640.00
1896	100 mm S.C.I. trap with vent heel	each	1.00	308.00	308.00
9999	Cement, sand and grit etc.	L.S.	26.91	1.49	40.10
9999	Carriage of materials	L.S.	26.91	1.49	40.10
	LABOUR:				
0116	Fitter (grade 1)	day	1.25	301.00	376.25
0123	Mason (brick layer) 1 st class	day	0.50	301.00	150.50
0114	Beldar	day	1.00	247.00	247.00
	TOTAL				5,431.95
	Add Water Charges @ 1%				54.32

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	TOTAL				5,486.27
	Add CPOH @ 15%				822.94
	Cost of each				6,309.21
	Say				6,309.20

17.2 Providing and fixing white vitreous china pedestal type water closet (European type W.C. pan) with seat and lid, 10 litre low level white P.V.C. flushing cistern, including flush pipe, with manually controlled device (handle lever), conforming to IS : 7231, with all fittings and fixtures complete, including cutting and making good the walls and floors wherever required:

17.2.1 W.C. pan with ISI marked white solid plastic seat and lid

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 pan				
	MATERIAL:				
1875	White plastic seat (solid) with lid C.P. brass hinges and rubber buffers	each	1.00	310.00	310.00
1955	Vitreous china pedestal type water closet	each	1.00	680.00	680.00
7358	Flushing Cistern P.V.C. 10 litre capacity (low level) (White) (with fittings, accessories and flush pipe)	each	1.00	640.00	640.00
9999	Cement, sand and grit etc.	L.S.	26.91	1.49	40.10
9999	Carriage of materials	L.S.	26.91	1.49	40.10
	LABOUR:				
0116	Fitter (grade 1)	day	1.25	301.00	376.25
0123	Mason (brick layer) 1 st class	day	0.50	301.00	150.50
0114	Beldar	day	1.00	247.00	247.00
	TOTAL				2,483.95
	Add Water Charges @ 1%				24.84
	TOTAL				2,508.79
	Add CPOH @ 15%				376.32
	Cost of each				2,885.11
	Say				2,885.10

17.2.2 W.C. pan with ISI marked black solid plastic seat and lid

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 pan				
	MATERIAL:				
1876	Black plastic seat (solid) with lid C.P. brass hinges and rubber buffers	each	1.00	293.00	293.00
1955	Vitreous china pedestal type water closet	each	1.00	680.00	680.00
7358	Flushing Cistern P.V.C. 10 litre capacity (low level) (White) (with fittings, accessories and flush pipe)	each	1.00	640.00	640.00
9999	Cement, sand and grit etc.	L.S.	26.91	1.49	40.10
9999	Carriage of materials	L.S.	26.91	1.49	40.10
	LABOUR:				
0116	Fitter (grade 1)	day	1.25	301.00	376.25

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0123	Mason (brick layer) 1 st class	day	0.50	301.00	150.50
0114	Beldar	day	1.00	247.00	247.00
	TOTAL				2,466.95
	Add Water Charges @ 1%				24.67
	TOTAL				2,491.62
	Add CPOH @ 15%				373.74
	Cost of each				2,865.36
	Say				2,865.35

17.3 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, 40 mm 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:

17.3.1 W.C. pan with ISI marked white solid plastic seat and lid

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 pan				
	MATERIAL:				
1875	White plastic seat (solid) with lid C.P. brass hinges and rubber buffers	each	1.00	310.00	310.00
1955	Vitreous china pedestal type water closet	each	1.00	680.00	680.00
7006	Vitreous china 10 litres low level cistern with fittings	each	1.00	1,550.00	1,550.00
9999	Overflow arrangement and specials for oveflow pipe	L.S.	62.79	1.49	93.56
1350	Mosquito proof coupling of approved design	each	1.00	27.00	27.00
9999	Plugs, screws etc	L.S.	13.52	1.49	20.14
9999	Red lead, white lead and gasket	L.S.	16.12	1.49	24.02
9999	Cement, sand and grit etc.	L.S.	26.91	1.49	40.10
9999	Carriage of materials	L.S.	26.91	1.49	40.10
	LABOUR:				
0116	Fitter (grade 1)	day	1.00	301.00	301.00
0123	Mason (brick layer) 1 st class	day	1.00	301.00	301.00
0114	Beldar	day	1.00	247.00	247.00
	TOTAL				3,633.92
	Add Water Charges @ 1%				36.34
	TOTAL				3,670.26
	Add CPOH @ 15%				550.54
	Cost of each				4,220.80
	Say				4,220.80

17.3.2 W.C. pan with ISI marked black solid plastic seat and lid

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 pan				
	MATERIAL:				
1876	Black plastic seat (solid) with lid C.P. brass hinges and rubber buffers	each	1.00	293.00	293.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1955	Vitreous china pedestal type water closet	each	1.00	680.00	680.00
7006	Vitreous china 10 litres low level cistern with fittings	each	1.00	1,550.00	1,550.00
9999	Overflow arrangement and specials for oveflow pipe	L.S.	62.79	1.49	93.56
1350	Mosquito proof coupling of approved design	each	1.00	27.00	27.00
9999	Plugs, screws etc	L.S.	13.52	1.49	20.14
9999	Red lead, white lead and gasket	L.S.	16.12	1.49	24.02
9999	Cement, sand and grit etc.	L.S.	26.91	1.49	40.10
9999	Carriage of materials	L.S.	26.91	1.49	40.10
	LABOUR:				
0116	Fitter (grade 1)	day	1.00	301.00	301.00
0123	Mason (brick layer) 1 st class	day	1.00	301.00	301.00
0114	Beldar	day	1.00	247.00	247.00
	TOTAL				3,616.92
	Add Water Charges @ 1%				36.17
	TOTAL				3,653.09
	Add CPOH @ 15%				547.96
	Cost of each				4,201.05
	Say				4,201.05

17.4 Providing and fixing white vitreous china flat back or wall corner type lipped front urinal basin of 430x260x350 mm and 340x410x265 mm 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:

17.4.1 One urinal basin with 5 litre white P.V.C. automatic flushing cistern

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1913	Vitreous china lipped front urinal	each	1.00	460.00	460.00
7359	P.V.C. automatic flushing cistern 5 litre capacity	each	1.00	490.00	490.00
7375	G.I. flush pipe and C.P. brass spreader including C.P. connecting pipe Single lipped urinal	each	1.00	440.00	440.00
9999	Red lead, white lead and gasket	L.S.	13.52	1.49	20.14
9999	Plugs, screws etc	L.S.	13.52	1.49	20.14
9999	Cement, sand and grit etc.	L.S.	13.52	1.49	20.14
9999	Painting of fittings etc.	L.S.	39.00	1.49	58.11
9999	Carriage of materials	L.S.	26.91	1.49	40.10
	LABOUR:				
0116	Fitter (grade 1)	day	0.88	301.00	264.88
0123	Mason (brick layer) 1 st class	day	0.88	301.00	264.88
0114	Beldar	day	1.50	247.00	370.50
	TOTAL				2,448.89
	Add Water Charges @ 1%				24.49
	TOTAL				2,473.38
	Add CPOH @ 15%				371.01
	Cost of each				2,844.39
	Say				2,844.40

17.4.2 Range of two urinal basins with 5 litre white P.V.C. automatic flushing cistern

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1913	Vitreous china lipped front urinal	each	2.00	460.00	920.00
7359	P.V.C. automatic flushing cistern 5 litre capacity	each	1.00	490.00	490.00
7376	G.I. flush pipe and C.P. brass spreader including C.P. connecting pipe Range of two lipped urinals	each	1.00	1,010.00	1,010.00
9999	Red lead, white lead and gasket	L.S.	20.28	1.49	30.22
9999	Plugs, screws etc	L.S.	20.28	1.49	30.22
9999	Cement, sand and grit etc.	L.S.	20.28	1.49	30.22
9999	Painting of fittings etc.	L.S.	39.00	1.49	58.11
9999	Carriage of materials	L.S.	26.91	1.49	40.10
	LABOUR:				
0116	Fitter (grade 1)	day	1.50	301.00	451.50
0123	Mason (brick layer) 1 st class	day	1.50	301.00	451.50
0114	Beldar	day	2.00	247.00	494.00
	TOTAL				4,005.87
	Add Water Charges @ 1%				40.06
	TOTAL				4,045.93
	Add CPOH @ 15%				606.89
	Cost of each				4,652.82
	Say				4,652.80

17.4.3 Range of three urinal basins with 10 litre white P.V.C. automatic flushing cistern

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1913	Vitreous china lipped front urinal	each	3.00	460.00	1,380.00
7361	P.V.C. automatic flushing cistern 10 litre capacity	each	1.00	530.00	530.00
7377	G.I. flush pipe and C.P. brass spreader including C.P. connecting pipe Range of three lipped urinals	each	1.00	1,240.00	1,240.00
9999	Red lead, white lead and gasket	L.S.	33.67	1.49	50.17
9999	Plugs, screws etc	L.S.	33.67	1.49	50.17
9999	Cement, sand and grit etc.	L.S.	33.67	1.49	50.17
9999	Painting of fittings etc.	L.S.	39.00	1.49	58.11
9999	Carriage of materials	L.S.	40.30	1.49	60.05
	LABOUR:				
0116	Fitter (grade 1)	day	2.00	301.00	602.00
0123	Mason (brick layer) 1 st class	day	2.00	301.00	602.00
0114	Beldar	day	3.00	247.00	741.00
	TOTAL				5,363.67
	Add Water Charges @ 1%				53.64
	TOTAL				5,417.31
	Add CPOH @ 15%				812.60
	Cost of each				6,229.91
	Say				6,229.90

17.4.4 Range of four urinal basins with 10 litre white P.V.C. automatic flushing cistern

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1913	Vitreous china lipped front urinal	each	4.00	460.00	1,840.00
7361	P.V.C. automatic flushing cistern 10 litre capacity	each	1.00	530.00	530.00
7378	G.I. flush pipe and C.P. brass spreader including C.P.connecting pipe Range of four lipped urinals	each	1.00	1,800.00	1,800.00
9999	Red lead, white lead and gasket	L.S.	53.82	1.49	80.19
9999	Plugs, screws etc	L.S.	53.82	1.49	80.19
9999	Cement, sand and grit etc.	L.S.	53.82	1.49	80.19
9999	Painting of fittings etc.	L.S.	39.00	1.49	58.11
9999	Carriage of materials	L.S.	53.82	1.49	80.19
	LABOUR:				
0116	Fitter (grade 1)	day	3.00	301.00	903.00
0123	Mason (brick layer) 1 st class	day	3.00	301.00	903.00
0114	Beldar	day	4.00	247.00	988.00
	TOTAL				7,342.87
	Add Water Charges @ 1%				73.43
	TOTAL				7,416.30
	Add CPOH @ 15%				1,112.44
	Cost of each				8,528.74
	Say				8,528.75

17.5 Providing and fixing white vitreous china flat back half stall urinal of size 580x380x350 mm 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:

17.5.1 Single half stall urinal with 5 litre PVC. automatic flushing cistern

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7379	White vitreous china clay half stall urinal flat back 580x380x350 mm or angle back 450x375x350 mm with waste fittings as per IS: 2556	each	1.00	1,440.00	1,440.00
7359	P.V.C. automatic flushing cistern 5 litre capacity	each	.00	490.00	490.00
1532	Flush pipe with union spreaders and clamps all in C.P. brass for single stall	each	1.00	240.00	240.00
1891	C.I. trap for standard urinal with vent arm with operating and other couplings in C.P. brass: 50 mm dia	each	1.00	158.00	158.00
9999	Red lead, white lead and gasket	L.S.	17.55	1.49	26.15
9999	Cement, sand and grit etc.	L.S.	26.91	1.49	40.10
9999	Painting of fittings etc.	L.S.	26.00	1.49	38.74
9999	Carriage of materials	L.S.	40.43	1.49	60.24

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	LABOUR:				
0116	Fitter (grade 1)	day	1.75	301.00	526.75
0123	Mason (brick layer) 1 st class	day	2.00	301.00	602.00
0114	Beldar	day	4.00	247.00	988.00
	TOTAL				4,609.98
	Add Water Charges @ 1%				46.10
	TOTAL				4,656.08
	Add CPOH @ 15%				698.41
	Cost of each				5,354.49
	Say				5,354.50

17.5.2 Range of two half stall urinals with 5 litre PVC. automatic flushing cistern

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7379	White vitreous china clay half stall urinal flat back 580x380x350 mm or angle back 450x375x350 mm with waste fittings as per IS: 2556	each	2.00	1,440.00	2,880.00
7359	P.V.C. automatic flushing cistern 5 litre capacity	each	1.00	490.00	490.00
1533	Flush pipe with union spreaders and clamps all in C.P. brass for double stall	each	1.00	380.00	380.00
1891	C.I. trap for standard urinal with vent arm with operating and other couplings in C.P. brass: 50 mm dia	each	1.00	158.00	158.00
9999	Red lead, white lead and gasket	L.S.	17.55	1.49	26.15
9999	Cement, sand and grit etc.	L.S.	53.82	1.49	80.19
9999	Painting of fittings etc.	L.S.	26.00	1.49	38.74
9999	Carriage of materials	L.S.	53.82	1.49	80.19
	LABOUR:				
0116	Fitter (grade 1)	day	2.50	301.00	752.50
0123	Mason (brick layer) 1 st class	day	3.00	301.00	903.00
0114	Beldar	day	6.00	247.00	1,482.00
	TOTAL				7,270.77
	Add Water Charges @ 1%				72.71
	TOTAL				7,343.48
	Add CPOH @ 15%				1,101.52
	Cost of each				8,445.00
	Say				8,445.00

17.5.3 Range of three half stall urinals with 10 litre PVC. automatic flushing cistern

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7379	White vitreous china clay half stall urinal flat back 580x380x350 mm or angle back 450x375x350 mm with waste fittings as per IS: 2556	each	3.00	1,440.00	4,320.00
7361	P.V.C. automatic flushing cistern 10 litre capacity	each	1.00	530.00	530.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1534	Flush pipe with union spreaders and clamps all in C.P. brass for range of three stall	each	1.00	490.00	490.00
1893	C.I. trap for standard urinal with vent arm with operating and other couplings in C.P. brass: 80 mm dia	each	1.00	200.00	200.00
9999	Red lead, white lead and gasket	L.S.	17.55	1.49	26.15
9999	Cement, sand and grit etc.	L.S.	80.73	1.49	120.29
9999	Painting of fittings etc.	L.S.	26.00	1.49	38.74
9999	Carriage of materials	L.S.	67.21	1.49	100.14
	LABOUR:				
0116	Fitter (grade 1)	day	3.00	301.00	903.00
0123	Mason (brick layer) 1 st class	day	3.50	301.00	1,053.50
0114	Beldar	day	7.00	247.00	1,729.00
	TOTAL				9,510.82
	Add Water Charges @ 1%				95.11
	TOTAL				9,605.93
	Add CPOH @ 15%				1,440.89
	Cost of each				11,046.82
	Say				11,046.80

17.5.4 Range of four half stall urinals with 10 litre PVC. automatic flushing cistern

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7379	White vitreous china clay half stall urinal flat back 580x380x350 mm or angle back 450x375x350 mm with waste fittings as per IS: 2556	each	4.00	1,440.00	5,760.00
7361	P.V.C. automatic flushing cistern 10 litre capacity	each	1.00	530.00	530.00
1535	Flush pipe with union spreaders and clamps all in C.P. brass for range of four stall	each	1.00	570.00	570.00
1893	C.I. trap for standard urinal with vent arm with operating and other couplings in C.P. brass: 80 mm dia	each	1.00	200.00	200.00
9999	Red lead, white lead and gasket	L.S.	17.55	1.49	26.15
9999	Cement, sand and grit etc.	L.S.	107.64	1.49	160.38
9999	Painting of fittings etc.	L.S.	39.00	1.49	58.11
9999	Carriage of materials	L.S.	80.73	1.49	120.29
	LABOUR:				
0116	Fitter (grade 1)	day	3.50	301.00	1,053.50
0123	Mason (brick layer) 1 st class	day	4.00	301.00	1,204.00
0114	Beldar	day	8.00	247.00	1,976.00
	TOTAL				11,658.43
	Add Water Charges @ 1%				116.58
	TOTAL				11,775.01
	Add CPOH @ 15%				1,766.25
	Cost of each				13,541.26
	Say				13,541.25

17.6 Providing and fixing one piece construction white vitreous china squatting plate with an integral longitudinal flushing pipe, white PVC. automatic flushing cistern, with fittings, standard size G.I. / PVC 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:

17.6.1 Single squatting plate with 5 litre PVC. automatic flushing cistern

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1915	Vitreous china squatting plate urinal	each	1.00	740.00	740.00
7359	P.V.C. automatic flushing cistern 5 litre capacity	each	1.00	490.00	490.00
1540	Flush pipe and spreaders G.I. for single set of one squatting plate urinal	each	1.00	170.00	170.00
9999	Red lead, white lead and gasket	L.S.	17.55	1.49	26.15
9999	Cement, sand and grit etc.	L.S.	26.91	1.49	40.10
9999	Painting of fittings etc.	L.S.	26.00	1.49	38.74
9999	Carriage of materials	L.S.	26.91	1.49	40.10
	LABOUR:				
0116	Fitter (grade 1)	day	1.75	301.00	526.75
0123	Mason (brick layer) 1 st class	day	0.75	301.00	225.75
0114	Beldar	day	3.00	247.00	741.00
	TOTAL				3,038.59
	Add Water Charges @ 1%				30.39
	TOTAL				3,068.98
	Add CPOH @ 15%				460.35
	Cost of each				3,529.33
	Say				3,529.35

17.6.2 Range of two squatting plates with 5 litre PVC. automatic flushing cistern

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1915	Vitreous china squatting plate urinal	each	2.00	740.00	1,480.00
7359	P.V.C. automatic flushing cistern 5 litre capacity	each	1.00	490.00	490.00
1541	Flush pipe and spreaders G.I. for range of two squatting plates urinal	each	1.00	230.00	230.00
9999	Red lead, white lead and gasket	L.S.	17.55	1.49	26.15
9999	Cement, sand and grit etc.	L.S.	53.82	1.49	80.19
9999	Painting of fittings etc.	L.S.	26.00	1.49	38.74
9999	Carriage of materials	L.S.	33.15	1.49	49.39
	LABOUR:				
0116	Fitter (grade 1)	day	2.50	301.00	752.50
0123	Mason (brick layer) 1 st class	day	1.00	301.00	301.00
0114	Beldar	day	4.00	247.00	988.00
	TOTAL				4,435.97
	Add Water Charges @ 1%				44.36
	TOTAL				4,480.33
	Add CPOH @ 15%				672.05
	Cost of each				5,152.38
	Say				5,152.40

17.6.3 Range of three squatting plates with 10 litre PVC. automatic flushing cistern

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1915	Vitreous china squatting plate urinal	each	3.00	740.00	2,220.00
7361	P.V.C. automatic flushing cistern 10 litre capacity	each	1.00	530.00	530.00
1542	Flush pipe and spreaders G.I. for range of three squatting plates urinal	each	1.00	290.00	290.00
9999	Red lead, white lead and gasket	L.S.	17.55	1.49	26.15
9999	Cement, sand and grit etc.	L.S.	80.73	1.49	120.29
9999	Painting of fittings etc.	L.S.	26.00	1.49	38.74
9999	Carriage of materials	L.S.	42.12	1.49	62.76
	LABOUR:				
0116	Fitter (grade 1)	day	3.00	301.00	903.00
0123	Mason (brick layer) 1 st class	day	1.50	301.00	451.50
0114	Beldar	day	5.00	247.00	1,235.00
	TOTAL				5,877.44
	Add Water Charges @ 1%				58.77
	TOTAL				5,936.21
	Add CPOH @ 15%				890.43
	Cost of each				6,826.64
	Say				6,826.65

17.6.4 Range of four squatting plates with 10 litre PVC automatic flushing cistern

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1915	Vitreous china squatting plate urinal	each	4.00	740.00	2,960.00
7361	P.V.C. automatic flushing cistern 10 litre capacity	each	1.00	530.00	530.00
1543	Flush pipe and spreaders G.I. for range of four squatting plates urinal	each	1.00	365.00	365.00
9999	Red lead, white lead and gasket	L.S.	17.55	1.49	26.15
9999	Cement, sand and grit etc.	L.S.	107.64	1.49	160.38
9999	Painting of fittings etc.	L.S.	26.00	1.49	38.74
9999	Carriage of materials	L.S.	69.03	1.49	102.85
	LABOUR:				
0116	Fitter (grade 1)	day	3.50	301.00	1,053.50
0123	Mason (brick layer) 1 st class	day	1.75	301.00	526.75
0114	Beldar	day	5.50	247.00	1,358.50
	TOTAL				7,121.87
	Add Water Charges @ 1%				71.22
	TOTAL				7,193.09
	Add CPOH @ 15%				1,078.96
	Cost of each				8,272.05
	Say				8,272.05

17.7 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:

17.7.1 White Vitreous China Wash basin size 630x450 mm with a pair of 15 mm C. P. brass pillar taps

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1947	Vitreous china flat back wash basin 630x450 mm	each	1.00	675.00	675.00
1885	15 mm C.P. brass tap	each	2.00	170.00	340.00
1951	C.P. brass waste 32 mm	each	1.00	55.00	55.00
1309	C.I. bracket for wash basin and sinks	pair	1.00	53.00	53.00
9999	Red lead, white lead and gasket	L.S.	16.12	1.49	24.02
9999	Cement, sand and grit etc.	L.S.	13.39	1.49	19.95
9999	Painting of brackets, fittings etc.	L.S.	26.91	1.49	40.10
9999	Carriage of materials	L.S.	13.52	1.49	20.14
	LABOUR:				
0116	Fitter (grade 1)	day	0.33	301.00	99.33
0123	Mason (brick layer) 1 st class	day	0.33	301.00	99.33
0114	Beldar	day	0.67	247.00	165.49
	TOTAL				1,591.36
	Add Water Charges @ 1%				15.91
	TOTAL				1,607.27
	Add CPOH @ 15%				241.09
	Cost of each				1,848.36
	Say				1,848.35

17.7.2 White Vitreous China Wash basin size 630x450 mm with a single 15 mm C.P. brass pillar tap

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1947	Vitreous china flat back wash basin 630x450 mm	each	1.00	675.00	675.00
1885	15 mm C.P. brass tap	each	1.00	170.00	170.00
1951	C.P. brass waste 32 mm	each	1.00	55.00	55.00
1309	C.I. bracket for wash basin and sinks	pair	1.00	53.00	53.00
9999	Red lead, white lead and gasket	L.S.	16.12	1.49	24.02
9999	Cement, sand and grit etc.	L.S.	13.39	1.49	19.95
9999	Painting of brackets, fittings etc.	L.S.	26.91	1.49	40.10
9999	Carriage of materials	L.S.	13.52	1.49	20.14
	LABOUR:				
0116	Fitter (grade 1)	day	0.30	301.00	90.30
0123	Mason (brick layer) 1 st class	day	0.33	301.00	99.33
0114	Beldar	day	0.63	247.00	155.61
	TOTAL				1,402.45
	Add Water Charges @ 1%				14.02
	TOTAL				1,416.47
	Add CPOH @ 15%				212.47
	Cost of each				1,628.94
	Say				1,628.95

17.7.3 White Vitreous China Wash basin size 550x400 mm with a pair of 15 mm C.P. brass pillar taps

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
3229	Vitreous china flat back wash basin 550x400 mm	each	1.00	530.00	530.00
1885	15 mm C.P. brass tap	each	2.00	170.00	340.00
1951	C.P. brass waste 32 mm	each	1.00	55.00	55.00
1309	C.I. bracket for wash basin and sinks	pair	1.00	53.00	53.00
9999	Red lead, white lead and gasket	L.S.	16.12	1.49	24.02
9999	Cement, sand and grit etc.	L.S.	13.39	1.49	19.95
9999	Painting of brackets, fittings etc.	L.S.	26.91	1.49	40.10
9999	Carriage of materials	L.S.	13.52	1.49	20.14
	LABOUR:				
0116	Fitter (grade 1)	day	0.33	301.00	99.33
0123	Mason (brick layer) 1 st class	day	0.33	301.00	99.33
0114	Beldar	day	0.67	247.00	165.49
	TOTAL				1,446.36
	Add Water Charges @ 1%				14.46
	TOTAL				1,460.82
	Add CPOH @ 15%				219.12
	Cost of each				1,679.94
	Say				1,679.95

17.7.4 White Vitreous China Flat back wash basin size 550x400 mm with single 15 mm C.P. brass pillar tap

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
3229	Vitreous china flat back wash basin 550x400 mm	each	1.00	530.00	530.00
1885	15 mm C.P. brass tap	each	1.00	170.00	170.00
1951	C.P. brass waste 32 mm	each	1.00	55.00	55.00
1309	C.I. bracket for wash basin and sinks	pair	1.00	53.00	53.00
9999	Red lead, white lead and gasket	L.S.	16.12	1.49	24.02
9999	Cement, sand and grit etc.	L.S.	13.39	1.49	19.95
9999	Painting of brackets, fittings etc.	L.S.	26.91	1.49	40.10
9999	Carriage of materials	L.S.	13.52	1.49	20.14
	LABOUR:				
0116	Fitter (grade 1)	day	0.30	301.00	90.30
0123	Mason (brick layer) 1 st class	day	0.33	301.00	99.33
0114	Beldar	day	0.63	247.00	155.61
	TOTAL				1,257.45
	Add Water Charges @ 1%				12.57
	TOTAL				1,270.02
	Add CPOH @ 15%				190.50
	Cost of each				1,460.52
	Say				1,460.50

17.7.5 White Vitreous China Angle back wash basin size 600x480 mm with single 15 mm C.P. brass pillar tap

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1949	Vitreous china angle back wash basin 600x480 mm	each	1.00	580.00	580.00
1885	15 mm C.P. brass tap	each	1.00	170.00	170.00
1951	C.P. brass waste 32 mm	each	1.00	55.00	55.00
1309	C.I. bracket for wash basin and sinks	pair	1.00	53.00	53.00
9999	Red lead, white lead and gasket	L.S.	16.12	1.49	24.02
9999	Cement, sand and grit etc.	L.S.	13.39	1.49	19.95
9999	Painting of brackets, fittings etc.	L.S.	26.91	1.49	40.10
9999	Carriage of materials	L.S.	13.52	1.49	20.14
	LABOUR:				
0116	Fitter (grade 1)	day	0.30	301.00	90.30
0123	Mason (brick layer) 1 st class	day	0.33	301.00	99.33
0114	Beldar	day	0.63	247.00	155.61
	TOTAL				1,307.45
	Add Water Charges @ 1%				13.07
	TOTAL				1,320.52
	Add CPOH @ 15%				198.08
	Cost of each				1,518.60
	Say				1,518.60

17.7.6 White Vitreous China Angle back wash basin size 400x400 mm with single 15 mm C.P. brass pillar tap

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1950	Vitreous china angle back wash basin 400x400 mm	each	1.00	405.00	405.00
1885	15 mm C.P. brass tap	each	1.00	170.00	170.00
1951	C.P. brass waste 32 mm	each	1.00	55.00	55.00
1309	C.I. bracket for wash basin and sinks	pair	1.00	53.00	53.00
9999	Red lead, white lead and gasket	L.S.	16.12	1.49	24.02
9999	Cement, sand and grit etc.	L.S.	13.39	1.49	19.95
9999	Painting of brackets, fittings etc.	L.S.	26.91	1.49	40.10
9999	Carriage of materials	L.S.	13.52	1.49	20.14
	LABOUR:				
0116	Fitter (grade 1)	day	0.30	301.00	90.30
0123	Mason (brick layer) 1 st class	day	0.33	301.00	99.33
0114	Beldar	day	0.63	247.00	155.61
	TOTAL				1,132.45
	Add Water Charges @ 1%				11.32
	TOTAL				1,143.77
	Add CPOH @ 15%				171.57
	Cost of each				1,315.34
	Say				1,315.35

17.7.7 White Vitreous China Flat back wash basin size 450x300 mm with single 15 mm C.P. brass pillar tap

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7004	Vitreous china flat back wash basin 450x300 mm	each	1.00	425.00	425.00
1885	15 mm C.P. brass tap	each	1.00	170.00	170.00
1951	C.P. brass waste 32 mm	each	1.00	55.00	55.00
1309	C.I. bracket for wash basin and sinks	pair	1.00	53.00	53.00
9999	Red lead, white lead and gasket	L.S.	16.12	1.49	24.02
9999	Cement, sand and grit etc.	L.S.	13.39	1.49	19.95
9999	Painting of brackets, fittings etc.	L.S.	26.91	1.49	40.10
9999	Carriage of materials	L.S.	13.52	1.49	20.14
	LABOUR:				
0116	Fitter (grade 1)	day	0.30	301.00	90.30
0123	Mason (brick layer) 1 st class	day	0.33	301.00	99.33
0114	Beldar	day	0.63	247.00	155.61
	TOTAL				1,152.45
	Add Water Charges @ 1%				11.52
	TOTAL				1,163.97
	Add CPOH @ 15%				174.60
	Cost of each				1,338.57
	Say				1,338.55

17.7.8 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

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
3213	Vitreous china Surgeon type wash basin of size 660x460 mm	each	1.00	995.00	995.00
7363	15 mm C.P. brass tap with elbow operation lever	each	2.00	600.00	1,200.00
1951	C.P. brass waste 32 mm	each	1.00	55.00	55.00
1309	C.I. bracket for wash basin and sinks	pair	1.00	53.00	53.00
9999	Red lead, white lead and gasket	L.S.	16.12	1.49	24.02
9999	Cement, sand and grit etc.	L.S.	13.39	1.49	19.95
9999	Painting of brackets, fittings etc.	L.S.	26.91	1.49	40.10
9999	Carriage of materials	L.S.	13.52	1.49	20.14
	LABOUR:				
0116	Fitter (grade 1)	day	0.33	301.00	99.33
0123	Mason (brick layer) 1 st class	day	0.33	301.00	99.33
0114	Beldar	day	0.67	247.00	165.49
	TOTAL				2,771.36
	Add Water Charges @ 1%				27.71
	TOTAL				2,799.07
	Add CPOH @ 15%				419.86
	Cost of each				3,218.93
	Say				3,218.95

17.7.9 White Vitreous China Surgeon type wash basin of size 660x460 mm with single 15 mm CP. brass pillar taps with elbow operated levers ISI marked

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
3213	Vitreous china Surgeon type wash basin of size 660x460 mm	each	1.00	995.00	995.00
7363	15 mm C.P. brass tap with elbow operation lever	each	1.00	600.00	600.00
1951	C.P. brass waste 32 mm	each	1.00	55.00	55.00
1309	C.I. bracket for wash basin and sinks	pair	1.00	53.00	53.00
9999	Red lead, white lead and gasket	L.S.	16.12	1.49	24.02
9999	Cement, sand and grit etc.	L.S.	13.39	1.49	19.95
9999	Painting of brackets, fittings etc.	L.S.	26.91	1.49	40.10
9999	Carriage of materials	L.S.	13.52	1.49	20.14
	LABOUR:				
0116	Fitter (grade 1)	day	0.30	301.00	90.30
0123	Mason (brick layer) 1 st class	day	0.33	301.00	99.33
0114	Beldar	day	0.63	247.00	155.61
	TOTAL				2,152.45
	Add Water Charges @ 1%				21.52
	TOTAL				2,173.97
	Add CPOH @ 15%				326.10
	Cost of each				2,500.07
	Say				2,500.05

17.7.10 Stainless Steel AISI-304(18/8) Round basin 405x355 mm with single 15 mm C.P. brass pillar tap

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7806	Salem Stainless steel AISI - 304 (18/8) Round basin 405mm X 355 mm	each	1.00	1,690.00	1,690.00
1885	15 mm C.P. brass tap	each	1.00	170.00	170.00
1951	C.P. brass waste 32 mm	each	1.00	55.00	55.00
1309	C.I. bracket for wash basin and sinks	pair	1.00	53.00	53.00
9999	Red lead, white lead and gasket	L.S.	16.12	1.49	24.02
9999	Cement, sand and grit etc.	L.S.	13.39	1.49	19.95
9999	Painting of brackets, fittings etc.	L.S.	26.91	1.49	40.10
9999	Carriage of materials	L.S.	13.52	1.49	20.14
	LABOUR:				
0116	Fitter (grade 1)	day	0.30	301.00	90.30
0123	Mason (brick layer) 1 st class	day	0.33	301.00	99.33
0114	Beldar	day	0.63	247.00	155.61
	TOTAL				2,417.45
	Add Water Charges @ 1%				24.17
	TOTAL				2,441.62
	Add CPOH @ 15%				366.24
	Cost of each				2,807.86
	Say				2,807.85

17.7.11 Stainless Steel AISI-304(18/8) Wash basin 530x345 mm with single 15 mm C.P. brass pillar tap

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7807	Salem Stainless steel AISI - 304 (18/8) Wash basin 530mm X 345 mm	each	1.00	1,470.00	1,470.00
1885	15 mm C.P. brass tap	each	1.00	170.00	170.00
1951	C.P. brass waste 32 mm	each	1.00	55.00	55.00
1309	C.I. bracket for wash basin and sinks	pair	1.00	53.00	53.00
9999	Red lead, white lead and gasket	L.S.	16.12	1.49	24.02
9999	Cement, sand and grit etc.	L.S.	13.39	1.49	19.95
9999	Painting of brackets, fittings etc.	L.S.	26.91	1.49	40.10
9999	Carriage of materials	L.S.	13.52	1.49	20.14
	LABOUR:				
0116	Fitter (grade 1)	day	0.30	301.00	90.30
0123	Mason (brick layer) 1 st class	day	0.33	301.00	99.33
0114	Beldar	day	0.63	247.00	155.61
	TOTAL				2,197.45
	Add Water Charges @ 1%				21.97
	TOTAL				2,219.42
	Add CPOH @ 15%				332.91
	Cost of each				2,552.33
	Say				2,552.35

17.8 Providing and fixing white vitreous china pedestal for wash basin completely recessed at the back for the reception of pipes and fittings.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one pedestal				
	MATERIAL:				
1396	Vitreous china pedestal for wash basin	each	1.00	650.00	650.00
9999	White cement mortar	L.S.	40.30	1.49	60.05
9999	Carriage of materials and fixing charges	L.S.	40.43	1.49	60.24
	TOTAL				770.29
	Add Water Charges @ 1%				7.70
	TOTAL				777.99
	Add CPOH @ 15%				116.70
	Cost of each				894.69
	Say				894.70

17.9 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:

17.9.1 White glazed fire clay kitchen sink of size 600x450x250 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1863	Fire clay kitchen sink: 600x450x250 mm	each	1.00	1,350.00	1,350.00
1309	C.I. bracket for wash basin and sinks	pair	1.00	53.00	53.00
1315	C.P.brass chain with 40 mm dia rubber plug	each	1.00	27.00	27.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1952	C.P. brass waste 40 mm	each	1.00	62.00	62.00
9999	Red lead, white lead and gasket	L.S.	16.12	1.49	24.02
9999	Cement, sand and grit etc.	L.S.	13.39	1.49	19.95
9999	Painting of brackets etc.	L.S.	26.91	1.49	40.10
9999	Carriage of materials	L.S.	13.52	1.49	20.14
	LABOUR:				
0116	Fitter (grade 1)	day	0.22	301.00	66.22
0123	Mason (brick layer) 1 st class	day	0.33	301.00	99.33
0114	Beldar	day	0.56	247.00	138.32
	TOTAL				1,900.08
	Add Water Charges @ 1%				19.00
	TOTAL				1,919.08
	Add CPOH @ 15%				287.86
	Cost of each				2,206.94
	Say				2,206.95

17.10 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:

17.10.1 Kitchen sink with drain board

17.10.1.1 510x1040 mm bowl depth 250 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7095	Stainless steel kitchen sink - with drain board bowl depth 250 mm	each	1.00	5,150.00	5,150.00
1309	C.I. bracket for wash basin and sinks	pair	2.00	53.00	106.00
9999	Cement, sand and grit etc.	L.S.	27.04	1.49	40.29
9999	Painting of brackets etc.	L.S.	26.91	1.49	40.10
9999	Carriage of materials	L.S.	13.52	1.49	20.14
	LABOUR:				
0116	Fitter (grade 1)	day	0.22	301.00	66.22
0123	Mason (brick layer) 1 st class	day	0.60	301.00	180.60
0114	Beldar	day	0.82	247.00	202.54
	TOTAL				5,805.89
	Add Water Charges @ 1%				58.06
	TOTAL				5,863.95
	Add CPOH @ 15%				879.59
	Cost of each				6,743.54
	Say				6,743.55

17.10.1.2 510x1040 mm bowl depth 225 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7096	Stainless steel kitchen sink - with drain board 510 x 1040 mm bowl depth 225 mm	each	1.00	4,900.00	4,900.00
1309	C.I. bracket for wash basin and sinks	pair	2.00	53.00	106.00
9999	Cement, sand and grit etc.	L.S.	27.04	1.49	40.29

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Painting of brackets	L.S.	26.91	1.49	40.10
9999	Carriage of materials	L.S.	13.52	1.49	20.14
	LABOUR:				
0116	Fitter (grade 1)	day	0.22	301.00	66.22
0123	Mason (brick layer) 1 st class	day	0.60	301.00	180.60
0114	Beldar	day	0.82	247.00	202.54
	TOTAL				5,555.89
	Add Water Charges @ 1%				55.56
	TOTAL				5,611.45
	Add CPOH @ 15%				841.72
	Cost of each				6,453.17
	Say				6,453.15

17.10.1.3 510x1040 mm bowl depth 200 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7097	Stainless steel kitchen sink - with drain board 510 x 1040 mm bowl depth 200 mm	each	1.00	4,200.00	4,200.00
1309	C.I. bracket for wash basin and sinks	pair	2.00	53.00	106.00
9999	Cement, sand and grit etc.	L.S.	27.04	1.49	40.29
9999	Painting brackets	L.S.	26.91	1.49	40.10
9999	Carriage of materials	L.S.	13.52	1.49	20.14
	LABOUR:				
0116	Fitter (grade 1)	day	0.22	301.00	66.22
0123	Mason (brick layer) 1 st class	day	0.60	301.00	180.60
0114	Beldar	day	0.82	247.00	202.54
	TOTAL				4,855.89
	Add Water Charges @ 1%				48.56
	TOTAL				4,904.45
	Add CPOH @ 15%				735.67
	Cost of each				5,640.12
	Say				5,640.10

17.10.1.4 510x1040 mm bowl depth 178 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7098	Stainless steel kitchen sink - with drain board 510x1040 mm bowl depth 178 mm	each	1.00	2,900.00	2,900.00
1309	C.I. bracket for wash basin and sinks	pair	2.00	53.00	106.00
9999	Cement, sand and grit etc.	L.S.	27.04	1.49	40.29
9999	Painting brackets	L.S.	26.91	1.49	40.10
9999	Carriage of materials	L.S.	13.52	1.49	20.14
	LABOUR:				
0116	Fitter (grade 1)	day	0.22	301.00	66.22
0123	Mason (brick layer) 1 st class	day	0.60	301.00	180.60
0114	Beldar	day	0.82	247.00	202.54
	TOTAL				3,555.89
	Add Water Charges @ 1%				35.56

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	TOTAL				3,591.45
	Add CPOH @ 15%				538.72
	Cost of each				4,130.17
	Say				4,130.15

17.10.2 Kitchen sink without drain board

17.10.2.1 610x510 mm bowl depth 200 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7101	Stainless steel kitchen sink - without drain board 610x510 mm bowl depth 200 mm	each	1.00	2,950.00	2,950.00
1309	C.I. bracket for wash basin and sinks	pair	1.00	53.00	53.00
9999	Cement, sand and grit etc.	L.S.	13.52	1.49	20.14
9999	Painting brackets	L.S.	26.91	1.49	40.10
9999	Carriage of materials	L.S.	13.52	1.49	20.14
	LABOUR:				
0116	Fitter (grade 1)	day	0.22	301.00	66.22
0123	Mason (brick layer) 1 st class	day	0.33	301.00	99.33
0114	Beldar	day	0.56	247.00	138.32
	TOTAL				3,387.25
	Add Water Charges @ 1%				33.87
	TOTAL				3,421.12
	Add CPOH @ 15%				513.17
	Cost of each				3,934.29
	Say				3,934.30

17.10.2.2 610x460 mm bowl depth 200 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7102	Stainless steel kitchen sink - without drain board 610x460 mm bowl depth 200 mm	each	1.00	2,750.00	2,750.00
1309	C.I. bracket for wash basin and sinks	pair	1.00	53.00	53.00
9999	Cement, sand and grit etc.	L.S.	13.52	1.49	20.14
9999	Painting brackets	L.S.	26.91	1.49	40.10
9999	Carriage of materials	L.S.	13.52	1.49	20.14
	LABOUR:				
0116	Fitter (grade 1)	day	0.22	301.00	66.22
0123	Mason (brick layer) 1 st class	day	0.33	301.00	99.33
0114	Beldar	day	0.56	247.00	138.32
	TOTAL				3,187.25
	Add Water Charges @ 1%				31.87
	TOTAL				3,219.12
	Add CPOH @ 15%				482.87
	Cost of each				3,701.99
	Say				3,702.00

17.10.2.3 470x420 mm bowl depth 178 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7103	Stainless steel kitchen sink - without drain board 470x420 mm bowl depth 178 mm	each	1.00	2,050.00	2,050.00
1309	C.I. bracket for wash basin and sinks	pair	1.00	53.00	53.00
9999	Cement, sand and grit etc.	L.S.	13.52	1.49	20.14
9999	Painting brackets	L.S.	26.91	1.49	40.10
9999	Carriage of materials	L.S.	13.52	1.49	20.14
	LABOUR:				
0116	Fitter (grade 1)	day	0.22	301.00	66.22
0123	Mason (brick layer) 1 st class	day	0.33	301.00	99.33
0114	Beldar	day	0.56	247.00	138.32
	TOTAL				2,487.25
	Add Water Charges @ 1%				24.87
	TOTAL				2,512.12
	Add CPOH @ 15%				376.82
	Cost of each				2,888.94
	Say				2,888.95

17.11 Providing and fixing white vitreous china laboratory sink with C.I. brackets, C.P. brass chain with rubber plug, 40 mm C.P brass waste and 40 mm C.P. brass trap with necessary C.P. brass unions complete, including painting of fittings and brackets, cutting and making good the wall wherever required:

17.11.1 Size 450x300x150 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1871	White vitreous china laboratory sink 450x300x150 mm	each	1.00	820.00	820.00
1309	C.I. bracket for wash basin and sinks	pair	1.00	53.00	53.00
1315	C.P.brass chain with 40 mm dia rubber plug	each	1.00	27.00	27.00
1952	C.P. brass waste 40 mm	each	1.00	62.00	62.00
1895	C.P. brass trap 40 mm dia	each	1.00	125.00	125.00
3617	C.P. Brass union 40mm dia	each	1.00	175.00	175.00
9999	Red lead, white lead and gasket	L.S.	16.12	1.49	24.02
9999	Cement, sand and grit etc.	L.S.	13.39	1.49	19.95
9999	Sundries	L.S.	26.91	1.49	40.10
9999	Carriage of materials	L.S.	13.52	1.49	20.14
	LABOUR:				
0116	Fitter (grade 1)	day	0.22	301.00	66.22
0123	Mason (brick layer) 1 st class	day	0.33	301.00	99.33
0114	Beldar	day	0.56	247.00	138.32
	TOTAL				1,670.08
	Add Water Charges @ 1%				16.70
	TOTAL				1,686.78
	Add CPOH @ 15%				253.02
	Cost of each				1,939.80
	Say				1,939.80

17.11.2 Size 600x450x200 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1872	White vitreous china laboratory sink 600x450x200 mm	each	1.00	1,525.00	1,525.00
1309	C.I. bracket for wash basin and sinks	pair	1.00	53.00	53.00
1315	C.P.brass chain with 40 mm dia rubber plug	each	1.00	27.00	27.00
1952	C.P. brass waste 40 mm	each	1.00	62.00	62.00
1895	C.P. brass trap 40 mm dia	each	1.00	125.00	125.00
3617	C.P. Brass union 40mm dia	each	1.00	175.00	175.00
9999	Red lead, white lead and gasket	L.S.	16.12	1.49	24.02
9999	Cement, sand and grit etc.	L.S.	13.39	1.49	19.95
9999	Sundries	L.S.	26.91	1.49	40.10
9999	Carriage of materials	L.S.	13.52	1.49	20.14
	LABOUR:				
0116	Fitter (grade 1)	day	0.22	301.00	66.22
0123	Mason (brick layer) 1 st class	day	0.33	301.00	99.33
0114	Beldar	day	0.56	247.00	138.32
	TOTAL				2,375.08
	Add Water Charges @ 1%				23.75
	TOTAL				2,398.83
	Add CPOH @ 15%				359.82
	Cost of each				2,758.65
	Say				2,758.65

17.12 Providing and fixing draining board with C.I. brackets including painting of brackets, cutting and making good the walls wherever required:

17.12.1 White glazed fire clay draining board of size 600x450x25 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7364	White glazed fire clay draining board 600x450x25 mm	each	1.00	525.00	525.00
1309	C.I. bracket for wash basin and sinks	pair	1.00	53.00	53.00
9999	Cement, sand and grit etc.	L.S.	13.39	1.49	19.95
9999	Painting brackets	L.S.	26.00	1.49	38.74
9999	Carriage of materials	L.S.	7.80	1.49	11.62
	LABOUR:				
0116	Fitter (grade 1)	day	0.06	301.00	18.06
0123	Mason (brick layer) 1 st class	day	0.17	301.00	51.17
0114	Beldar	day	0.22	247.00	54.34
	TOTAL				771.88
	Add Water Charges @ 1%				7.72
	TOTAL				779.60
	Add CPOH @ 15%				116.94
	Cost of each				896.54
	Say				896.55

17.13 Providing and fixing white vitreous china water closet squatting pan (Indian type):

17.13.1 Long pattern W.C. pan of size 580 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1953	Vitreous china Indian type W.C. pan size 580 mm	each	1.00	340.00	340.00
9999	Cement, sand and grit etc.	L.S.	13.39	1.49	19.95
9999	Carriage of materials	L.S.	13.52	1.49	20.14
	LABOUR:				
0123	Mason (brick layer) 1 st class	day	0.50	301.00	150.50
0114	Beldar	day	0.50	247.00	123.50
	TOTAL				654.09
	Add Water Charges @ 1%				6.54
	TOTAL				660.63
	Add CPOH @ 15%				99.09
	Cost of each				759.72
	Say				759.70

17.13.2 Orissa pattern W.C. pan of size 580x440 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1954	Vitreous china orrisa type W.C. pan size 580 mm	each	1.00	750.00	750.00
9999	Cement, sand and grit etc.	L.S.	13.39	1.49	19.95
9999	Carriage of materials	L.S.	13.52	1.49	20.14
	LABOUR:				
0123	Mason (brick layer) 1 st class	day	0.50	301.00	150.50
0114	Beldar	day	0.50	247.00	123.50
	TOTAL				1,064.09
	Add Water Charges @ 1%				10.64
	TOTAL				1,074.73
	Add CPOH @ 15%				161.21
	Cost of each				1,235.94
	Say				1,235.95

17.14 Extra for using coloured W.C. pan instead of white W.C. pan :

17.14.1 Orissa pattern W.C. pan 580x440 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
	Difference in cost of				
7104	Coloured Orissa pattern W.C. pan 580x440 mm	each	1.00	1,275.00	1,275.00
1954	Vitreous china orrisa type W.C. pan size 580 mm	each	-1.00	750.00	-750.00
	TOTAL				525.00
	Add Water Charges @ 1%				5.25
	TOTAL				530.25

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Add CPOH @ 15%				79.54
	Cost of each				609.79
	Say				609.80

17.15 Providing and fixing white vitreous china pedestal type (European type / wash down type) water closet pan.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1955	Vitreous china pedestal type water closet	each	1.00	680.00	680.00
9999	Cement, sand and grit etc.	L.S.	13.39	1.49	19.95
9999	Carriage of materials	L.S.	13.52	1.49	20.14
	LABOUR:				
0123	Mason (brick layer) 1 st class	day	0.50	301.00	150.50
0114	Beldar	day	0.50	247.00	123.50
	TOTAL				994.09
	Add Water Charges @ 1%				9.94
	TOTAL				1,004.03
	Add CPOH @ 15%				150.60
	Cost of each				1,154.63
	Say				1,154.65

17.16 Extra for using coloured pedestal type WC pan (European type) with low level cistern of same colour instead of white vitreous china WC pan and cistern.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for each				
	MATERIAL:				
7105	Coloured Pedestal type W.C. pan 580x440 mm (European type)	each	1.00	1,080.00	1,080.00
	Deduct				
1955	Vitreous china pedestal type water closet	each	-1.00	680.00	-680.00
7106	Coloured Vitreous china 10 lit. low level cistern	each	1.00	1,500.00	1,500.00
	Deduct				
7005	Vitreous china 10 litres low level cistern without fittings	each	-1.00	890.00	-890.00
	TOTAL				1,010.00
	Add Water Charges @ 1%				10.10
	TOTAL				1,020.10
	Add CPOH @ 15%				153.01
	Cost of each				1,173.11
	Say				1,173.10

17.17 Providing and fixing a pair of white vitreous china foot rests of standard pattern for squatting pan water closet:

17.17.1 250x130x30 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 pair				
	MATERIAL:				
1363	Vitreous china foot rests 250x130x30 mm	pair	1.00	90.00	90.00
9999	Cement, sand including of materials	L.S.	8.06	1.49	12.01
	LABOUR:				
0123	Mason (brick layer) 1 st class	day	0.06	301.00	18.06
	TOTAL				120.07
	Add Water Charges @ 1%				1.20
	TOTAL				121.27
	Add CPOH @ 15%				18.19
	Cost of 1 pair				139.46
	Say				139.45

17.17.2 250x125x25 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 pair				
	MATERIAL:				
1970	Vitreous china foot rests 250x125x25 mm	pair	1.00	100.00	100.00
9999	Cement, sand including of materials	L.S.	8.06	1.49	12.01
	LABOUR:				
0123	Mason (brick layer) 1 st class	day	0.06	301.00	18.06
	TOTAL				130.07
	Add Water Charges @ 1%				1.30
	TOTAL				131.37
	Add CPOH @ 15%				19.71
	Cost of 1 pair				151.08
	Say				151.10

17.18 Providing and fixing P.V.C. low level flushing cistern with manually controlled device (handle lever) conforming to IS : 7231, with all fittings and fixtures complete.

17.18.1 10 litre capacity - White

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7358	Flushing Cistern P.V.C. 10 litre capacity (low level) (White) (with fittings, accessories and flush pipe)	each	1.00	640.00	640.00
9999	Carriage of materials	L.S.	5.20	1.49	7.75
	LABOUR:				
	(Considering 1 fitter and 1 beldar can fix 8 cisterns in one day)				
0116	Fitter (grade 1)	day	0.125	301.00	37.62

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Beldar	day	0.125	247.00	30.88
	TOTAL				716.25
	Add Water Charges @ 1%				7.16
	TOTAL				723.41
	Add CPOH @ 15%				108.51
	Cost of each				831.92
	Say				831.90

17.18.2 10 litre capacity - coloured

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7123	Coloured High density polyethylene / poly propylene 10 lit. (full flush) capacity controlled low level flushing cistern with fittings	each	1.00	685.00	685.00
9999	Carriage of materials	L.S.	7.02	1.49	10.46
	LABOUR:				
	(Considering 1 fitter and 1 beldar can fix 8 cisterns in one day)				
0116	Fitter (grade 1)	day	0.125	301.00	37.62
0114	Beldar	day	0.125	247.00	30.88
	TOTAL				763.96
	Add Water Charges @ 1%				7.64
	TOTAL				771.60
	Add CPOH @ 15%				115.74
	Cost of each				887.34
	Say				887.35

17.19 Providing and fixing controlled flush, low level cistern made of vitreous china with all fittings complete.

17.19.1 10 litre (full flush) capacity-white

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7126	White Vitreous china 10 litre (full flush) capacity controlled low level flushing cistern with all fittings	each	1.00	975.00	975.00
9999	Carriage of materials	L.S.	13.52	1.49	20.14
	LABOUR:				
0116	Fitter (grade 1)	day	0.50	301.00	150.50
0114	Beldar	day	0.50	247.00	123.50
	TOTAL				1,269.14
	Add Water Charges @ 1%				12.69
	TOTAL				1,281.83
	Add CPOH @ 15%				192.27
	Cost of each				1,474.10
	Say				1,474.10

17.19.2 10 litre (full flush) capacity-coloured

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7127	Coloured Vitreous china 10 litre (full flush) capacity controlled low level flushing cistern with all fittings	each	1.00	1,400.00	1,400.00
9999	Carriage of materials	L.S.	13.52	1.49	20.14
	LABOUR:				
0116	Fitter (grade 1)	day	0.50	301.00	150.50
0114	Beldar	day	0.50	247.00	123.50
	TOTAL				1,694.14
	Add Water Charges @ 1%				16.94
	TOTAL				1,711.08
	Add CPOH @ 15%				256.66
	Cost of each				1,967.74
	Say				1,967.75

17.20 Providing and fixing solid plastic seat with lid for pedestal type W.C. pan complete:
17.20.1 White solid plastic seat with lid

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1875	White plastic seat (solid) with lid C.P. brass hinges and rubber buffers	each	1.00	310.00	310.00
9999	Carriage of materials and fixing charges	L.S.	13.39	1.49	19.95
	TOTAL				329.95
	Add Water Charges @ 1%				3.30
	TOTAL				333.25
	Add CPOH @ 15%				49.99
	Cost of each				383.24
	Say				383.25

17.20.2 Black solid plastic seat with lid

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1876	Black plastic seat (solid) with lid C.P. brass hinges and rubber buffers	each	1.00	293.00	293.00
9999	Carriage of materials and fixing charges	L.S.	13.39	1.49	19.95
	TOTAL				312.95
	Add Water Charges @ 1%				3.13
	TOTAL				316.08
	Add CPOH @ 15%				47.41
	Cost of each				363.49
	Say				363.50

17.20.3 Cloured (other than black & white) solid plastic seat with lid

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one No.				
	MATERIAL:				
	Difference in cost of				
7107	Coloured (other than black) solid P.V.C. seat in European W.C. pan	each	1.00	475.00	475.00
9999	Carriage and fixing charges	L.S.	13.39	1.49	19.95
	TOTAL				494.95
	Add Water Charges @ 1%				4.95
	TOTAL				499.90
	Add CPOH @ 15%				74.98
	Cost of each				574.88
	Say				574.90

17.22 Providing and fixing G.I. inlet connection for flush pipe connecting with W.C. pan.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1614	G.I. inlet connection	each	1.00	61.00	61.00
9999	Carriage of materials and fixing charges	L.S.	13.39	1.49	19.95
	TOTAL				80.95
	Add Water Charges @ 1%				0.81
	TOTAL				81.76
	Add CPOH @ 15%				12.26
	Cost of each				94.02
	Say				94.00

17.23 Providing and fixing white vitreous china flat back or wall corner type lipped front urinal basin of 430x260x350 mm or 340x410x265 mm sizes respectively.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1913	Vitreous china lipped front urinal	each	1.00	460.00	460.00
9999	Carriage of materials	L.S.	9.49	1.49	14.14
	LABOUR:				
0116	Fitter (grade 1)	day	0.38	301.00	114.38
0114	Beldar	day	0.38	247.00	93.86
	TOTAL				682.38
	Add Water Charges @ 1%				6.82
	TOTAL				689.20
	Add CPOH @ 15%				103.38
	Cost of each				792.58
	Say				792.60

17.24 Providing and fixing white vitreous china squatting plate urinal with integral rim longitudinal flush pipe.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1915	Vitreous china squatting plate urinal	each	1.00	740.00	740.00
9999	Cement, sand and grit etc.	L.S.	10.79	1.49	16.08
9999	Carriage of materials	L.S.	13.39	1.49	19.95
	LABOUR:				
0116	Fitter (grade 1)	day	0.50	301.00	150.50
0123	Mason (brick layer) 1 st class	day	0.50	301.00	150.50
0114	Beldar	day	1.00	247.00	247.00
	TOTAL				1,324.03
	Add Water Charges @ 1%				13.24
	TOTAL				1,337.27
	Add CPOH @ 15%				200.59
	Cost of each				1,537.86
	Say				1,537.85

17.25 Providing and fixing white vitreous china wash basin including making all connections but excluding the cost of fittings:

17.25.1 Flat back wash basin of size 630x450 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1947	Vitreous china flat back wash basin 630x450 mm	each	1.00	675.00	675.00
9999	Fixing charges	L.S.	53.82	1.49	80.19
9999	Carriage of materials	L.S.	9.49	1.49	14.14
	TOTAL				769.33
	Add Water Charges @ 1%				7.69
	TOTAL				777.02
	Add CPOH @ 15%				116.55
	Cost of each				893.57
	Say				893.55

17.25.2 Flat back wash basin of size 550x400 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
3229	Vitreous china flat back wash basin 550x400 mm	each	1.00	530.00	530.00
9999	Fixing charges	L.S.	53.82	1.49	80.19
9999	Carriage of materials	L.S.	9.49	1.49	14.14
	TOTAL				624.33
	Add Water Charges @ 1%				6.24
	TOTAL				630.57
	Add CPOH @ 15%				94.59
	Cost of each				725.16
	Say				725.15

17.25.3 Angle back wash basin of size 600x480 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1949	Vitreous china angle back wash basin 600x480 mm	each	1.00	580.00	580.00
9999	Fixing charges	L.S.	53.82	1.49	80.19
9999	Carriage of materials	L.S.	9.49	1.49	14.14
	TOTAL				674.33
	Add Water Charges @ 1%				6.74
	TOTAL				681.07
	Add CPOH @ 15%				102.16
	Cost of each				783.23
	Say				783.25

17.25.4 Angle back wash basin of size 400x400 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1950	Vitreous china angle back wash basin 400x400 mm	each	1.00	405.00	405.00
9999	Fixing charges	L.S.	53.82	1.49	80.19
9999	Carriage of materials	L.S.	9.49	1.49	14.14
	TOTAL				499.33
	Add Water Charges @ 1%				4.99
	TOTAL				504.32
	Add CPOH @ 15%				75.65
	Cost of each				579.97
	Say				579.95

17.25.5 Flat back wash basin of size 450x300 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7004	Vitreous china flat back wash basin 450x300 mm	each	1.00	425.00	425.00
9999	Fixing charges	L.S.	53.82	1.49	80.19
9999	Carriage of materials	L.S.	9.49	1.49	14.14
	TOTAL				519.33
	Add Water Charges @ 1%				5.19
	TOTAL				524.52
	Add CPOH @ 15%				78.68
	Cost of each				603.20
	Say				603.20

17.25.6 Surgeon type wash basin of size 660x460 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
3213	Vitreous china Surgeon type wash basin of size 660x460 mm	each	1.00	995.00	995.00
9999	Fixing charges	L.S.	53.82	1.49	80.19
9999	Carriage of materials	L.S.	9.49	1.49	14.14
	TOTAL				1,089.33
	Add Water Charges @ 1%				10.89
	TOTAL				1,100.22
	Add CPOH @ 15%				165.03
	Cost of each				1,265.25
	Say				1,265.25

17.26 Providing and fixing kitchen sink including making all connections excluding cost of fittings.

17.26.1 White glazed fire clay sink of size 600x450x250 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1863	Fire clay kitchen sink: 600x450x250 mm	each	1.00	1,350.00	1,350.00
9999	Fixing charges	L.S.	40.43	1.49	60.24
9999	Carriage of materials	L.S.	10.79	1.49	16.08
	TOTAL				1,426.32
	Add Water Charges @ 1%				14.26
	TOTAL				1,440.58
	Add CPOH @ 15%				216.09
	Cost of each				1,656.67
	Say				1,656.65

17.27 Providing and fixing white vitreous china laboratory sink including making all connections excluding cost of fittings:

17.27.1 Size 450x300x150 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1871	White vitreous china laboratory sink 450x300x150 mm	each	1.00	820.00	820.00
9999	Fixing charges	L.S.	40.43	1.49	60.24
9999	Carriage of materials	L.S.	10.79	1.49	16.08
	TOTAL				896.32
	Add Water Charges @ 1%				8.96
	TOTAL				905.28
	Add CPOH @ 15%				135.79
	Cost of each				1,041.07
	Say				1,041.05

17.27.2 Size 600x450x200 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1872	White vitreous china laboratory sink 600x450x200 mm	each	1.00	1,525.00	1,525.00
9999	Fixing charges	L.S.	40.43	1.49	60.24
9999	Carriage of materials	L.S.	10.79	1.49	16.08
	TOTAL				1,601.32
	Add Water Charges @ 1%				16.01
	TOTAL				1,617.33
	Add CPOH @ 15%				242.60
	Cost of each				1,859.93
	Say				1,859.95

17.28 Providing and fixing P.V.C. waste pipe for sink or wash basin including PVC. waste fittings complete.

17.28.1 Semi rigid pipe

17.28.1.1 32 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7117	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	1.00	21.00	21.00
9999	Carriage of materiage and fixing charges	L.S.	20.28	1.49	30.22
	TOTAL				51.22
	Add Water Charges @ 1%				0.51
	TOTAL				51.73
	Add CPOH @ 15%				7.76
	Cost of each				59.49
	Say				59.50

17.28.1.2 40 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7118	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	1.00	27.00	27.00
9999	Carriage of materials and fixing charges	L.S.	20.28	1.49	30.22
	TOTAL				57.22
	Add Water Charges @ 1%				0.57
	TOTAL				57.79
	Add CPOH @ 15%				8.67
	Cost of each				66.46
	Say				66.45

17.28.2 Flexible pipe

17.28.2.1 32 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7119	Flexible (coil shaped) PVC waste pipe for sink and washbasin 32 mm dia with length not less than 700 mm i/c PVC waste fittings	each	1.00	26.00	26.00
9999	Carriage of materials and fixing charges	L.S.	20.28	1.49	30.22
	TOTAL				56.22
	Add Water Charges @ 1%				0.56
	TOTAL				56.78
	Add CPOH @ 15%				8.52
	Cost of each				65.30
	Say				65.30

17.28.2.2 40 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7120	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	1.00	28.00	28.00
9999	Carriage of materials and fixing charges	L.S.	20.28	1.49	30.22
	TOTAL				58.22
	Add Water Charges @ 1%				0.58
	TOTAL				58.80
	Add CPOH @ 15%				8.82
	Cost of each				67.62
	Say				67.60

17.29 Providing and fixing 100 mm sand cast Iron grating for gully trap.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1369	S.C.I. gully or nahani grating 100 mm dia	each	1.00	15.00	15.00
9999	Carriage of materials and fixing charges	L.S.	4.16	1.49	6.20
	TOTAL				21.20
	Add Water Charges @ 1%				0.21
	TOTAL				21.41
	Add CPOH @ 15%				3.21
	Cost of each				24.62
	Say				24.60

17.30 Providing and fixing in position 25 mm diameter mosquito proof coupling of approved municipal design.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1350	Mosquito proof coupling of approved design	each	1.00	27.00	27.00
9999	Carriage of materials and fixing charges	L.S.	1.82	1.49	2.71
	TOTAL				29.71
	Add Water Charges @ 1%				0.30
	TOTAL				30.01
	Add CPOH @ 15%				4.50
	Cost of each				34.51
	Say				34.50

17.31 Providing and fixing 600x450 mm beveled edge mirror of superior glass (of approved quality) complete with 6 mm thick hard board ground fixed to wooden cleats with C.P. brass screws and washers complete.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1392	Mirror of superior make glass 60x45 cm	each	1.00	290.00	290.00
7116	Hard board 6 mm thick 600x450 mm	sqm	0.27	170.00	45.90
	Wooden cleats				
9.32	Rate as per Item Number 9.32 of SH: Wood and PVC work	each	4.00	17.40	69.60 (A)
0588	Chromium plated Brass screws 25 mm	100 nos	4.00	115.00	4.60
9999	Carriage of materials	L.S.	4.16	1.49	6.20
9999	Sundries	L.S.	1.43	1.49	2.13
	LABOUR:				
0112	Carpenter 2nd class	day	0.33	273.00	90.09
0114	Beldar	day	0.33	247.00	81.51
	TOTAL				590.03
	Add Water Charges @ 1% except on A i.e on (590.03 - 69.60 =) 520.43				5.20
	TOTAL				595.23
	Add CPOH @ 15% except on A i.e on (595.23 - 69.60 =) 525.63				78.84
	Cost of each				674.07
	Say				674.05

17.32 Providing and fixing mirror of superior glass (of approved quality) and of required shape and size with plastic moulded frame of approved make and shade with 6 mm thick hard board backing:

17.32.1 Circular shape 450 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7112	Circular shape 450 mm dia Mirror with Plastic moulded frame	each	1.00	390.00	390.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Hard board 0.45x0.45 = 0.2025 sqm Add wastage @ 10% = 0.0203 sqm = 0.2228 sqm say 0.22sqm				
7116	Hard board 6 mm thick	sqm	0.22	170.00	37.40
7048	Rawl plug 50 mm (designation 10 nos)	each	2.00	10.00	20.00
0588	Chromium plated Brass screws 25 mm and washers	100 nos	2.00	115.00	2.30
9999	Sundries	L.S.	1.43	1.49	2.13
9999	Carriage of materials	L.S.	4.16	1.49	6.20
	LABOUR:				
0112	Carpenter 2nd class	day	0.33	273.00	90.09
0114	Beldar	day	0.33	247.00	81.51
	TOTAL				629.63
	Add Water Charges @ 1%				6.30
	TOTAL				635.93
	Add CPOH @ 15%				95.39
	Cost of each				731.32
	Say				731.30

17.32.2 Rectangular shape 453x357 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7113	Rectangular shape 453x357 mm Mirror with Plastic moulded frame	each	1.00	260.00	260.00
	Hard board 0.453x0.357 = 0.1617 sqm Add wastage @ 10% = 0.0162 sqm = 0.1779 sqm say 0.18 sqm				
7116	Hard board 6 mm thick	sqm	0.18	170.00	30.60
7048	Rawl plug 50 mm (designation 10 nos)	each	4.00	10.00	40.00
0588	Chromium plated Brass screws 25 mm and washers	100 nos	4.00	115.00	4.60
9999	Sundries	L.S.	1.43	1.49	2.13
9999	Carriage of materials	L.S.	4.16	1.49	6.20
	LABOUR:				
0112	Carpenter 2nd class	day	0.33	273.00	90.09
0114	Beldar	day	0.33	247.00	81.51
	TOTAL				515.13
	Add Water Charges @ 1%				5.15
	TOTAL				520.28
	Add CPOH @ 15%				78.04
	Cost of each				598.32
	Say				598.30

17.32.3 Oval shape 450x350 mm (outer dimensions)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7114	Oval shape 450x350 mm (outer dimensions) Mirror with Plastic moulded frame	each	1.00	300.00	300.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Hard board 0.45x0.35=0.1575 sqm Add wastage @ 10% = 0.0158 sqm = 0.1733 sqm say 0.17 sqm				
7116	Hard board 6 mm thick	sqm	0.17	170.00	28.90
7048	Rawl plug 50 mm (designation 10 nos)	each	4.00	10.00	40.00
0588	Chromium plated Brass screws 25 mm	100 nos	4.00	115.00	4.60
9999	Sundries	L.S.	1.43	1.49	2.13
9999	Carriage of materials	L.S.	4.16	1.49	6.20
	LABOUR:				
0112	Carpenter 2nd class	day	0.33	273.00	90.09
0114	Beldar	day	0.33	247.00	81.51
	TOTAL				553.43
	Add Water Charges @ 1%				5.53
	TOTAL				558.96
	Add CPOH @ 15%				83.84
	Cost of each				642.80
	Say				642.80

17.32.4 Rectangular shape 1500x450 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no. MATERIAL:				
7115	Rectangular shape 1500x450 mm Mirror with Plastic moulded frame Hard board 1.50x0.45 = 0.675 sqm Add wastage @ 10% = 0.0675 sqm = 0.7425 sqm say 0.74sqm	each	1.00	670.00	670.00
7116	Hard board 6 mm thick	sqm	0.74	170.00	125.80
7048	Rawl plug 50 mm (designation 10 nos)	each	6.00	10.00	60.00
0588	Chromium plated Brass screws 25 mm	100 nos	6.00	115.00	6.90
9999	Sundries	L.S.	1.43	1.49	2.13
9999	Carriage of materials	L.S.	4.16	1.49	6.20
	LABOUR:				
0112	Carpenter 2nd class	day	0.33	273.00	90.09
0114	Beldar	day	0.33	247.00	81.51
	TOTAL				1,042.63
	Add Water Charges @ 1%				10.43
	TOTAL				1,053.06
	Add CPOH @ 15%				157.96
	Cost of each				1,211.02
	Say				1,211.00

17.33 Providing and fixing 600x120x5 mm glass shelf with edges round off supported on anodised aluminium angle frame with C.P. brass brackets and guard rail complete fixed with 40 mm long screws, rawl plugs etc., complete.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no. MATERIAL:				
3228	600x120 mm glass shelf with anodised aluminium angle frame, C.P. brass brackets and guard rail of standard size	each	1.00	130.00	130.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7048	Rawl plug 50 mm (designation 10 nos)	each	2.00	10.00	20.00
0586	Chromium plated Brass screws 40 mm	100 Nos	4.00	190.00	7.60
9999	Carriage of materials	L.S.	4.16	1.49	6.20
	LABOUR:				
0112	Carpenter 2nd class	day	0.25	273.00	68.25
0114	Beldar	day	0.25	247.00	61.75
	TOTAL				293.80
	Add Water Charges @ 1%				2.94
	TOTAL				296.74
	Add CPOH @ 15%				44.51
	Cost of each				341.25
	Say				341.25

17.34 Providing and fixing toilet paper holder:

17.34.1 C.P. brass

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1889	C.P. brass toilet paper holder of standard size	each	1.00	115.00	115.00
	Wooden cleats				
9.32	Rate as per Item Number 9.32 of SH: Wood and PVC work	each	2.00	17.40	34.80 (A)
0588	Chromium plated Brass screws 25 mm	100 nos	2.00	115.00	2.30
9999	Carriage of materials	L.S.	4.29	1.49	6.39
	MATERIAL:				
0112	Carpenter 2nd class	day	0.12	273.00	32.76
0114	Beldar	day	0.12	247.00	29.64
	TOTAL				220.89
	Add Water Charges @ 1% except on A i.e on (220.89 - 34.80 =) 186.09				1.86
	TOTAL				222.75
	Add CPOH @ 15% except on A i.e on (222.75 - 34.80 =) 187.95				28.19
	Cost of each				250.94
	Say				250.95

17.34.2 Vitreous china

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
3749	Vitreous china toilet paper holder of standard size	each	1.00	118.00	118.00
	Wooden cleats				
9.32	Rate as per Item Number 9.32 of SH: Wood and PVC work	each	2.00	17.40	34.80 (A)
0588	Chromium plated Brass screws 25 mm	100 nos	6.00	115.00	6.90
9999	Carriage of materials	L.S.	4.29	1.49	6.39
	LABOUR:				
0112	Carpenter 2nd class	day	0.12	273.00	32.76

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Beldar	day	0.12	247.00	29.64
	TOTAL				228.49
	Add Water Charges @ 1% except on A i.e on (228.49 - 34.80 =) 193.69				1.94
	TOTAL				230.43
	Add CPOH @ 15% except on A i.e on (230.43 - 34.80 =) 195.63				29.34
	Cost of each				259.77
	Say				259.75

17.35 Providing and fixing soil, waste and vent pipes:
17.35.1 100 mm dia
17.35.1.1 Sand cast iron S&S pipe as per IS: 1729

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 17.37m				
	(1.8mx10)-(9x0.07m) = 17.37 m				
	MATERIAL:				
1617	S.C. I. soil, waste and vent single socketed pipe 1.80 metres long: 100 mm dia	each	10.50	990.00	10,395.00
9999	Scaffolding	L.S.	80.73	1.49	120.29
9999	Carriage of materials	L.S.	53.82	1.49	80.19
	LABOUR:				
0116	Fitter (grade 1)	day	0.42	301.00	126.42
0100	Bandhani	day	0.21	260.00	54.60
0114	Beldar	day	0.83	247.00	205.01
	TOTAL				10,981.51
	Add Water Charges @ 1%				109.82
	TOTAL				11,091.33
	Add CPOH @ 15%				1,663.70
	Cost of 17.37 metre				12,755.03
	Cost of 1 metre				734.31
	Say				734.30

17.35.1.2 Centrifugally cast (spun) iron socket & spigot (S&S) pipe as per IS: 3989

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 16.87m				
	(1.75mx10)-(9x0.07m) = 16.87m				
	MATERIAL:				
3620	C.C.I. (spun) socketed soil, waste and vent pipe 1.80 metres long:100 mm dia	each	10.50	1,130.00	11,865.00
9999	Scaffolding	L.S.	80.73	1.49	120.29
9999	Carriage of materials	L.S.	53.82	1.49	80.19
	LABOUR:				
0116	Fitter (grade 1)	day	0.42	301.00	126.42
0100	Bandhani	day	0.21	260.00	54.60

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Beldar	day	0.83	247.00	205.01
	TOTAL				12,451.51
	Add Water Charges @ 1%				124.52
	TOTAL				12,576.03
	Add CPOH @ 15%				1,886.40
	Cost of 16.87 metre				14,462.43
	Cost of 1 metre				857.29
	Say				857.30

17.35.2 75 mm diameter

17.35.2.1 Sand cast iron S&S pipe as per IS: 1729

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 17.42m				
	(1.8mx10)-(9x0.065m)= 17.415 m say 17.42m				
	MATERIAL:				
1616	S.C.I. soil, waste and vent single socketed pipe 1.80 metres long: 75 mm dia	each	10.50	890.00	9,345.00
9999	Scaffolding	L.S.	80.73	1.49	120.29
9999	Carriage of materials	L.S.	40.38	1.49	60.17
	LABOUR:				
0116	Fitter (grade 1)	day	0.35	301.00	105.35
0100	Bandhani	day	0.17	260.00	44.20
0114	Beldar	day	0.70	247.00	172.90
	TOTAL				9,847.91
	Add Water Charges @ 1%				98.48
	TOTAL				9,946.39
	Add CPOH @ 15%				1,491.96
	Cost of 17.42 metre				11,438.35
	Cost of 1 metre				656.62
	Say				656.60

17.35.2.2 Centrifugally cast (spun) iron socketed pipe as per IS: 3989

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 16.92m				
	(1.75mx10)-(9x0.065m) = 16.915 m				
	say 16.92 m				
	MATERIAL:				
3621	C.C.I. (spun) socketed soil, waste and vent pipe 1.80 metres long:75 mm dia including 5% allowance for wastage	each	10.50	985.00	10,342.50
9999	Scaffolding	L.S.	80.73	1.49	120.29
9999	Carriage of materials	L.S.	40.38	1.49	60.17
	LABOUR:				
0116	Fitter (grade 1)	day	0.35	301.00	105.35
0100	Bandhani	day	0.17	260.00	44.20

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Beldar	day	0.70	247.00	172.90
	TOTAL				10,845.41
	Add Water Charges @ 1%				108.45
	TOTAL				10,953.86
	Add CPOH @ 15%				1,643.08
	Cost of 16.92 metre				12,596.94
	Cost of 1 metre				744.50
	Say				744.50

17.36 Providing and filling the joints with spun yarn, cement slurry and cement mortar 1:2 (1 cement : 2 fine sand) in S.C.I. / C.I. Pipes:

17.36.1 75 mm dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 4 joints				
	MATERIAL:				
9999	Cement mortar, spun yarn etc.	L.S.	6.89	1.49	10.27
	LABOUR:				
0116	Fitter (grade 1)	day	0.28	301.00	84.28
0114	Beldar	day	0.28	247.00	69.16
	TOTAL				163.71
	Add Water Charges @ 1%				1.64
	TOTAL				165.35
	Add CPOH @ 15%				24.80
	Cost of 4 nos				190.15
	Cost of each				47.54
	Say				47.55

17.36.2 100 mm dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 4 joints				
	MATERIAL:				
9999	Cement mortar, spun yam etc.	L.S.	8.06	1.49	12.01
	LABOUR:				
0116	Fitter (grade 1)	day	0.33	301.00	99.33
0114	Beldar	day	0.33	247.00	81.51
	TOTAL				192.85
	Add Water Charges @ 1%				1.93
	TOTAL				194.78
	Add CPOH @ 15%				29.22
	Cost of 4 nos				224.00
	Cost of each				56.00
	Say				56.00

17.37 Providing and fixing M.S. holder-bat clamps of approved design to Sand Cast Iron/ Cast Iron (spun) pipe embedded in and including cement concrete blocks 10x10x10 cm of 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), including cost of cutting holes and making good the walls etc. :

17.37.1 For 100 mm dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 5 nos				
	MATERIAL:				
1331	M.S.Holder bat clamp of approved design for 100 mm S.C.I. pipe	each	5.00	17.00	85.00
9999	Carriage of clamps	L.S.	2.47	1.49	3.68
	LABOUR:				
0116	Fitter (grade 1)	day	0.125	301.00	37.62
0124	Mason (brick layer) 2nd class	day	0.75	273.00	204.75
0114	Beldar	day	0.50	247.00	123.50
9999	Sundries	L.S.	7.15	1.49	10.65
	C.C. Block 5x0.10x0x0.10= 0.005 cum				
0295	Stone Aggregate (Single size) : 20 mm nominal size	cum	0.0033	1,050.00	3.46
0297	Stone Aggregate (Single size) : 10 mm nominal size	cum	0.0011	1,050.00	1.16
2202	Carriage of stone aggregate below 40 mm nominal size	cum	0.0044	87.60	0.39
0982	Coarse sand (zone III)	cum	0.0022	1,120.00	2.46
2203	Carriage of coarse sand	cum	0.0022	87.60	0.19
0367	Portland Cement	tonne	0.0016	5,000.00	8.00
2209	Carriage of cement	tonne	0.0016	77.87	0.12
0114	Beldar	day	0.0045	247.00	1.11
0115	Coolie	day	0.0032	247.00	0.79
0101	Bhisti	day	0.0014	260.00	0.36
0123	Mason (brick layer) 1 st class	day	0.0003	301.00	0.09
0124	Mason (brick layer) 2nd class	day	0.0003	273.00	0.08
0128	Mate	day	0.0002	260.00	0.05
9999	Hire charges of machine etc.	L.S.	0.26	1.49	0.39
9999	Sundries	L.S.	0.13	1.49	0.19
9999	Sundries	L.S.	0.13	1.49	0.19
	TOTAL				484.23
	Add Water Charges @ 1%				4.84
	TOTAL				489.07
	Add CPOH @ 15%				73.36
	Cost of 5 nos				562.43
	Cost of each				112.49
	Say				112.50

17.37.2 For 75 mm dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 5 nos				
	MATERIAL:				
1332	M.S.Holder bat clamp of approved design for75 mm S.C.I. pipe	each	5.00	15.00	75.00
9999	Carriage of bat clamps	L.S.	2.47	1.49	3.68

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	LABOUR:				
0116	Fitter (grade 1)	day	0.125	301.00	37.62
0124	Mason (brick layer) 2nd class	day	0.75	273.00	204.75
0114	Beldar	day	0.50	247.00	123.50
9999	Sundries	L.S.	7.15	1.49	10.65
	C.C. Block 5x0.10x0x0.10= 0.005 cum				
0295	Stone Aggregate (Single size) : 20 mm nominal size	cum	0.0033	1,050.00	3.46
0297	Stone Aggregate (Single size) : 10 mm nominal size	cum	0.0011	1,050.00	1.16
2202	Carriage of stone aggregate below 40 mm nominal size	cum	0.0044	87.60	0.39
0982	Coarse sand (zone III)	cum	0.0022	1,120.00	2.46
2203	Carriage of coarse sand	cum	0.0022	87.60	0.19
0367	Portland Cement	tonne	0.0016	5,000.00	8.00
2209	Carriage of cement	tonne	0.0016	77.87	0.12
0114	Beldar	day	0.0045	247.00	1.11
0115	Coolie	day	0.0032	247.00	0.79
0101	Bhisti	day	0.0014	260.00	0.36
0123	Mason (brick layer) 1 st class	day	0.0003	301.00	0.09
0124	Mason (brick layer) 2nd class	day	0.0003	273.00	0.08
0128	Mate	day	0.0002	260.00	0.05
9999	Hire charges of machine etc.	L.S.	0.26	1.49	0.39
9999	Sundries	L.S.	0.13	1.49	0.19
9999	Sundries	L.S.	0.13	1.49	0.19
	TOTAL				474.23
	Add Water Charges @ 1%				4.74
	TOTAL				478.97
	Add CPOH @ 15%				71.85
	Cost of 5 nos				550.82
	Cost of each				110.16
	Say				110.15

17.38 Providing and fixing bend of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete.

17.38.1 100 mm dia

17.38.1.1 Sand cast iron S&S as per IS - 1729

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1625	S.C.I. bend with access door 100 mm dia including cost of bolts and nuts	each	1.00	233.00	233.00
1374	Rubber insertions for 100 mm dia pipe joints	each	1.00	14.00	14.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.49	20.14
	TOTAL				267.14
	Add Water Charges @ 1%				2.67
	TOTAL				269.81
	Add CPOH @ 15%				40.47
	Cost of each				310.28
	Say				310.30

17.38.1.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
3624	S.C.I. S&S bends with access door 100 mm dia including cost of bolts and nuts	each	1.00	270.00	270.00
1374	Rubber insertions for 100 mm dia pipe joints 3 mm thick	each	1.00	14.00	14.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.49	20.14
	TOTAL				304.14
	Add Water Charges @ 1%				3.04
	TOTAL				307.18
	Add CPOH @ 15%				46.08
	Cost of each				353.26
	Say				353.25

17.38.2 75 mm dia

17.38.2.1 Sand cast iron S&S as per IS - 1729

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1624	S.C.I. bend with access door 75 mm dia including cost of bolts and nuts	each	1.00	187.00	187.00
1373	Rubber insertions for 80 mm dia pipe joints 3 mm thick	each	1.00	11.00	11.00
9999	Carriage of materials and fixing charges	L.S.	10.79	1.49	16.08
	TOTAL				214.08
	Add Water Charges @ 1%				2.14
	TOTAL				216.22
	Add CPOH @ 15%				32.43
	Cost of each				248.65
	Say				248.65

17.38.2.2 Sand cast iron S&S as per IS- 3989

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
3625	S.C.I. S&S bends with access door 75 mm dia including cost of bolts and nuts	each	1.00	215.00	215.00
1373	Rubber insertions for 80 mm dia pipe joints 3 mm thick	each	1.00	11.00	11.00
9999	Carriage of materials and fixing charges	L.S.	10.79	1.49	16.08
	TOTAL				242.08
	Add Water Charges @ 1%				2.42
	TOTAL				244.50
	Add CPOH @ 15%				36.67
	Cost of each				281.17
	Say				281.15

17.39 Providing and fixing plain bend of required degree.

17.39.1 100 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1621	S.C.I. plain bend 100 mm dia	each	1.00	210.00	210.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.49	20.14
	TOTAL				230.14
	Add Water Charges @ 1%				2.30
	TOTAL				232.44
	Add CPOH @ 15%				34.87
	Cost of each				267.31
	Say				267.30

17.39.1.2 Sand cast iron S&S as per IS : 3989

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
3628	S.C.I. S&S bend 100 mm dia	each	1.00	235.00	235.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.49	20.14
	TOTAL				255.14
	Add Water Charges @ 1%				2.55
	TOTAL				257.69
	Add CPOH @ 15%				38.65
	Cost of each				296.34
	Say				296.35

17.39.2 75 mm dia

17.39.2.1 Sand cast iron S&S as per IS -1729

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1620	S.C.I. plain bend 75 mm dia	each	1.00	170.00	170.00
9999	Carriage of materials and fixing charges	L.S.	10.79	1.49	16.08
	TOTAL				186.08
	Add Water Charges @ 1%				1.86
	TOTAL				187.94
	Add CPOH @ 15%				28.19
	Cost of each				216.13
	Say				216.15

17.39.2.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
3629	S.C.I. S&S bend 75 mm dia	each	1.00	175.00	175.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Carriage of materials and fixing charges	L.S.	10.79	1.49	16.08
	TOTAL				191.08
	Add Water Charges @ 1%				1.91
	TOTAL				192.99
	Add CPOH @ 15%				28.95
	Cost of each				221.94
	Say				221.95

17.40 Providing and fixing heel rest sanitary bend.

17.40.1 100 mm dia

17.40.1.1 Sand cast iron S&S as per IS - 1729

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1667	Sand cast iron heel rest bend 100 mm dia	each	1.00	239.00	239.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.49	20.14
	TOTAL				259.14
	Add Water Charges @ 1%				2.59
	TOTAL				261.73
	Add CPOH @ 15%				39.26
	Cost of each				300.99
	Say				301.00

17.40.1.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
3634	S.C.I. S&S heel rest sanitary bend 100 mm dia	each	1.00	275.00	275.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.49	20.14
	TOTAL				295.14
	Add Water Charges @ 1%				2.95
	TOTAL				298.09
	Add CPOH @ 15%				44.71
	Cost of each				342.80
	Say				342.80

17.40.2 75 mm dia

17.40.2.1 Sand cast iron S&S as per IS - 1729

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1666	Sand cast iron heel rest bend 75 mm dia	each	1.00	200.00	200.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Carriage of materials and fixing charges	L.S.	10.79	1.49	16.08
	TOTAL				216.08
	Add Water Charges @ 1%				2.16
	TOTAL				218.24
	Add CPOH @ 15%				32.74
	Cost of each				250.98
	Say				251.00

17.40.2.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
3635	S.C.I. S&S heel rest sanitary bend 75 mm dia	each	1.00	240.00	240.00
9999	Carriage of materials and fixing charges	L.S.	10.79	1.49	16.08
	TOTAL				256.08
	Add Water Charges @ 1%				2.56
	TOTAL				258.64
	Add CPOH @ 15%				38.80
	Cost of each				297.44
	Say				297.45

17.41 Providing and fixing double equal junction of required degree with access door, insertion rubber washer 3mm thick, bolts and nuts complete:

17.41.1 100x100x100x100 mm

17.41.1.1 Sand cast iron S&S as per IS - 1729

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1637	S.C.I. double equal junctions 100x100x100x100 mm dia with access door including cost of bolts and nuts	each	1.00	530.00	530.00
1374	Rubber insertions for 100 mm dia pipe joints 3 mm thick	each	1.00	14.00	14.00
9999	Carriage of materials and fixing charges	L.S.	13.39	1.49	19.95
	TOTAL				563.95
	Add Water Charges @ 1%				5.64
	TOTAL				569.59
	Add CPOH @ 15%				85.44
	Cost of each				655.03
	Say				655.05

17.41.1.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
3654	S.C.I. S&S double equal junctions with access door 100x100x100x100 mm including cost of bolts and nuts	each	1.00	610.00	610.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1374	Rubber insertions for 100 mm dia pipe joints 3 mm thick	each	1.00	14.00	14.00
9999	Carriage of materials and fixing charges	L.S.	13.39	1.49	19.95
	TOTAL				643.95
	Add Water Charges @ 1%				6.44
	TOTAL				650.39
	Add CPOH @ 15%				97.56
	Cost of each				747.95
	Say				747.95

17.41.2 75x75x75x75 mm

17.41.2.1 Sand cast iron S&S as per IS - 1729

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1636	S.C.I. double equal junctions 75x75x75x75 mm dia with access door including cost of bolts and nuts	each	1.00	395.00	395.00
1373	Rubber insertions for 80 mm dia pipe joints 3 mm thick	each	1.00	11.00	11.00
9999	Carriage of materials and fixing charges	L.S.	10.79	1.49	16.08
	TOTAL				422.08
	Add Water Charges @ 1%				4.22
	TOTAL				426.30
	Add CPOH @ 15%				63.94
	Cost of each				490.24
	Say				490.25

17.41.2.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
3655	S.C.I. S&S double equal junctions with access door 75x75x75x75 mm including cost of bolts and nuts	each	1.00	475.00	475.00
1373	Rubber insertions for 80 mm dia pipe joints 3 mm thick	each	1.00	11.00	11.00
9999	Carriage of materials and fixing charges	L.S.	10.79	1.49	16.08
	TOTAL				502.08
	Add Water Charges @ 1%				5.02
	TOTAL				507.10
	Add CPOH @ 15%				76.06
	Cost of each				583.16
	Say				583.15

17.42 Providing and fixing double equal plain junction of required degree.

17.42.1 100x100x100x100 mm

17.42.1.1 Sand cast iron S&S as per IS - 1729

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1634	S.C.I. plain double equal junctions 100x100x100x100 mm dia	each	1.00	490.00	490.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.49	20.14
	TOTAL				510.14
	Add Water Charges @ 1%				5.10
	TOTAL				515.24
	Add CPOH @ 15%				77.29
	Cost of each				592.53
	Say				592.55

17.42.1.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
3650	S.C.I. S&S double equal junctions 100x100x100x100 mm	each	1.00	565.00	565.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.49	20.14
	TOTAL				585.14
	Add Water Charges @ 1%				5.85
	TOTAL				590.99
	Add CPOH @ 15%				88.65
	Cost of each				679.64
	Say				679.65

17.42.2 75x75x75x75 mm

17.42.2.1 Sand cast iron S&S as per IS - 1729

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1633	S.C.I. plain double equal junctions 75x75x75x75 mm dia	each	1.00	335.00	335.00
9999	Carriage of materials and fixing charges	L.S.	10.79	1.49	16.08
	TOTAL				351.08
	Add Water Charges @ 1%				3.51
	TOTAL				354.59
	Add CPOH @ 15%				53.19
	Cost of each				407.78
	Say				407.80

17.42.2.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
3651	S.C.I. S&S double equal junctions 75x75x75x75 mm	each	1.00	450.00	450.00
9999	Carriage of materials and fixing charges	L.S.	10.79	1.49	16.08
	TOTAL				466.08
	Add Water Charges @ 1%				4.66
	TOTAL				470.74
	Add CPOH @ 15%				70.61
	Cost of each				541.35
	Say				541.35

17.43 Providing and fixing single equal plain junction of required degree with access door, insertion rubber washer 3mm thick, bolts and nuts complete.

17.43.1 100x100x100 mm

17.43.1.1 Sand cast iron S&S as per IS - 1729

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1631	S.C.I. single equal junctions 100x100x100 mm dia with access door including cost of bolts and nuts	each	1.00	350.00	350.00
1374	Rubber insertions for 100 mm dia pipe joints 3 mm thick	each	1.00	14.00	14.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.49	20.14
	TOTAL				384.14
	Add Water Charges @ 1%				3.84
	TOTAL				387.98
	Add CPOH @ 15%				58.20
	Cost of each				446.18
	Say				446.20

17.43.1.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
3644	S.C.I. S&S single equal junctions with access door 100x100x100 mm including cost of bolts and nuts	each	1.00	465.00	465.00
1374	Rubber insertions for 100 mm dia pipe joints 3 mm thick	each	1.00	14.00	14.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.49	20.14
	TOTAL				499.14
	Add Water Charges @ 1%				4.99
	TOTAL				504.13
	Add CPOH @ 15%				75.62
	Cost of each				579.75
	Say				579.75

17.43.2 75x75x75 mm

17.43.2.1 Sand cast iron S&S as per IS - 1729

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1630	S.C.I. single equal junctions 75x75x75 mm dia with access door including cost of bolts and nuts	each	1.00	260.00	260.00
1373	Rubber insertions for 80 mm dia pipe joints 3 mm thick	each	1.00	11.00	11.00
9999	Carriage of materials and fixing charges	L.S.	10.79	1.49	16.08
	TOTAL				287.08
	Add Water Charges @ 1%				2.87
	TOTAL				289.95
	Add CPOH @ 15%				43.49
	Cost of each				333.44
	Say				333.45

17.43.2.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
3645	S.C.I. S&S single equal junctions with access door 75x75x75 mm including cost of bolts and nuts	each	1.00	350.00	350.00
1373	Rubber insertions for 80 mm dia pipe joints 3 mm thick	each	1.00	11.00	11.00
9999	Carriage of materials and fixing charges	L.S.	10.79	1.49	16.08
	TOTAL				377.08
	Add Water Charges @ 1%				3.77
	TOTAL				380.85
	Add CPOH @ 15%				57.13
	Cost of each				437.98
	Say				438.00

17.44 Providing and fixing single equal plain junction of required degree:

17.44.1 100x100x100 mm

17.44.1.1 Sand cast iron S&S as per IS - 1729

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1628	S.C.I. plain single equal junctions 100x100x100 mm dia	each	1.00	310.00	310.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.49	20.14
	TOTAL				330.14
	Add Water Charges @ 1%				3.30
	TOTAL				333.44
	Add CPOH @ 15%				50.02
	Cost of each				383.46
	Say				383.45

17.44.1.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
3640	S.C.I. S&S single equal junctions 100x100x 100mm	each	1.00	430.00	430.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.49	20.14
	TOTAL				450.14
	Add Water Charges @ 1%				4.50
	TOTAL				454.64
	Add CPOH @ 15%				68.20
	Cost of each				522.84
	Say				522.85

17.44.2 75x75x75 mm

17.44.2.1 Sand cast iron S&S as per IS - 1729

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1627	S.C.I. plain single equal junctions 75x75x75 mm dia	each	1.00	240.00	240.00
9999	Carriage of materials and fixing charges	L.S.	10.79	1.49	16.08
	TOTAL				256.08
	Add Water Charges @ 1%				2.56
	TOTAL				258.64
	Add CPOH @ 15%				38.80
	Cost of each				297.44
	Say				297.45

17.44.2.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
3641	S.C.I. S&S single equal junctions 75x75x75 mm	each	1.00	310.00	310.00
9999	Carriage of materials and fixing charges	L.S.	10.79	1.49	16.08
	TOTAL				326.08
	Add Water Charges @ 1%				3.26
	TOTAL				329.34
	Add CPOH @ 15%				49.40
	Cost of each				378.74
	Say				378.75

17.45 Providing and fixing double unequal junction of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete:

17.45.1 100x100x75x75 mm

17.45.1.1 Sand cast iron S&S as per IS - 1729

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1662	Sand cast iron S&S double unequal junctions: 100x100x75x75 mm dia with access door including cost of bolts and nuts	each	1.00	550.00	550.00
1374	Rubber insertions for 100 mm dia pipe joints 3 mm thick	each	1.00	14.00	14.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.49	20.14
	TOTAL				584.14
	Add Water Charges @ 1%				5.84
	TOTAL				589.98
	Add CPOH @ 15%				88.50
	Cost of each				678.48
	Say				678.50

17.45.1.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
3674	S.C.I. S&S double unequal junctions with access door 100x100x75x75 mm including cost of bolts and nuts	each	1.00	850.00	850.00
1374	Rubber insertions for 100 mm dia pipe joints 3 mm thick	each	1.00	14.00	14.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.49	20.14
	TOTAL				884.14
	Add Water Charges @ 1%				8.84
	TOTAL				892.98
	Add CPOH @ 15%				133.95
	Cost of each				1,026.93
	Say				1,026.95

17.46 Providing and fixing double unequal plain junction of required degree:

17.46.1 100x100x75x75 mm

17.46.1.1 Sand cast iron S&S as per IS - 1729

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1659	Sand cast iron S&S plain double unequal junctions: 100x100x75x75 mm dia	each	1.00	510.00	510.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Carriage of materials and fixing charges	L.S.	13.52	1.49	20.14
	TOTAL				530.14
	Add Water Charges @ 1%				5.30
	TOTAL				535.44
	Add CPOH @ 15%				80.32
	Cost of each				615.76
	Say				615.75

17.46.1.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
3670	S.C.I. S&S double unequal junctions 100x100x75x75 mm	each	1.00	780.00	780.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.49	20.14
	TOTAL				800.14
	Add Water Charges @ 1%				8.00
	TOTAL				808.14
	Add CPOH @ 15%				121.22
	Cost of each				929.36
	Say				929.35

17.47 Providing and fixing single unequal junction of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete:

17.47.1 100x100x75 mm

17.47.1.1 Sand cast iron S&S as per IS - 1729

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1656	Sand cast iron S&S single unequal junctions: 100x100x75 mm dia with access door including cost of bolts and nuts	each	1.00	390.00	390.00
1374	Rubber insertions for 100 mm dia pipe joints 3 mm thick	each	1.00	14.00	14.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.49	20.14
	TOTAL				424.14
	Add Water Charges @ 1%				4.24
	TOTAL				428.38
	Add CPOH @ 15%				64.26
	Cost of each				492.64
	Say				492.65

17.47.1.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
3664	S.C.I. S&S single unequal junctions with access door 100x100x75 mm including cost of bolts and nuts	each	1.00	630.00	630.00
1374	Rubber insertions for 100 mm dia pipe joints 3 mm thick	each	1.00	14.00	14.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.49	20.14
	TOTAL				664.14
	Add Water Charges @ 1%				6.64
	TOTAL				670.78
	Add CPOH @ 15%				100.62
	Cost of each				771.40
	Say				771.40

17.48 Providing and fixing single unequal plain junction of required degree:

17.48.1 100x100x75 mm

17.48.1.1 Sand cast iron S&S as per IS - 1729

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1653	Sand cast iron S&S plain single unequal junctions: 100x100x75 mm dia	each	1.00	350.00	350.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.49	20.14
	TOTAL				370.14
	Add Water Charges @ 1%				3.70
	TOTAL				373.84
	Add CPOH @ 15%				56.08
	Cost of each				429.92
	Say				429.90

17.48.1.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
3660	S.C.I. S&S single unequal junctions 100x100x75 mm	each	1.00	560.00	560.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.49	20.14
	TOTAL				580.14
	Add Water Charges @ 1%				5.80
	TOTAL				585.94
	Add CPOH @ 15%				87.89
	Cost of each				673.83
	Say				673.85

17.49 Providing and fixing double equal plain invert branch of required degree:
17.49.1 100x100x100x100 mm
17.49.1.1 Sand cast iron S&S as per IS - 1729

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1673	S.C.I. double equal invert branch of required degree 100x100x100x100 mm dia	each	1.00	510.00	510.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.49	20.14
	TOTAL				530.14
	Add Water Charges @ 1%				5.30
	TOTAL				535.44
	Add CPOH @ 15%				80.32
	Cost of each				615.76
	Say				615.75

17.49.1.2 Sand cast iron S&S as per IS 3989

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
3685	S.C.I. S&S double equal invert branch of required degree 100x100x100x100 mm dia	each	1.00	525.00	525.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.49	20.14
	TOTAL				545.14
	Add Water Charges @ 1%				5.45
	TOTAL				550.59
	Add CPOH @ 15%				82.59
	Cost of each				633.18
	Say				633.20

17.49.2 75x75x75x75 mm
17.49.2.1 Sand cast iron S&S as per IS - 1729

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1672	S.C.I. double equal invert branch of required degree 75x75x75x75 mm dia	each	1.00	382.00	382.00
9999	Carriage of materials and fixing charges	L.S.	10.79	1.49	16.08
	TOTAL				398.08
	Add Water Charges @ 1%				3.98
	TOTAL				402.06
	Add CPOH @ 15%				60.31
	Cost of each				462.37
	Say				462.35

17.49.2.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
3686	S.C.I. S&S double equal invert branch of required degree 75x75x75x75 mm dia	each	1.00	405.00	405.00
9999	Carriage of materials and fixing charges	L.S.	10.79	1.49	16.08
	TOTAL				421.08
	Add Water Charges @ 1%				4.21
	TOTAL				425.29
	Add CPOH @ 15%				63.79
	Cost of each				489.08
	Say				489.10

17.50 Providing and fixing single equal plain invert branch of required degree:
17.50.1 100x100x100 mm
17.50.1.1 Sand cast iron S&S as per IS - 1729

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1670	S.C.I. single equal invert branch of required degree 100x100x100 mm dia	each	1.00	387.00	387.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.49	20.14
	TOTAL				407.14
	Add Water Charges @ 1%				4.07
	TOTAL				411.21
	Add CPOH @ 15%				61.68
	Cost of each				472.89
	Say				472.90

17.50.1.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
3681	S.C.I. S&S single equal invert branch of required degree 100x100x100 mm dia	each	1.00	395.00	395.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.49	20.14
	TOTAL				415.14
	Add Water Charges @ 1%				4.15
	TOTAL				419.29
	Add CPOH @ 15%				62.89
	Cost of each				482.18
	Say				482.20

17.50.2 75x75x75 mm

17.50.2.1 Sand cast iron S&S as per IS - 1729

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1669	S.C.I. single equal invert branch of required degree 75x75x75 mm dia	each	1.00	290.00	290.00
9999	Carriage of materials and fixing charges	L.S.	10.79	1.49	16.08
	TOTAL				306.08
	Add Water Charges @ 1%				3.06
	TOTAL				309.14
	Add CPOH @ 15%				46.37
	Cost of each				355.51
	Say				355.50

17.50.2.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
3682	S.C.I. S&S single equal invert branch of required degree 75x75x75 mm dia	each	1.00	303.00	303.00
9999	Carriage of materials and fixing charges	L.S.	10.79	1.49	16.08
	TOTAL				319.08
	Add Water Charges @ 1%				3.19
	TOTAL				322.27
	Add CPOH @ 15%				48.34
	Cost of each				370.61
	Say				370.60

17.51 Providing and fixing double unequal invert branch of required degree:

17.51.1 100x100x75x75 mm

17.51.1.1 Sand cast iron S&S as per IS - 1729

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1677	S.C.I. double unequal invert branch of required degree 100x100x75x75 mm dia	each	1.00	545.00	545.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.49	20.14
	TOTAL				565.14
	Add Water Charges @ 1%				5.65
	TOTAL				570.79
	Add CPOH @ 15%				85.62
	Cost of each				656.41
	Say				656.40

17.51.1.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
3695	S.C.I. S&S double unequal invert branch of required degree 100x100x75x75 mm dia	each	1.00	700.00	700.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.49	20.14
	TOTAL				720.14
	Add Water Charges @ 1%				7.20
	TOTAL				727.34
	Add CPOH @ 15%				109.10
	Cost of each				836.44
	Say				836.45

17.52 Providing and fixing single unequal plain invert branch of required degree:

17.52.1 100x100x75 mm

17.52.1.1 Sand cast iron S&S as per IS - 1729

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1674	S.C.I. single unequal invert branch of required degree 100x100x75 mm dia	each	1.00	466.00	466.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.49	20.14
	TOTAL				486.14
	Add Water Charges @ 1%				4.86
	TOTAL				491.00
	Add CPOH @ 15%				73.65
	Cost of each				564.65
	Say				564.65

17.52.1.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
3690	S.C.I. S&S single unequal invert branch of required degree 100x100x75 mm dia	each	1.00	505.00	505.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.49	20.14
	TOTAL				525.14
	Add Water Charges @ 1%				5.25
	TOTAL				530.39
	Add CPOH @ 15%				79.56
	Cost of each				609.95
	Say				609.95

17.53 Providing and fixing sand cast iron S&S off sets as per IS: 1729

17.53.1 76 mm off sets

17.53.1.1 With 75 mm dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
3746	S.C.I. S&S, 75 mm offset for 75 mm dia pipe	each	1.00	215.00	215.00
9999	Carriage of materials and fixing charges	L.S.	10.79	1.49	16.08
	TOTAL				231.08
	Add Water Charges @ 1%				2.31
	TOTAL				233.39
	Add CPOH @ 15%				35.01
	Cost of each				268.40
	Say				268.40

17.53.1.2 With 100 mm dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
3747	S.C.I. S&S, 75 mm offset for 100 mm dia pipe	each	1.00	246.00	246.00
9999	Carriage of materials and fixing charges	L.S.	10.79	1.49	16.08
	TOTAL				262.08
	Add Water Charges @ 1%				2.62
	TOTAL				264.70
	Add CPOH @ 15%				39.70
	Cost of each				304.40
	Say				304.40

17.53.2 114 mm off sets

17.53.2.1 With 75 mm dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
3712	S.C.I. S&S, 114 mm offset for 75 mm dia pipe	each	1.00	270.00	270.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.49	20.14
	TOTAL				290.14
	Add Water Charges @ 1%				2.90
	TOTAL				293.04
	Add CPOH @ 15%				43.96
	Cost of each				337.00
	Say				337.00

17.53.2.2 With 100 mm dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
3713	S.C.I. S&S, 114 mm offset for 100 mm dia pipe	each	1.00	355.00	355.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Carriage of materials and fixing charges	L.S.	13.52	1.49	20.14
	TOTAL				375.14
	Add Water Charges @ 1%				3.75
	TOTAL				378.89
	Add CPOH @ 15%				56.83
	Cost of each				435.72
	Say				435.70

17.53.3 152 mm off sets

17.53.3.1 With 75 mm dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
3716	S.C.I. S&S, 152 mm offset for 75 mm dia pipe	each	1.00	335.00	335.00
9999	Carriage of materials and fixing charges	L.S.	17.94	1.49	26.73
	TOTAL				361.73
	Add Water Charges @ 1%				3.62
	TOTAL				365.35
	Add CPOH @ 15%				54.80
	Cost of each				420.15
	Say				420.15

17.53.3.2 With 100 mm dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
3717	S.C.I. S&S, 152 mm offset for 100 mm dia pipe	each	1.00	440.00	440.00
9999	Carriage of materials and fixing charges	L.S.	17.94	1.49	26.73
	TOTAL				466.73
	Add Water Charges @ 1%				4.67
	TOTAL				471.40
	Add CPOH @ 15%				70.71
	Cost of each				542.11
	Say				542.10

17.54 Providing and fixing sand cast iron S&S off sets as per IS: 3989 :

17.54.1 75 mm off sets

17.54.1.1 With 75 mm dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
3699	S.C.I. S&S, 75 mm offset for 75 mm dia pipe	each	1.00	215.00	215.00
9999	Carriage of materials and fixing charges	L.S.	10.79	1.49	16.08
	TOTAL				231.08
	Add Water Charges @ 1%				2.31
	TOTAL				233.39
	Add CPOH @ 15%				35.01
	Cost of each				268.40
	Say				268.40

17.54.2 150 mm off sets

17.54.2.1 With 75 mm dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
3707	S.C.I. S&S, 150 mm offset for 75 mm dia pipe	each	1.00	270.00	270.00
9999	Carriage of materials and fixing charges	L.S.	16.12	1.49	24.02
	TOTAL				294.02
	Add Water Charges @ 1%				2.94
	TOTAL				296.96
	Add CPOH @ 15%				44.54
	Cost of each				341.50
	Say				341.50

17.54.2.2 With 100 mm dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
3708	S.C.I. S&S, 150 mm offset for 100 mm dia pipe	each	1.00	370.00	370.00
9999	Carriage of materials and fixing charges	L.S.	16.12	1.49	24.02
	TOTAL				394.02
	Add Water Charges @ 1%				3.94
	TOTAL				397.96
	Add CPOH @ 15%				59.69
	Cost of each				457.65
	Say				457.65

17.55 Providing and fixing door piece, insertion rubber washer 3 mm thick, bolts & nuts complete:

17.55.1 100 mm

17.55.1.1 Sand cast iron S&S as per IS - 1729

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1683	S.C.I. door pieces 100 mm dia including cost of bolts and nuts	each	1.00	350.00	350.00
1374	Rubber insertions for 100 mm dia pipe joints	each	1.00	14.00	14.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.49	20.14
	TOTAL				384.14
	Add Water Charges @ 1%				3.84
	TOTAL				387.98
	Add CPOH @ 15%				58.20
	Cost of each				446.18
	Say				446.20

17.55.1.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
3728	S.C.I. S&S door pieces 100 mm dia including cost of bolts and nuts	each	1.00	370.00	370.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1374	Rubber insertions for 100 mm dia pipe joints	each	1.00	14.00	14.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.49	20.14
	TOTAL				404.14
	Add Water Charges @ 1%				4.04
	TOTAL				408.18
	Add CPOH @ 15%				61.23
	Cost of each				469.41
	Say				469.40

17.55.2 75 mm

17.55.2.1 Sand cast iron S&S as per IS - 1729

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1682	S.C.I. door pieces 75 mm dia including cost of bolts and nuts	each	1.00	253.00	253.00
1373	Rubber insertions for 80 mm dia pipe joints	each	1.00	11.00	11.00
9999	Carriage of materials and fixing charges	L.S.	10.79	1.49	16.08
	TOTAL				280.08
	Add Water Charges @ 1%				2.80
	TOTAL				282.88
	Add CPOH @ 15%				42.43
	Cost of each				325.31
	Say				325.30

17.55.2.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
3729	S.C.I. S&S door pieces 75 mm dia including cost of bolts and nuts	each	1.00	260.00	260.00
1373	Rubber insertions for 80 mm dia pipe joints	each	1.00	11.00	11.00
9999	Carriage of materials and fixing charges	L.S.	10.79	1.49	16.08
	TOTAL				287.08
	Add Water Charges @ 1%				2.87
	TOTAL				289.95
	Add CPOH @ 15%				43.49
	Cost of each				333.44
	Say				333.45

17.56 Providing and fixing terminal guard:

17.56.1 100 mm

17.56.1.1 Sand cast iron S&S as per IS - 1729

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1640	Slotted cowl (terminal guard) 100 mm dia	each	1.00	187.00	187.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Carriage of materials and fixing charges	L.S.	13.52	1.49	20.14
	TOTAL				207.14
	Add Water Charges @ 1%				2.07
	TOTAL				209.21
	Add CPOH @ 15%				31.38
	Cost of each				240.59
	Say				240.60

17.56.1.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
3733	S.C.I. S&S, Slotted Cowl (Terminal Guard) 100 mm	each	1.00	190.00	190.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.49	20.14
	TOTAL				210.14
	Add Water Charges @ 1%				2.10
	TOTAL				212.24
	Add CPOH @ 15%				31.84
	Cost of each				244.08
	Say				244.10

17.56.2 75 mm

17.56.2.1 Sand cast iron S&S as per IS - 1729

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1639	Slotted cowl (terminal guard) 75 mm dia	each	1.00	137.00	137.00
9999	Carriage of materials and fixing charges	L.S.	10.79	1.49	16.08
	TOTAL				153.08
	Add Water Charges @ 1%				1.53
	TOTAL				154.61
	Add CPOH @ 15%				23.19
	Cost of each				177.80
	Say				177.80

17.56.2.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
3734	S.C.I. S&S, Slotted Cowl (Terminal Guard) 75 mm	each	1.00	175.00	175.00
9999	Carriage of materials and fixing charges	L.S.	10.79	1.49	16.08
	TOTAL				191.08
	Add Water Charges @ 1%				1.91
	TOTAL				192.99
	Add CPOH @ 15%				28.95
	Cost of each				221.94
	Say				221.95

17.57 Providing and fixing collar:
17.57.1 100 mm
17.57.1.1 Sand cast iron S&S as per IS - 1729

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1686	S.C.I. collar 100 mm dia	each	1.00	133.00	133.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.49	20.14
	TOTAL				153.14
	Add Water Charges @ 1%				1.53
	TOTAL				154.67
	Add CPOH @ 15%				23.20
	Cost of each				177.87
	Say				177.85

17.57.1.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
3738	S.C.I. S&S, collars 100 mm	each	1.00	185.00	185.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.49	20.14
	TOTAL				205.14
	Add Water Charges @ 1%				2.05
	TOTAL				207.19
	Add CPOH @ 15%				31.08
	Cost of each				238.27
	Say				238.25

17.57.2 75 mm
17.57.2.1 Sand cast iron S&S as per IS - 1729

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1685	S.C.I. collar 75 mm dia	each	1.00	98.00	98.00
9999	Carriage of materials and fixing charges	L.S.	10.79	1.49	16.08
	TOTAL				114.08
	Add Water Charges @ 1%				1.14
	TOTAL				115.22
	Add CPOH @ 15%				17.28
	Cost of each				132.50
	Say				132.50

17.57.2.2 Sand cast iron S&S as per IS- 3989

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
3739	S.C.I. S&S, collars 75 mm	each	1.00	130.00	130.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Carriage of materials and fixing charges	L.S.	10.79	1.49	16.08
	TOTAL				146.08
	Add Water Charges @ 1%				1.46
	TOTAL				147.54
	Add CPOH @ 15%				22.13
	Cost of each				169.67
	Say				169.65

17.58 Providing lead caulked joints to sand cast iron/centrifugally cast (spun) iron pipes and fittings of diameter:

17.58.1 100 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 joint				
	MATERIAL:				
1397	Pig lead	kilogram	0.98	90.00	88.20
1881	Spun yarn	kilogram	0.11	40.00	4.40
9999	Kerosene oil, fuel and other sundries	L.S.	13.52	1.49	20.14
9999	Carriage of materials	L.S.	1.43	1.49	2.13
	LABOUR:				
0116	Fitter (grade 1)	day	0.06	301.00	18.06
0117	Assistant Fitter or 2nd class Fitter	day	0.06	273.00	16.38
0114	Beldar	day	0.12	247.00	29.64
	TOTAL				178.95
	Add Water Charges @ 1%				1.79
	TOTAL				180.74
	Add CPOH @ 15%				27.11
	Cost of each				207.85
	Say				207.85

17.58.2 75 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 joint				
	MATERIAL:				
1397	Pig lead	kilogram	0.88	90.00	79.20
1881	Spun yarn	kilogram	0.09	40.00	3.60
9999	Kerosene oil, fuel and other sundries	L.S.	10.79	1.49	16.08
9999	Carriage of materials	L.S.	1.43	1.49	2.13
	LABOUR:				
0116	Fitter (grade 1)	day	0.05	301.00	15.05
0117	Assistant Fitter or 2nd class Fitter	day	0.05	273.00	13.65
0114	Beldar	day	0.09	247.00	22.23
	TOTAL				151.94
	Add Water Charges @ 1%				1.52
	TOTAL				153.46
	Add CPOH @ 15%				23.02
	Cost of each				176.48
	Say				176.50

17.58.3 50 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 joint				
	MATERIAL:				
1397	Pig lead	kilogram	0.77	90.00	69.30
1881	Spun yarn	kilogram	0.06	40.00	2.40
9999	Kerosene oil, fuel and other sundries	L.S.	6.76	1.49	10.07
9999	Carriage of materials	L.S.	1.43	1.49	2.13
	LABOUR:				
0116	Fitter (grade 1)	day	0.04	301.00	12.04
0117	Assistant Fitter or 2nd class Fitter	day	0.05	273.00	13.65
0114	Beldar	day	0.05	247.00	12.35
	TOTAL				121.94
	Add Water Charges @ 1%				1.22
	TOTAL				123.16
	Add CPOH @ 15%				18.47
	Cost of each				141.63
	Say				141.65

17.59 Providing and fixing M.S. stays and clamps for sand cast iron/centrifugally cast (spun) iron pipes of diameter:

17.59.1 100 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1330	Clamps and M.S. stays including bolts and nuts for 100 mm pipe	each	1.00	33.00	33.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.49	20.14
	TOTAL				53.14
	Add Water Charges @ 1%				0.53
	TOTAL				53.67
	Add CPOH @ 15%				8.05
	Cost of each				61.72
	Say				61.70

17.59.2 75 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1335	Clamps and M.S. stays including bolts and nuts for 75 mm pipe	each	1.00	29.00	29.00
9999	Carriage of materials and fixing charges	L.S.	10.79	1.49	16.08
	TOTAL				45.08
	Add Water Charges @ 1%				0.45
	TOTAL				45.53
	Add CPOH @ 15%				6.83
	Cost of each				52.36
	Say				52.35

17.59.3 50 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1334	Clamps and M.S. stays including bolts and nuts for 50 mm pipe	each	1.00	25.00	25.00
9999	Carriage of materials and fixing charges	L.S.	9.49	1.49	14.14
	TOTAL				39.14
	Add Water Charges @ 1%				0.39
	TOTAL				39.53
	Add CPOH @ 15%				5.93
	Cost of each				45.46
	Say				45.45

17.60 Providing and fixing trap of self cleansing design with screwed down or hinged grating with or without vent arm complete, including cost of cutting and making good the walls and floors:

17.60.1 100 mm inlet and 100 mm outlet

17.60.1.1 Sand cast iron S&S as per IS: 3989

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7808	Centrifugally cast (spun) iron S&S 100 mm inlet and 100 mm outlet	each	1.00	392.00	392.00
9999	Cement, sand and grit etc.	L.S.	13.52	1.49	20.14
9999	Carriage of materials	L.S.	2.73	1.49	4.07
	LABOUR:				
0123	Mason (brick layer) 1 st class	day	0.50	301.00	150.50
0114	Beldar	day	0.50	247.00	123.50
	TOTAL				690.21
	Add Water Charges @ 1%				6.90
	TOTAL				697.11
	Add CPOH @ 15%				104.57
	Cost of each				801.68
	Say				801.70

17.60.1.2 Sand Cast Iron S&S as per IS: 1729

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1897	100 mm S.C.I. trap with 100 mm inlet and 100 mm outlet	each	1.00	263.00	263.00
9999	Cement, sand and grit etc.	L.S.	13.52	1.49	20.14
9999	Carriage of materials	L.S.	2.73	1.49	4.07
	LABOUR:				
0123	Mason (brick layer) 1 st class	day	0.50	301.00	150.50

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Beldar	day	0.50	247.00	123.50
	TOTAL				561.21
	Add Water Charges @ 1%				5.61
	TOTAL				566.82
	Add CPOH @ 15%				85.02
	Cost of each				651.84
	Say				651.85

17.60.2 100 mm inlet and 75 mm outlet

17.60.2.1 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7809	Centrifugally cast (spun) iron S&S 100 mm inlet and 75 mm outlet	each	1.00	424.00	424.00
9999	Cement, sand and grit etc.	L.S.	13.52	1.49	20.14
9999	Carriage of materials	L.S.	2.73	1.49	4.07
	LABOUR:				
0123	Mason (brick layer) 1 st class	day	0.50	301.00	150.50
0114	Beldar	day	0.50	247.00	123.50
	TOTAL				722.21
	Add Water Charges @ 1%				7.22
	TOTAL				729.43
	Add CPOH @ 15%				109.41
	Cost of each				838.84
	Say				838.85

17.60.2.2 Sand Cast Iron S&S as per IS- 1729

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1898	100 mm S.C.I. trap with 100 mm inlet and 75 mm outlet	each	1.00	198.00	198.00
9999	Cement, sand and grit etc.	L.S.	13.52	1.49	20.14
9999	Carriage of materials	L.S.	2.73	1.49	4.07
	LABOUR:				
0123	Mason (brick layer) 1 st class	day	0.50	301.00	150.50
0114	Beldar	day	0.50	247.00	123.50
	TOTAL				496.21
	Add Water Charges @ 1%				4.96
	TOTAL				501.17
	Add CPOH @ 15%				75.18
	Cost of each				576.35
	Say				576.35

17.61 Cutting chases in brick masonry walls for following diameter sand cast iron / centrifugally cast (spun) iron pipes and making good the same with cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 12.5 mm nominal size) including necessary plaster and pointing in cement mortar 1:4 (1 cement : 4 coarse sand) :

17.61.1 - 100 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one metre				
	MATERIAL:				
	Cement concrete 1:3:6 (1 cement :3 coarse sand :6 graded stone aggregate)				
4.2.5	Rate as per Item Number 4.2.5 of SH: Concrete work	cum	0.022	4,782.35	105.21 (A)
9999	Plastering in cement mortar 1:4	L.S.	10.40	1.49	15.50
9999	Carriage of materials	L.S.	4.16	1.49	6.20
	LABOUR:				
0123	Mason (brick layer) 1 st class	day	0.14	301.00	42.14
0114	Beldar	day	0.27	247.00	66.69
	TOTAL				235.74
	Add Water Charges @ 1% except on A i.e on (235.74 - 105.21 =) 130.53				1.31
	TOTAL				237.05
	Add CPOH @ 15% except on A i.e on (237.05 - 105.21 =) 131.84				19.78
	Cost of 1 metre				256.83
	Say				256.85

17.61.2 75 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one metre				
	MATERIAL:				
	Cement concrete 1:3:6 (1 cement :3 coarse sand :6 graded stone aggregate)				
4.2.5	Rate as per Item Number 4.2.5 of SH: Concrete work	cum	0.015	4,782.35	71.74 (A)
9999	Plastering in cement mortar 1:4	L.S.	7.80	1.49	11.62
9999	Carriage of materials	L.S.	3.51	1.49	5.23
	LABOUR:				
0123	Mason (brick layer) 1 st class	day	0.10	301.00	30.10
0114	Beldar	day	0.20	247.00	49.40
	TOTAL				168.09
	Add Water Charges @ 1% except on A i.e on (168.09 - 71.74 =) 96.35				0.96
	TOTAL				169.05
	Add CPOH @ 15% except on A i.e on (169.05 - 71.74 =) 97.31				14.60
	Cost of 1 metre				183.65
	Say				183.65

17.61.3 50 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one metre				
	MATERIAL:				
	Cement concrete 1:3:6 (1 cement :3 coarse sand :6 graded stone aggregate)				
4.2.5	Rate as per Item Number 4.2.5 of SH: Concrete work	cum	0.008	4,782.35	38.26 (A)
9999	Plastering in cement mortar 1:4	L.S.	5.20	1.49	7.75
9999	Carriage of materials	L.S.	2.73	1.49	4.07
	LABOUR:				
0123	Mason (brick layer) 1 st class	day	0.07	301.00	21.07
0114	Beldar	day	0.14	247.00	34.58
	TOTAL				105.73
	Add Water Charges @ 1% except on A i.e on (105.73 - 38.26 =) 67.47				0.67
	TOTAL				106.40
	Add CPOH @ 15% except on A i.e on (106.40 - 38.26 =) 68.14				10.22
	Cost of 1 metre				116.62
	Say				116.60

17.62 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.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one cistern with fittings				
	MATERIAL:				
0828	Anticorrosive bituminous paint (black)	litre	0.23	85.00	19.55
4202	Red oxide Zinc chromate primer	litre	0.20	68.00	13.60
0834	Synthetic enamel paint in all shades except black or chocolate shade	litre	0.40	135.00	54.00
9999	Carriage of materials	L.S.	1.43	1.49	2.13
9999	Sundries	L.S.	6.76	1.49	10.07
	LABOUR:				
0131	Painter	day	0.25	273.00	68.25
0114	Beldar	day	0.50	247.00	123.50
	TOTAL				291.10
	Add Water Charges @ 1%				2.91
	TOTAL				294.01
	Add CPOH @ 15%				44.10
	Cost of each				338.11
	Say				338.10

17.63 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.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one cistern with fittings				
	MATERIAL:				
0828	Anticorrosive bituminous paint (black)	litre	0.23	85.00	19.55

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0834	Synthetic enamel paint in all shades except black or chocolate shade	litre	0.20	135.00	27.00
9999	Polishing of wooden seat and cleaning of W.C. pan with acid	L.S.	20.67	1.49	30.80
9999	Sundries and carriage of materials	L.S.	7.15	1.49	10.65
	LABOUR:				
0131	Painter	day	0.20	273.00	54.60
0114	Beldar	day	0.25	247.00	61.75
	TOTAL				204.35
	Add Water Charges @ 1%				2.04
	TOTAL				206.39
	Add CPOH @ 15%				30.96
	Cost of each				237.35
	Say				237.35

17.64 Repainting C.I. cistern with synthetic enamel paint of approved colour, brand and manufacture on the outside surface of cistern, flush pipe, other fittings etc. complete.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one cistern with fittings				
	MATERIAL:				
0834	Synthetic enamel paint in all shades except black or chocolate shade	litre	0.20	135.00	27.00
9999	Sundries and carriage of materials	L.S.	3.64	1.49	5.42
	LABOUR:				
0131	Painter	day	0.09	273.00	24.57
0114	Beldar	day	0.12	247.00	29.64
	TOTAL				86.63
	Add Water Charges @ 1%				0.87
	TOTAL				87.50
	Add CPOH @ 15%				13.12
	Cost of each				100.62
	Say				100.60

17.65 Painting sand cast iron / centrifugally cast (spun) iron soil, waste vent pipes and fittings with two coats of synthetic enamel paint of any colour such as chocolate grey, or buff etc. over a coat of primer (of approved quality) for new work:

17.65.1 100 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metres				
	MATERIAL:				
	Perimeter = 3.14x 110 mm =345.71				
	Area 10x0.3457 = 3.46 sqm				
	Priming coat				
13.50.3	Rate as per Item Number 13.50.3 of SH: Finishing	sqm	3.46	20.70	71.62 (A)
	Painting two coats with paint of any colour such as chocalate, grey or buff etc				
13.61.1	Rate as per Item Number 13.61.1 of SH: Finishing	sqm	3.46	53.85	186.32 (A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Add for delay	L.S.	17.16	1.49	25.57
	TOTAL				283.51
	Add Water Charges @ 1% except on A i.e on (283.51 - 257.94 =) 25.57				0.26
	TOTAL				283.77
	Add CPOH @ 15% except on A i.e on (283.77 - 257.94 =) 25.83				3.87
	Cost of 10 metre				287.64
	Cost of 1 metre				28.76
	Say				28.75

17.65.2 75 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metres				
	MATERIAL:				
	Perimeter = 3.14x82 mm =257.71				
	Area 10x0.2577 =2.577 sqm say 2.60 sq. m for outer surface				
	Priming coat				
13.50.3	Rate as per Item Number 13.50.3 of SH: Finishing	sqm	2.60	20.70	53.82 (A)
	Painting two coats with paint of any colour such as chocalate, grey or buff etc.				
13.61.1	Rate as per Item Number 13.61.1 of SH: Finishing	sqm	2.60	53.85	140.01 (A)
9999	Add for delay	L.S.	15.21	1.49	22.66
	TOTAL				216.49
	Add Water Charges @ 1% except on A i.e on (216.49 - 193.83 =) 22.66				0.23
	TOTAL				216.72
	Add CPOH @ 15% except on A i.e on (216.72 - 193.83 =) 22.89				3.43
	Cost of 10 metre				220.15
	Cost of 1 metre				22.02
	Say				22.00

17.66 Repainting sand cast iron / centrifugally cast iron (spun) iron, soil, waste, vent pipes and fittings with one coat of synthetic enamel paint of any colour such as chocolate, grey or buff etc :

17.66.1 100 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metres				
	MATERIAL:				
	Painting one coat with paint of any colour such as chocolate,grey or buff etc.				
14.54.1	Rate as per Item Number 14.54.1 of SH: Repairs to buildings	sqm	3.46	35.20	121.79 (A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Add for delay	L.S.	12.22	1.49	18.21
	TOTAL				140.00
	Add Water Charges @ 1% except on A i.e on (140.00 - 121.79 =) 18.21				0.18
	TOTAL				140.18
	Add CPOH @ 15% except on A i.e on (140.18 - 121.79 =) 18.39				2.76
	Cost of 10 metre				142.94
	Cost of 1 metre				14.29
	Say				14.30

17.66.2 75 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metres				
	MATERIAL:				
	Painting one coat with paint of any colour such as chocolate,grey or buff etc.				
14.54.1	Rate as per Item Number 14.54.1 of SH: Repairs to buildings	sqm	2.577	35.20	90.71 (A)
9999	Add for delay	L.S.	9.49	1.49	14.14
	TOTAL				104.85
	Add Water Charges @ 1% except on A i.e on (104.85 - 90.71 =) 14.14				0.14
	TOTAL				104.99
	Add CPOH @ 15% except on A i.e on (104.99 - 90.71 =) 14.28				2.14
	Cost of 10 metre				107.13
	Cost of 1 metre				10.71
	Say				10.70

17.67 Repainting bath tub of size 1700x730x430 mm with enamel paint.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 tub				
	MATERIAL:				
0830	Enamel paint	litre	0.90	125.00	112.50
9999	Sundries	L.S.	6.76	1.49	10.07
	LABOUR:				
0131	Painter	day	0.25	273.00	68.25
0115	Coolie	day	0.25	247.00	61.75
	TOTAL				252.57
	Add Water Charges @ 1%				2.53
	TOTAL				255.10
	Add CPOH @ 15%				38.26
	Cost of each				293.36
	Say				293.35

17.68 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 fixed with C.P. brass hinges and rubber buffers, 10 litre low level flushing cistern with fittings and brackets, 40 mm flush bend, 20 mm 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:

17.68.1 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

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1875	White plastic seat (solid) with lid C.P. brass hinges and rubber buffers	each	1.00	310.00	310.00
1965	White vitreous china dual purpose closet (Anglo Indian W.C.) suitable for use as squatting pan or European type water closet as per manufacturer's specifications	each	1.00	1,250.00	1,250.00
7006	Vitreous china 10 litres low level cistern with fittings	each	1.00	1,550.00	1,550.00
9999	20 mm G.I. over flow pipe and specials forover flow pipe	L.S.	276.25	1.49	411.61
1350	Mosquito proof coupling of approved design	each	1.00	27.00	27.00
9999	Plugs, screws etc	L.S.	59.15	1.49	88.13
9999	Red lead, white lead and gasket	L.S.	71.76	1.49	106.92
9999	Cement, sand and grit etc.	L.S.	118.43	1.49	176.46
9999	Carriage of materials	L.S.	118.43	1.49	176.46
	LABOUR:				
0116	Fitter (grade 1)	day	1.00	301.00	301.00
0123	Mason (brick layer) 1 st class	day	1.00	301.00	301.00
0114	Beldar	day	1.00	247.00	247.00
	TOTAL				4,945.58
	Add Water Charges @ 1%				49.46
	TOTAL				4,995.04
	Add CPOH @ 15%				749.26
	Cost of each				5,744.30
	Say				5,744.30

17.69 Providing and fixing PTMT Waste Coupling for wash basin and sink, of approved quality and colour.

17.69.1 Waste coupling 31 mm dia of 79 mm length and 62 mm breadth weighing not less than 45 gms

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7491	PTMT - Waste Coupling 31/32 mm	each	1.00	51.00	51.00
9999	Carriage of materials and fixing charges	L.S.	20.28	1.49	30.22
	TOTAL				81.22
	Add Water Charges @ 1%				0.81
	TOTAL				82.03
	Add CPOH @ 15%				12.30
	Cost of each				94.33
	Say				94.35

17.69.2 Waste coupling 38 mm dia of 83 mm length and 77 mm breadth, weighing not less than 60 gms

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7492	PTMT - Waste Coupling 38/40 mm	each	1.00	64.00	64.00
9999	Carriage of materials and fixing charges	L.S.	20.28	1.49	30.22
	TOTAL				94.22
	Add Water Charges @ 1%				0.94
	TOTAL				95.16
	Add CPOH @ 15%				14.27
	Cost of each				109.43
	Say				109.45

17.70 Providing and fixing PTMT Bottle Trap for Wash basin and sink.

17.70.1 Bottle trap 31 mm single piece moulded with height of 270 mm, effective length of tail pipe 260 mm from the centre of the waste coupling, 77 mm breadth with 25 mm minimum water seal, weighing not less than 260 gms

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7493	PTMT - Bottle Trap 31/32 mm	each	1.00	317.00	317.00
9999	Carriage of materials and fixing charges	L.S.	20.28	1.49	30.22
	TOTAL				347.22
	Add Water Charges @ 1%				3.47
	TOTAL				350.69
	Add CPOH @ 15%				52.60
	Cost of each				403.29
	Say				403.30

17.70.2 Bottle trap 38 mm single piece moulded with height of 270 mm, effective length of tail pipe 260 mm from the centre of the waste coupling, 77 mm breadth with 25 mm minimum water seal, weighing not less than 263 gms

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for each				
	MATERIAL:				
7494	PTMT - Bottle Trap 38/40 mm	each	1.00	345.00	345.00
9999	Carriage of materials and fixing charges	L.S.	20.28	1.49	30.22
	TOTAL				375.22
	Add Water Charges @ 1%				3.75
	TOTAL				378.97
	Add CPOH @ 15%				56.85
	Cost of each				435.82
	Say				435.80

17.71 Providing and fixing PTMT liquid soap container 109 mm wide, 125 mm high and 112 mm distance from wall of standard shape with bracket of the same materials with snap fittings of approved quality and colour, weighing not less than 105 gms.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7503	PTMT Liquid Soap Container of 400 ml capacity	each	1.00	145.00	145.00
9999	Carriage of materials and fixing charges	L.S.	6.76	1.49	10.07
	TOTAL				155.07
	Add Water Charges @ 1%				1.55
	TOTAL				156.62
	Add CPOH @ 15%				23.49
	Cost of each				180.11
	Say				180.10

17.72 Providing and fixing PTMT towel ring trapezoidal shape 215 mm long, 200 mm wide with minimum distances of 37 mm from wall face with concealed fittings arrangement of approved quality and colour, weighing not less than 88 gms.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7504	PTMT Towel Ring 215x200x37 mm	each	1.00	116.00	116.00
9999	Carriage of materials and fixing charges	L.S.	20.28	1.49	30.22
	TOTAL				146.22
	Add Water Charges @ 1%				1.46
	TOTAL				147.68
	Add CPOH @ 15%				22.15
	Cost of each				169.83
	Say				169.85

17.73 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.

17.73.1 450 mm long towel rail with total length of 495 mm, 78 mm wide and effective height of 88 mm, weighing not less than 170 gms

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
	Wooden cleates				
9.32	Rate as per Item Number 9.32 of SH: Wood and PVC work	each	2.00	17.40	34.80 (A)
7505	PTMT- Towel Rail (450 mm)	each	1.00	192.00	192.00
0588	Chromium plated Brass screws 25 mm	100 nos	6.00	115.00	6.90
9999	Carriage of materials	L.S.	4.16	1.49	6.20
	LABOUR:				
0112	Carpenter 2nd class	day	0.17	273.00	46.41

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Beldar	day	0.17	247.00	41.99
	TOTAL				328.30
	Add Water Charges @ 1% except on A i.e on (328.30 - 34.80 =) 293.50				2.94
	TOTAL				331.24
	Add CPOH @ 15% except on A i.e on (331.24 - 34.80 =) 296.44				44.47
	Cost of each				375.71
	Say				375.70

17.73.2 600 mm long towel rail with total length of 645 mm, width 78 mm and effective height of 88mm, weighing not less than 190 gms

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7506	PTMT - Towel Rail (600 mm)	each	1.00	226.00	226.00
	Wooden cleates				
9.32	Rate as per Item Number 9.32 of SH: Wood and PVC work	each	2.00	17.40	34.80 (A)
0588	Chromium plated Brass screws 25 mm	100 nos	6.00	115.00	6.90
9999	Carriage of materials	L.S.	4.16	1.49	6.20
	LABOUR:				
0112	Carpenter 2nd class	day	0.17	273.00	46.41
0114	Beldar	day	0.17	247.00	41.99
	TOTAL				362.30
	Add Water Charges @ 1% except on A i.e on (362.30 - 34.80 =) 327.50				3.28
	TOTAL				365.58
	Add CPOH @ 15% except on A i.e on (365.58 - 34.80 =) 330.78				49.62
	Cost of each				415.20
	Say				415.20

17.74 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.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
	Wooden cleates				
9.32	Rate as per Item Number 9.32 of SH: Wood and PVC work	each	2.00	17.40	34.80 (A)
7507	PTMT Shelf 450x124x36 mm	each	1.00	258.00	258.00
0588	Chromium plated Brass screws 25 mm	100 nos	6.00	115.00	6.90
9999	Carriage of materials	L.S.	4.16	1.49	6.20
	LABOUR:				
0112	Carpenter 2nd class	day	0.17	273.00	46.41

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Beldar	day	0.17	247.00	41.99
	TOTAL				394.30
	Add Water Charges @ 1% except on A i.e on (394.30 - 34.80 =) 359.50				3.60
	TOTAL				397.90
	Add CPOH @ 15% except on A i.e on (397.90 - 34.80 =) 363.10				54.46
	Cost of each				452.36
	Say				452.35

17.75 Providing and fixing PTMT 15 mm Urinal spreader size 95x69x100 mm with 1/2" BSP thread and shapes, weighing not less than 60 gms.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7508	PTMT - Urinal Spreader 15 mm	each	1.00	127.00	127.00
9999	Carriage of materials and fixing charges	L.S.	6.76	1.49	10.07
	TOTAL				137.07
	Add Water Charges @ 1%				1.37
	TOTAL				138.44
	Add CPOH @ 15%				20.77
	Cost of each				159.21
	Say				159.20

17.76 Providing and fixing PTMT urinal cock of approved quality and colour.

17.76.1 15 mm nominal bore, 80 mm long, 42 mm high and 30 mm wide with BSP female threads weighing not less than 48 gms

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7858	P.T.M.T. Urinal cock 15 mm dia	each	1.00	94.00	94.00
9999	Carriage of materials and fixing charges	L.S.	8.06	1.49	12.01
	TOTAL				106.01
	Add Water Charges @ 1%				1.06
	TOTAL				107.07
	Add CPOH @ 15%				16.06
	Cost of each				123.13
	Say				123.15

17.77 Providing and fixing M.S. holder bat clamp of approved design to sand cast iron / cast iron (spun) pipes comprising of M.S. flat brackets made of 50x5 mm flat of specified shape, projecting 75 mm outside the wall surface and fixed on wall with 4 nos, 6 mm dia expansion hold fasteners, including drilling necessary holes in brick wall / CC / RCC surface and the cost of bolts etc. The pipes shall be fixed to the already fixed brackets with the help of 30 mm x 1.6 mm galvanised M.S. flats of specified shape and of total length 420 mm and shall be fixed with M.S. nuts, bolts, & washers of size 25x6 mm, one bolts on each side of the pipe.

17.77.1 Total bracket length 580 mm of approved shape and design (for single 100 mm dia pipe)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 5 nos MATERIAL: M.S. flats 50x5mm 50x0.58= 2.90m @ 1.97 kg/metre = 5.71 kg. M.S. flats 30x1.6mm 5x0.42 = 2.10m. 0.38kg/metre = 0.80kg. Total = 6.51kg. Add wastage 5% = 0.33kg. Total = 6.86 kg = 0.0686 quintal				
1007	Structural steel such as tees, angles channels and R.S. joists	quintal	0.0686	4,250.00	291.55
2205	Carriage of steel	tonne	0.00686	77.87	0.53
0116	Fitter (grade 1)	day	0.033	301.00	9.93
0103	Blacksmith 2nd class	day	0.049	273.00	13.38
0114	Beldar	day	0.065	247.00	16.06
	Priming coat 5x0.58x0.11 =0.32 5x0.42x0.063 =0.13 Total = 0.45sqm				
13.50.1	Rate as per Item Number 13.50.1 of SH: Finishing	sqm	0.45	25.85	11.63 (A)
9999	Sundries	L.S.	1.35	1.49	2.01
	P/F expansion hold fasteners 6mm threaded dia 5x4 Nos = 20 Nos				
8.8.1.1	Rate as per Item Number 8.8.1.1 of SH: Marble work	each	20.00	22.05	441.00 (A)
	TOTAL				786.09
	Add Water Charges @ 1% except on A i.e on (786.09 - 452.63 =) 333.46				3.33
	TOTAL				789.42
	Add CPOH @ 15% except on A i.e on (789.42 - 452.63 =) 336.79				50.52
	Cost of 5 nos				839.94
	Cost of each				167.99
	Say				168.00

17.77.2 Total bracket length 810 mm of approved shape and design (for two 100 mm dia pipes)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 5 nos MATERIAL: M.S. flats 50x5mm 50x0.81= 4.05m @ 1.97 kg/ metre = 7.98 kg. M.S. flats 30x1.6mm 5x2x0.42 = 4.20m. 0.38kg/metre = 1.60kg. Total = 9.58kg. Add wastage 5% = 0.48kg. Total = 10.06 kg. M.S.flats 10.06kg. = 0.1006 quintal				
1007	Structural steel such as tees, angles channels and R.S. joists	quintal	0.1006	4,250.00	427.55
2205	Carriage of steel	tonne	0.01006	77.87	0.78
	LABOUR:				
0116	Fitter (grade 1)	day	0.048	301.00	14.45
0103	Blacksmith 2nd class	day	0.072	273.00	19.66
0114	Beldar	day	0.096	247.00	23.71
	Priming coat 5x0.81x0.11 =0.45 5x2x0.42x0.063 = 0.26 Total = 0.71sqm				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
13.50.1	Rate as per Item Number 13.50.1 of SH: Finishing	sqm	0.71	25.85	18.35 (A)
9999	Sundries P/F expansion hold fasteners 6mm threaded dia 5x4 Nos = 20 Nos	L.S.	1.98	1.49	2.95
8.8.1.1	Rate as per Item Number 8.8.1.1 of SH: Marble work	each	20.00	22.05	441.00 (A)
	TOTAL				948.45
	Add Water Charges @ 1% except on A i.e on (948.45 - 459.35 =) 489.10				4.89
	TOTAL				953.34
	Add CPOH @ 15% except on A i.e on (953.34 - 459.35 =) 493.99				74.10
	Cost of 5 nos				1,027.44
	Cost of each				205.49
	Say				205.50

17.77.3 Total bracket length 1040 mm of approved shape and design (for three 100 mm dia pipes)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 5 nos MATERIAL: M.S. flats 50x5mm 50x1.04= 5.20m @ 1.97 kg/ metre = 10.24 kg. M.S. flats 30x1.6mm 5x3x0.42 = 6.30m. 0.38kg/metre = 2.39kg. Total = 12.63kg. Add wastage 5% = 0.63kg. Total = 13.26 kg. M.S.flats 13.26kg. = 0.1326 quintal				
1007	Structural steel such as tees, angles channels and R.S. joists	quintal	0.1326	4,250.00	563.55
2205	Carriage of steel LABOUR:	tonne	0.01326	77.87	1.03
0116	Fitter (grade 1)	day	0.063	301.00	18.96
0103	Blacksmith 2nd class	day	0.095	273.00	25.94
0114	Beldar	day	0.126	247.00	31.12
	Priming coat 5xl.04x0.ll =0.57 5x3x0.42x0.063 = 0.40 Total = 0.97sqm				
13.50.1	Rate as per Item Number 13.50.1 of SH: Finishing	sqm	0.97	25.85	25.07 (A)
9999	Sundries P/F expansion hold fasteners 6mm threaded dia 5x4 Nos = 20 Nos	L.S.	2.60	1.49	3.87
8.8.1.1	Rate as per Item Number 8.8.1.1 of SH: Marble work	each	20.00	22.05	441.00 (A)
	TOTAL				1,110.54
	Add Water Charges @ 1% except on A i.e on (1,110.54 - 466.07 =) 644.47				6.44
	TOTAL				1,116.98
	Add CPOH @ 15% except on A i.e on (1,116.98 - 466.07 =) 650.91				97.64
	Cost of 5 nos				1,214.62
	Cost of each				242.92
	Say				242.90

17.78 Providing and fixing white vitreous china extended wall mounting water closet of size 780x370x690 mm of approved shape including providing & fixing white vitreous china cistern with dual flush fitting, of flushing capacity 3 litre/ 6 litre (adjustable to 4 litre/ 8 litres), including seat cover, and cistern fittings, nuts, bolts and gasket etc complete.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for each				
	MATERIAL:				
7072	Wall mounted water closet	each	1.00	4,548.00	4,548.00
7073	Adjustable Vetrious China Cistern with fittings	each	1.00	2,409.60	2,409.60
1875	White plastic seat (solid) with lid C.P. brasseach hinges and rubber buffers	1.00	310.00	310.00	
9999	Carriage of material	L.S.	9.79	1.49	14.59
	LABOUR:				
0116	Fitter (grade 1)	day	1.00	301.00	301.00
0114	Beldar	day	1.00	247.00	247.00
0123	Mason (brick layer) 1 st class	day	1.00	301.00	301.00
	TOTAL				8,131.19
	Add Water Charges @ 1%				81.31
	TOTAL				8,212.50
	Add CPOH @ 15%				1,231.88
	Cost of each				9,444.38
	Say				9,444.40

17.79 Providing & fixing white vitreous china water less urinal of size 600 x 330 x 315 mm having antibacterial /germs free ceramic surface, fixed with cartridge having debris catcher and hygiene seal.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for each				
	MATERIAL:				
7074	White Vetrious China Waterless Urinal	each	1.00	13,208.00	13,208.00
7075	Cistern with fittings for Waterless Urinal	each	1.00	3,029.60	3,029.60
9999	Carriage of material	L.S.	9.79	1.49	14.59
	LABOUR:				
0116	Fitter (grade 1)	day	0.50	301.00	150.50
0114	Beldar	day	0.50	247.00	123.50
	TOTAL				16,526.19
	Add Water Charges @ 1%				165.26
	TOTAL				16,691.45
	Add CPOH @ 15%				2,503.72
	Cost of each				19,195.17
	Say				19,195.15

17.80 Providing and fixing white vitreous china battery based infrared sensor operated urinal of approx. size 610 x 390 x 370 mm having pre & post flushing with water (250 ml & 500 ml consumption), having water inlet from back side, including fixing to wall with suitable brackets all as per manufacturers specification and direction of Engineer-in-charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one No.				
	MATERIAL:				
7076	White Vetrious Urinal	each	1.00	12,592.75	12,592.75
9999	Carriage of material	L.S.	9.79	1.49	14.59
0116	Fitter (grade 1)	day	0.50	301.00	150.50
0114	Beldar	day	0.50	247.00	123.50
	TOTAL				12,881.34
	Add Water Charges @ 1%				128.81
	TOTAL				13,010.15
	Add CPOH @ 15%				1,951.52
	Cost of each				14,961.67
	Say				14,961.65

SUB HEAD : 18

WATER SUPPLY

18.1 Providing and fixing Polyethelene-Aluminium-Polyethelene (PE-AL-PE) Composite Pressure Pipes conforming to IS - 15450, U.V. stabilized with carban 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 meter spacing. This includes testing of joints complete of joints complete as per direction of the Engineer-in-Charge. Internal work - Exposed on wall

18.1.1 1216 (16 mm OD) pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
8300	1216 mm PE-AL-PE Composite pressure pipe	metre	10.00	90.00	900.00 (X)
	Add 30% for fittings and wastage etc. on X = 30 x 900.00 / 100				270.00
9999	Cement, sand and grit	L.S.	2.73	1.49	4.07
	LABOUR:				
0116	Fitter (grade 1)	day	0.33	301.00	99.33
0117	Assistant Fitter or 2nd class Fitter	day	0.66	273.00	180.18
0114	Beldar	day	0.66	247.00	163.02
	TOTAL				1,616.60
	Add Water Charges @ 1%				16.17
	TOTAL				1,632.77
	Add CPOH @ 15%				244.92
	Cost of 10 metre				1,877.69
	Cost of 1 metre				187.77
	Say				187.75

18.1.2 1620 (20 mm OD) pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
8301	1620 mm PE-AL-PE Composite pressure pipe	metre	10.00	111.00	1,110.00 (X)
	Add 30% for fittings and wastage etc. on X = 30 x 1110.00 / 100				333.00
9999	Cement, sand and grit	L.S.	2.73	1.49	4.07
	LABOUR:				
0116	Fitter (grade 1)	day	0.33	301.00	99.33
0117	Assistant Fitter or 2nd class Fitter	day	0.82	273.00	223.86
0114	Beldar	day	0.66	247.00	163.02
	TOTAL				1,933.28
	Add Water Charges @ 1%				19.33
	TOTAL				1,952.61
	Add CPOH @ 15%				292.89
	Cost of 10 metre				2,245.50
	Cost of 1 metre				224.55
	Say				224.55

18.1.3 2025 (25 mm OD) pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
8302	2025 mm PE-AL-PE Composite pressure pipe	metre	10.00	143.00	1,430.00 (X)
	Add 30% for fittings and wastage etc. on X				
	= 30 x 1430.00 / 100				429.00
9999	Cement, sand and grit	L.S.	2.73	1.49	4.07
	LABOUR:				
0116	Fitter (grade 1)	day	0.33	301.00	99.33
0117	Assistant Fitter or 2nd class Fitter	day	0.98	273.00	267.54
0114	Beldar	day	0.66	247.00	163.02
	TOTAL				2,392.96
	Add Water Charges @ 1%				23.93
	TOTAL				2,416.89
	Add CPOH @ 15%				362.53
	Cost of 10 metre				2,779.42
	Cost of 1 metre				277.94
	Say				277.95

18.1.4 2532 (32 mm OD) pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
8303	2532 mm PE-AL-PE Composite pressure pipe	metre	10.00	193.00	1,930.00 (X)
	Add 30% for fittings and wastage etc. on X				
	= 30 x 1930.00 / 100				579.00
9999	Cement, sand and grit	L.S.	4.16	1.49	6.20
	LABOUR:				
0116	Fitter (grade 1)	day	0.33	301.00	99.33
0117	Assistant Fitter or 2nd class Fitter	day	0.98	273.00	267.54
0114	Beldar	day	0.98	247.00	242.06
	TOTAL				3,124.13
	Add Water Charges @ 1%				31.24
	TOTAL				3,155.37
	Add CPOH @ 15%				473.31
	Cost of 10 metre				3,628.68
	Cost of 1 metre				362.87
	Say				362.85

18.1.5 3240 (40 mm OD) pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
8304	3240 mm PE-AL-PE Composite pressure pipe	metre	10.00	310.00	3,100.00 (X)
	Add 30% for fittings and wastage etc. on X				
	= 30 x 3100.00 / 100				930.00
9999	Cement, sand and grit	L.S.	5.33	1.49	7.94
	LABOUR:				
0116	Fitter (grade 1)	day	0.33	301.00	99.33

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0117	Assistant Fitter or 2nd class Fitter	day	1.31	273.00	357.63
0114	Beldar	day	1.31	247.00	323.57
	TOTAL				4,818.47
	Add Water Charges @ 1%				48.18
	TOTAL				4,866.65
	Add CPOH @ 15%				730.00
	Cost of 10 metre				5,596.65
	Cost of 1 metre				559.67
	Say				559.65

18.1.6 4050 (50 mm OD) pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
8305	4050 mm PE-AL-PE Composite pressure pipe	metre	10.00	335.00	3,350.00 (X)
	Add 30% for fittings and wastage etc. on X				
	= 30 x 3350.00 / 100				1,005.00
9999	Cement, sand and grit	L.S.	5.33	1.49	7.94
	LABOUR:				
0116	Fitter (grade 1)	day	0.33	301.00	99.33
0117	Assistant Fitter or 2nd class Fitter	day	1.31	273.00	357.63
0114	Beldar	day	1.31	247.00	323.57
	TOTAL				5,143.47
	Add Water Charges @ 1%				51.43
	TOTAL				5,194.90
	Add CPOH @ 15%				779.23
	Cost of 10 metre				5,974.13
	Cost of 1 metre				597.41
	Say				597.40

18.2 Providing and fixing Polyethelene-Aluminium-Polyethelene (PE-AL-PE) Composite Pressure Pipes conforming to IS - 15450, U.V. stabilized with carban 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 meter spacing. This includes the costs of cutting chases and including testing of joints complete of joints complete as per direction of the Engineer-in-Charge. Concealed work, including cutting chases and making good the wall etc.

18.2.1 1216 (16 mm OD) pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
8300	1216 mm PE-AL-PE Composite pressure pipe	metre	10.00	90.00	900.00 (X)
	Add 75% for fittings, clamps and wastage etc. on X				
	= 75 x 900.00 / 100				675.00
	Making chases upto 7.5 x 7.5 cm. in walls and making good the same				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
18.78	Rate as per Item Number 18.78 of SH: Water supply	metre	10.00	64.50	645.00 (A)
	LABOUR:				
0116	Fitter (grade 1)	day	0.33	301.00	99.33
0117	Assistant Fitter or 2nd class Fitter	day	0.66	273.00	180.18
0114	Beldar	day	0.66	247.00	163.02
	TOTAL				2,662.53
	Add Water Charges @ 1% except on A i.e on (2,662.53 - 645.00 =) 2,017.53				20.18
	TOTAL				2,682.71
	Add CPOH @ 15% except on A i.e on (2,682.71 - 645.00 =) 2,037.71				305.66
	Cost of 10 metre				2,988.37
	Cost of 1 metre				298.84
	Say				298.85

18.2.2 1620 (20 mm OD) pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
8301	1620 mm PE-AL-PE Composite pressure pipe	metre	10.00	111.00	1,110.00 (X)
	Add 75% for fittings, clamps and wastage etc. on X				
	= 75 x 1110.00 / 100				832.50
	Making chases upto 7.5 x 7.5 cm. in walls and making good the same				
18.78	Rate as per Item Number 18.78 of SH: Water supply	metre	10.00	64.50	645.00 (A)
	LABOUR:				
0116	Fitter (grade 1)	day	0.33	301.00	99.33
0117	Assistant Fitter or 2nd class Fitter	day	0.66	273.00	180.18
0114	Beldar	day	0.66	247.00	163.02
	TOTAL				3,030.03
	Add Water Charges @ 1% except on A i.e on (3,030.03 - 645.00 =) 2,385.03				23.85
	TOTAL				3,053.88
	Add CPOH @ 15% except on A i.e on (3,053.88 - 645.00 =) 2,408.88				361.33
	Cost of 10 metre				3,415.21
	Cost of 1 metre				341.52
	Say				341.50

18.2.3 2025 (25 mm OD) pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
8302	2025 mm PE-AL-PE Composite pressure pipe	metre	10.00	143.00	1,430.00 (X)
	Add 75% for fittings, clamps and wastage etc. on X				
	= 75 x 1430.00 / 100				1,072.50

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Making chases upto 7.5 x 7.5 cm. in walls and making good the same				
18.78	Rate as per Item Number 18.78 of SH: Water supply	metre	10.00	64.50	645.00 (A)
	LABOUR:				
0116	Fitter (grade 1)	day	0.33	301.00	99.33
0117	Assistant Fitter or 2nd class Fitter	day	0.66	273.00	180.18
0114	Beldar	day	0.66	247.00	163.02
	TOTAL				3,590.03
	Add Water Charges @ 1% except on A i.e on (3,590.03 - 645.00 =) 2,945.03				29.45
	TOTAL				3,619.48
	Add CPOH @ 15% except on A i.e on (3,619.48 - 645.00 =) 2,974.48				446.17
	Cost of 10 metre				4,065.65
	Cost of 1 metre				406.57
	Say				406.55

18.2.4 2532 (32 mm OD) pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
8303	2532 mm PE-AL-PE Composite pressure pipe	metre	10.00	193.00	1,930.00 (X)
	Add 75% for fittings, clamps and wastage etc. on X				
	= 75 x 1930.00 / 100				1,447.50
	Making chases upto 7.5 x 7.5 cm. in walls and making good the same				
18.78	Rate as per Item Number 18.78 of SH: Water supply	metre	10.00	64.50	645.00 (A)
	LABOUR:				
0116	Fitter (grade 1)	day	0.33	301.00	99.33
0117	Assistant Fitter or 2nd class Fitter	day	0.66	273.00	180.18
0114	Beldar	day	0.66	247.00	163.02
	TOTAL				4,465.03
	Add Water Charges @ 1% except on A i.e on (4,465.03 - 645.00 =) 3,820.03				38.20
	TOTAL				4,503.23
	Add CPOH @ 15% except on A i.e on (4,503.23 - 645.00 =) 3,858.23				578.73
	Cost of 10 metre				5,081.96
	Cost of 1 metre				508.20
	Say				508.20

18.3 Providing and fixing Polyethelene-Aluminium-Polyethelene (PE-AL-PE) Composite Pressure Pipes conforming to IS - 15450, U.V. stabilized with carbon black having thermal stability for hot & cold water supply, capable to withstand temperature up to 80 °C including all special fittings of composite material (engineering plastic blend and brass inserts wherever required) e.g. elbows ,tees ,reducers, couplers & connectors etc., with trenching, refilling and testing of joints complete as per direction of the engineer in charge. External work

18.3.1 1216 (16 mm OD) pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
8300	1216 mm PE-AL-PE Composite pressure pipe	metre	10.00	90.00	900.00 (X)
	Add 30% for fittings and wastage etc. on X				
	= 30 x 900.00 / 100				270.00
	LABOUR:				
0116	Fitter (grade 1)	day	0.08	301.00	24.08
0114	Beldar	day	0.16	247.00	39.52
	Trenching and refilling etc.				
0114	Beldar	day	0.66	247.00	163.02
0115	Coolie	day	0.66	247.00	163.02
	TOTAL				1,559.64
	Add Water Charges @ 1%				15.60
	TOTAL				1,575.24
	Add CPOH @ 15%				236.29
	Cost of 10 metre				1,811.53
	Cost of 1 metre				181.15
	Say				181.15

18.3.2 1620 (20 mm OD) pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
8301	1620 mm PE-AL-PE Composite pressure pipe	metre	10.00	111.00	1,110.00 (X)
	Add 30% for fittings and wastage etc. on X				
	= 30 x 1110.00 / 100				333.00
0116	Fitter (grade 1)	day	0.08	301.00	24.08
0114	Beldar	day	0.16	247.00	39.52
	Trenching and refilling etc.				
0114	Beldar	day	0.66	247.00	163.02
0115	Coolie	day	0.66	247.00	163.02
	TOTAL				1,832.64
	Add Water Charges @ 1%				18.33
	TOTAL				1,850.97
	Add CPOH @ 15%				277.65
	Cost of 10 metre				2,128.62
	Cost of 1 metre				212.86
	Say				212.85

18.3.3 2025 (25mm OD) pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
8302	2025 mm PE-AL-PE Composite pressure pipe	metre	10.00	143.00	1,430.00 (X)
	Add 30% for fittings and wastage etc. on X				
	= 30 x 1430.00 / 100				429.00
	LABOUR:				
0116	Fitter (grade 1)	day	0.08	301.00	24.08

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Beldar	day	0.16	247.00	39.52
	Trenching and refilling etc.				
0114	Beldar	day	0.66	247.00	163.02
0115	Coolie	day	0.66	247.00	163.02
	TOTAL				2,248.64
	Add Water Charges @ 1%				22.49
	TOTAL				2,271.13
	Add CPOH @ 15%				340.67
	Cost of 10 metre				2,611.80
	Cost of 1 metre				261.18
	Say				261.20

18.3.4 2532 (32 mm OD) pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
8303	2532 mm PE-AL-PE Composite pressure pipe	metre	10.00	193.00	1,930.00 (X)
	Add 30% for fittings and wastage etc. on X				
	= 30 x 1930.00 / 100				579.00
	LABOUR:				
0116	Fitter (grade 1)	day	0.08	301.00	24.08
0114	Beldar	day	0.16	247.00	39.52
	Trenching and refilling etc.				
0114	Beldar	day	0.66	247.00	163.02
0115	Coolie	day	0.66	247.00	163.02
	TOTAL				2,898.64
	Add Water Charges @ 1%				28.99
	TOTAL				2,927.63
	Add CPOH @ 15%				439.14
	Cost of 10 metre				3,366.77
	Cost of 1 metre				336.68
	Say				336.70

18.3.5 3240 (40 mm OD) pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
8304	3240 mm PE-AL-PE Composite pressure pipe	metre	10.00	310.00	3,100.00 (X)
	Add 30% for fittings and wastage etc. on X				
	= 30 x 3100.00 / 100				930.00
	LABOUR:				
0116	Fitter (grade 1)	day	0.16	301.00	48.16
0114	Beldar	day	0.33	247.00	81.51
	Trenching and refilling etc.				
0114	Beldar	day	0.66	247.00	163.02
0115	Coolie	day	0.66	247.00	163.02
	TOTAL				4,485.71
	Add Water Charges @ 1%				44.86
	TOTAL				4,530.57
	Add CPOH @ 15%				679.59
	Cost of 10 metre				5,210.16
	Cost of 1 metre				521.02
	Say				521.00

18.3.6 4050 (50 mm OD) pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
8305	4050 mm PE-AL-PE Composite pressure pipe	metre	10.00	335.00	3,350.00 (X)
	Add 30% for fittings and wastage etc. on X				
	= 30 x 3350.00 / 100				1,005.00
	LABOUR:				
0116	Fitter (grade 1)	day	0.16	301.00	48.16
0114	Beldar	day	0.33	247.00	81.51
	Trenching and refilling etc.				
0114	Beldar	day	0.66	247.00	163.02
0115	Coolie	day	0.66	247.00	163.02
	TOTAL				4,810.71
	Add Water Charges @ 1%				48.11
	TOTAL				4,858.82
	Add CPOH @ 15%				728.82
	Cost of 10 metre				5,587.64
	Cost of 1 metre				558.76
	Say				558.75

18.4 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

18.4.1 PN - 16 Pipe, 16 mm OD

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
8625	Poly propylene- Random - Co - Polymer (PPR) pipes SDR 7.4 - 16 mm Outer dia	metre	10.00	32.00	320.00 (X)
	Add 30% for fittings and wastage etc. on X				
	= 30 x 320.00 / 100				96.00
9999	Cement, sand and grit	L.S.	2.73	1.49	4.07
	LABOUR:				
0116	Fitter (grade 1)	day	0.33	301.00	99.33
0117	Assistant Fitter or 2nd class Fitter	day	0.66	273.00	180.18
0114	Beldar	day	0.66	247.00	163.02
	TOTAL				862.60
	Add Water Charges @ 1%				8.63
	TOTAL				871.23
	Add CPOH @ 15%				130.68
	Cost of 10 metre				1,001.91
	Cost of 1 metre				100.19
	Say				100.20

18.4.2 PN - 16 Pipe, 20 mm OD

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
8626	Poly propylene - Random - Co - Polymer (PPR) pipes SDR 7.4 - 20 mm Outer dia	metre	10.00	50.00	500.00 (X)
	Add 30% for fittings and wastage etc. on X = 30 x 500.00 / 100				150.00
9999	Cement, sand and grit	L.S.	2.73	1.49	4.07
	LABOUR:				
0116	Fitter (grade 1)	day	0.33	301.00	99.33
0117	Assistant Fitter or 2nd class Fitter	day	0.82	273.00	223.86
0114	Beldar	day	0.66	247.00	163.02
	TOTAL				1,140.28
	Add Water Charges @ 1%				11.40
	TOTAL				1,151.68
	Add CPOH @ 15%				172.75
	Cost of 10 metre				1,324.43
	Cost of 1 metre				132.44
	Say				132.45

18.4.3 PN - 16 Pipe, 25 mm OD

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
8627	Poly propylene - Random - Co - polymer (PPR) pipes SDR 7.4 - 25 mm outer dia	metre	10.00	76.00	760.00 (X)
	Add 30% for fittings and wastage etc. on X = 30 x 760.00 / 100				228.00
9999	Cement, sand and grit	L.S.	2.73	1.49	4.07
	LABOUR:				
0116	Fitter (grade 1)	day	0.33	301.00	99.33
0117	Assistant Fitter or 2nd class Fitter	day	0.98	273.00	267.54
0114	Beldar	day	0.66	247.00	163.02
	TOTAL				1,521.96
	Add Water Charges @ 1%				15.22
	TOTAL				1,537.18
	Add CPOH @ 15%				230.58
	Cost of 10 metre				1,767.76
	Cost of 1 metre				176.78
	Say				176.80

18.4.4 PN - 16 Pipe, 32 mm OD

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
8628	Poly propylene - Random - Co - poymer (PPR) pipes SDR 7.4 - 32 mm Outer dia	metre	10.00	124.00	1,240.00 (X)
	Add 30% for fittings and wastage etc. on X = 30 x 1240.00 / 100				372.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Cement, sand and grit	L.S.	4.16	1.49	6.20
	LABOUR:				
0116	Fitter (grade 1)	day	0.33	301.00	99.33
0117	Assistant Fitter or 2nd class Fitter	day	0.98	273.00	267.54
0114	Beldar	day	0.98	247.00	242.06
	TOTAL				2,227.13
	Add Water Charges @ 1%				22.27
	TOTAL				2,249.40
	Add CPOH @ 15%				337.41
	Cost of 10 metre				2,586.81
	Cost of 1 metre				258.68
	Say				258.70

18.4.5 PN - 16 Pipe, 40 mm OD

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
8629	Poly propylene - Random - Co - polymer (PPR) pipes SDR 7.4 - 40 mm Outer dia	metre	10.00	196.00	1,960.00 (X)
	Add 30% for fittings and wastage etc. on X = 30 x 1960.00 / 100				588.00
9999	Cement, sand and grit	L.S.	5.33	1.49	7.94
	LABOUR:				
0116	Fitter (grade 1)	day	0.33	301.00	99.33
0117	Assistant Fitter or 2nd class Fitter	day	1.31	273.00	357.63
0114	Beldar	day	1.31	247.00	323.57
	TOTAL				3,336.47
	Add Water Charges @ 1%				33.36
	TOTAL				3,369.83
	Add CPOH @ 15%				505.47
	Cost of 10 metre				3,875.30
	Cost of 1 metre				387.53
	Say				387.55

18.4.6 PN - 16 Pipe, 50 mm OD

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
8630	Poly propylene - Random - Co - polymer (PPR) pipes SDR 7.4 - 50 mm Outer dia	metre	10.00	286.00	2,860.00 (X)
	Add 30% for fittings and wastage etc. on X = 30 x 2860.00 / 100				858.00
9999	Cement, sand and grit	L.S.	5.33	1.49	7.94
	LABOUR:				
0116	Fitter (grade 1)	day	0.33	301.00	99.33
0117	Assistant Fitter or 2nd class Fitter	day	1.31	273.00	357.63

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Beldar	day	1.31	247.00	323.57
	TOTAL				4,506.47
	Add Water Charges @ 1%				45.06
	TOTAL				4,551.53
	Add CPOH @ 15%				682.73
	Cost of 10 metre				5,234.26
	Cost of 1 metre				523.43
	Say				523.45

18.5 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 wall etc.

18.5.1 PN - 16 Pipe, 16 mm OD

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
8625	Poly propylene- Random - Co - Polymer (PPR) pipes SDR 7.4 - 16 mm Outer dia	metre	10.00	32.00	320.00 (X)
	Add 75% for fittings, clamps and wastage etc. on X				
	= 75 x 320.00 / 100				240.00
	Making chases upto 7.5 x 7.5 cm. in walls and making good the same				
18.78	Rate as per Item Number 18.78 of SH: Water supply	metre	10.00	64.50	645.00 (A)
	LABOUR:				
0116	Fitter (grade 1)	day	0.33	301.00	99.33
0117	Assistant Fitter or 2nd class Fitter	day	0.66	273.00	180.18
0114	Beldar	day	0.66	247.00	163.02
	TOTAL				1,647.53
	Add Water Charges @ 1% except on A i.e on (1,647.53 - 645.00 =) 1,002.53				10.03
	TOTAL				1,657.56
	Add CPOH @ 15% except on A i.e on (1,657.56 - 645.00 =) 1,012.56				151.88
	Cost of 10 metre				1,809.44
	Cost of 1 metre				180.94
	Say				180.95

18.5.2 PN - 16 Pipe, 20 mm OD

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
8626	Poly propylene - Random - Co - Polymer (PPR) pipes SDR 7.4 - 20 mm Outer dia	metre	10.00	50.00	500.00 (X)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Add 75% for fittings, clamps and wastage etc. on X				
	= 75 x 500.00 / 100				375.00
	Making chases upto 7.5 x 7.5 cm. in walls and making good the same				
18.78	Rate as per Item Number 18.78 of SH: Water supply	metre	10.00	64.50	645.00 (A)
	LABOUR:				
0116	Fitter (grade 1)	day	0.33	301.00	99.33
0117	Assistant Fitter or 2nd class Fitter	day	0.66	273.00	180.18
0114	Beldar	day	0.66	247.00	163.02
	TOTAL				1,962.53
	Add Water Charges @ 1% except on A i.e on (1,962.53 - 645.00 =) 1,317.53				13.18
	TOTAL				1,975.71
	Add CPOH @ 15% except on A i.e on (1,975.71 - 645.00 =) 1,330.71				199.61
	Cost of 10 metre				2,175.32
	Cost of 1 metre				217.53
	Say				217.55

18.5.3 PN - 16 Pipe, 25 mm OD

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
8627	Poly propylene - Random - Co - polymer (PPR) pipes SDR 7.4 - 25 mm outer dia	metre	10.00	76.00	760.00 (X)
	Add 75% for fittings, clamps and wastage etc. on X				
	= 75 x 760.00 / 100				570.00
	Making chases upto 7.5 x 7.5 cm. in walls and making good the same				
18.78	Rate as per Item Number 18.78 of SH: Water supply	metre	10.00	64.50	645.00 (A)
	LABOUR:				
0116	Fitter (grade 1)	day	0.33	301.00	99.33
0117	Assistant Fitter or 2nd class Fitter	day	0.66	273.00	180.18
0114	Beldar	day	0.66	247.00	163.02
	TOTAL				2,417.53
	Add Water Charges @ 1% except on A i.e on (2,417.53 - 645.00 =) 1,772.53				17.73
	TOTAL				2,435.26
	Add CPOH @ 15% except on A i.e on (2,435.26 - 645.00 =) 1,790.26				268.54
	Cost of 10 metre				2,703.80
	Cost of 1 metre				270.38
	Say				270.40

18.5.4 PN -16 Pipe, 32 mm OD

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
8628	Poly propylene - Random - Co - poymer (PPR) pipes SDR 7.4 - 32 mm Outer dia	metre	10.00	124.00	1,240.00 (X)
	Add 75% for fittings, clamps and wastage etc. on X				
	= 75 x 1240.00 / 100				930.00
	Making chases upto 7.5 x 7.5 cm. in walls and making good the same				
18.78	Rate as per Item Number 18.78 of SH: Water supply	metre	10.00	64.50	645.00 (A)
	LABOUR:				
0116	Fitter (grade 1)	day	0.33	301.00	99.33
0117	Assistant Fitter or 2nd class Fitter	day	0.66	273.00	180.18
0114	Beldar	day	0.66	247.00	163.02
	TOTAL				3,257.53
	Add Water Charges @ 1% except on A i.e on (3,257.53 - 645.00 =) 2,612.53				26.13
	TOTAL				3,283.66
	Add CPOH @ 15% except on A i.e on (3,283.66 - 645.00 =) 2,638.66				395.80
	Cost of 10 metre				3,679.46
	Cost of 1 metre				367.95
	Say				367.95

18.6 Providing and fixing 3 layer PP-R (Poly propylene Random copolymer) pipes 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, including trenching ,refilling & testing of joints complete as per direction of Engineer-in-Charge. External work

18.6.1 PN - 16 Pipe, 16 mm OD (SDR -7.4)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
8625	Poly propylene- Random - Co - Polymer (PPR) pipes SDR 7.4 - 16 mm Outer dia	metre	10.00	32.00	320.00 (X)
	Add 30% for fittings and wastage etc. on X				
	= 30 x 320.00 / 100				96.00
	LABOUR:				
0116	Fitter (grade 1)	day	0.08	301.00	24.08
0114	Beldar	day	0.16	247.00	39.52
	Trenching and refilling etc.				
0114	Beldar	day	0.66	247.00	163.02
0115	Coolie	day	0.66	247.00	163.02
	TOTAL				805.64
	Add Water Charges @ 1%				8.06
	TOTAL				813.70
	Add CPOH @ 15%				122.06
	Cost of 10 metre				935.76
	Cost of 1 metre				93.58
	Say				93.60

18.6.2 PN - 16 Pipe, 20 mm OD (SDR -7.4)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
8626	Poly propylene - Random - Co - Polymer (PPR) pipes SDR 7.4 - 20 mm Outer dia	metre	10.00	50.00	500.00 (X)
	Add 30% for fittings and wastage etc. on X = 30 x 500.00 / 100				150.00
	LABOUR:				
0116	Fitter (grade 1)	day	0.08	301.00	24.08
0114	Beldar	day	0.16	247.00	39.52
	Trenching and refilling etc.				
0114	Beldar	day	0.66	247.00	163.02
0115	Coolie	day	0.66	247.00	163.02
	TOTAL				1,039.64
	Add Water Charges @ 1%				10.40
	TOTAL				1,050.04
	Add CPOH @ 15%				157.51
	Cost of 10 metre				1,207.55
	Cost of 1 metre				120.76
	Say				120.75

18.6.3 PN - 16 Pipe, 25 mm OD (SDR -7.4)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
8627	Poly propylene - Random - Co - polymer (PPR) pipes SDR 7.4 - 25 mm outer dia	metre	10.00	76.00	760.00 (X)
	Add 30% for fittings and wastage etc. on X = 30 x 760.00 / 100				228.00
	LABOUR:				
0116	Fitter (grade 1)	day	0.12	301.00	36.12
0114	Beldar	day	0.25	247.00	61.75
	Trenching and refilling etc.				
0114	Beldar	day	0.66	247.00	163.02
0115	Coolie	day	0.66	247.00	163.02
	TOTAL				1,411.91
	Add Water Charges @ 1%				14.12
	TOTAL				1,426.03
	Add CPOH @ 15%				213.90
	Cost of 10 metre				1,639.93
	Cost of 1 metre				163.99
	Say				164.00

18.6.4 PN - 16 Pipe, 32 mm OD (SDR -7.4)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
8628	Poly propylene - Random - Co - poymer (PPR) pipes SDR 7.4 - 32 mm Outer dia	metre	10.00	124.00	1,240.00 (X)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Add 30% for fittings and wastage etc. on X = 30 x 1240.00 / 100				372.00
	LABOUR:				
0116	Fitter (grade 1)	day	0.12	301.00	36.12
0114	Beldar	day	0.25	247.00	61.75
	Trenching and refilling etc.				
0114	Beldar	day	0.66	247.00	163.02
0115	Coolie	day	0.66	247.00	163.02
	TOTAL				2,035.91
	Add Water Charges @ 1%				20.36
	TOTAL				2,056.27
	Add CPOH @ 15%				308.44
	Cost of 10 metre				2,364.71
	Cost of 1 metre				236.47
	Say				236.45

18.6.5 PN - 16 Pipe, 40 mm OD (SDR -7.4)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
8629	Poly propylene - Random - Co - polymer (PPR) pipes SDR 7.4 - 40 mm Outer dia	metre	10.00	196.00	1,960.00 (X)
	Add 30% for fittings and wastage etc. on X = 30 x 1960.00 / 100				588.00
	LABOUR:				
0116	Fitter (grade 1)	day	0.16	301.00	48.16
0114	Beldar	day	0.33	247.00	81.51
	Trenching and refilling etc.				
0114	Beldar	day	0.66	247.00	163.02
0115	Coolie	day	0.66	247.00	163.02
	TOTAL				3,003.71
	Add Water Charges @ 1%				30.04
	TOTAL				3,033.75
	Add CPOH @ 15%				455.06
	Cost of 10 metre				3,488.81
	Cost of 1 metre				348.88
	Say				348.90

18.6.6 PN - 16 Pipe, 50 mm OD (SDR -7.4)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
8630	Poly propylene - Random - Co - polymer (PPR) pipes SDR 7.4 - 50 mm Outer dia	metre	10.00	286.00	2,860.00 (X)
	Add 30% for fittings and wastage etc. on X = 30 x 2860.00 / 100				858.00
	LABOUR:				
0116	Fitter (grade 1)	day	0.16	301.00	48.16
0114	Beldar	day	0.33	247.00	81.51

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Trenching and refilling etc.				
0114	Beldar	day	0.66	247.00	163.02
0115	Coolie	day	0.66	247.00	163.02
	TOTAL				4,173.71
	Add Water Charges @ 1%				41.74
	TOTAL				4,215.45
	Add CPOH @ 15%				632.32
	Cost of 10 metre				4,847.77
	Cost of 1 metre				484.78
	Say				484.80

18.6.7 - PN - 16 Pipe, 63 mm OD (SDR -7.4)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
8631	Poly propylene - Random - Co - polymer (PPR) pipes SDR 7.4 - 63 mm Outer dia	metre	10.00	445.00	4,450.00 (X)
	Add 30% for fittings and wastage etc. on X = 30 x 4450.00 / 100				1,335.00
	LABOUR:				
0116	Fitter (grade 1)	day	0.25	301.00	75.25
0114	Beldar	day	0.66	247.00	163.02
	Trenching and refilling etc.				
0114	Beldar	day	0.66	247.00	163.02
0115	Coolie	day	0.66	247.00	163.02
	TOTAL				6,349.31
	Add Water Charges @ 1%				63.49
	TOTAL				6,412.80
	Add CPOH @ 15%				961.92
	Cost of 10 metre				7,374.72
	Cost of 1 metre				737.47
	Say				737.45

18.6.8 PN - 16 Pipe, 75 mm OD (SDR -7.4)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
8632	Poly propylene - Random - Co - polymer (PPR) pipes SDR 7.4 - 75 mm Outer dia	metre	10.00	640.00	6,400.00 (X)
	Add 30% for fittings and wastage etc. on X = 30 x 6400.00 / 100				1,920.00
	LABOUR:				
0116	Fitter (grade 1)	day	0.25	301.00	75.25
0114	Beldar	day	0.66	247.00	163.02
	Trenching and refilling etc.				
0114	Beldar	day	0.66	247.00	163.02

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0115	Coolie	day	0.66	247.00	163.02
	TOTAL				8,884.31
	Add Water Charges @ 1%				88.84
	TOTAL				8,973.15
	Add CPOH @ 15%				1,345.97
	Cost of 10 metre				10,319.12
	Cost of 1 metre				1,031.91
	Say				1,031.90

18.6.9 PN - 16 Pipe, 90 mm OD (SDR -7.4)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
8633	Poly propylene - Random - Co - polymer (PPR) pipes SDR 7.4 - 90 mm Outer dia	metre	10.00	1,020.00	10,200.00(X)
	Add 30% for fittings and wastage etc. on X = 30 x 10200.00 / 100				3,060.00
	LABOUR:				
0116	Fitter (grade 1)	day	0.37	301.00	111.37
0114	Beldar	day	0.97	247.00	239.59
	Trenching and refilling etc.				
0114	Beldar	day	0.80	247.00	197.60
0115	Coolie	day	0.80	247.00	197.60
	TOTAL				14,006.16
	Add Water Charges @ 1%				140.06
	TOTAL				14,146.22
	Add CPOH @ 15%				2,121.93
	Cost of 10 metre				16,268.15
	Cost of 1 metre				1,626.82
	Say				1,626.80

18.6.10 PN - 10 Pipe, 110 mm OD (SDR -11)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
8634	Poly propylene - Random - Co - polymer (PPR) pipes SDR - 11 - 110 mm Outer dia	metre	10.00	1,070.00	10,700.00 (X)
	Add 30% for fittings and wastage etc. on X = 30 x 10700.00 / 100				3,210.00
	LABOUR:				
0116	Fitter (grade 1)	day	0.37	301.00	111.37
0114	Beldar	day	0.97	247.00	239.59
	Trenching and refilling etc.				
0114	Beldar	day	0.80	247.00	197.60

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0115	Coolie	day	0.80	247.00	197.60
	TOTAL				14,656.16
	Add Water Charges @ 1%				146.56
	TOTAL				14,802.72
	Add CPOH @ 15%				2,220.41
	Cost of 10 metre				17,023.13
	Cost of 1 metre				1,702.31
	Say				1,702.30

18.6.11 PN - 10 Pipe, 160 mm OD (SDR -11)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
8635	Poly propylene - Random - Co - polymer (PPR) pipes SDR - 11- 160 mm Outer dia	metre	10.00	2,255.00	22,550.00(X)
	Add 30% for fittings and wastage etc. on X = 30 x 22550.00 / 100				6,765.00
	LABOUR:				
0116	Fitter (grade 1)	day	0.58	301.00	174.58
0114	Beldar	day	1.54	247.00	380.38
	Trenching and refilling etc.				
0114	Beldar	day	1.20	247.00	296.40
0115	Coolie	day	1.20	247.00	296.40
	TOTAL				30,462.76
	Add Water Charges @ 1%				304.63
	TOTAL				30,767.39
	Add CPOH @ 15%				4,615.11
	Cost of 10 metre				35,382.50
	Cost of 1 metre				3,538.25
	Say				3,538.25

18.7 Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and testing of joints complete as per direction of Engineer-in-Charge. Internal work - Exposed on wall

18.7.1 15 mm nominal outer dia pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
8636	Chlorinated Polyvinyl - chloride (CPVC) pipe 15 mm outer dia	metre	10.00	51.00	510.00 (X)
	Add 30% for fittings and wastage etc. on X = 30 x 510.00 / 100				153.00
9999	Cement, sand and grit etc.	L.S.	2.73	1.49	4.07
	LABOUR:				
0116	Fitter (grade 1)	day	0.33	301.00	99.33
0117	Assistant Fitter or 2nd class Fitter	day	0.82	273.00	223.86

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Beldar	day	0.66	247.00	163.02
	TOTAL				1,153.28
	Add Water Charges @ 1%				11.53
	TOTAL				1,164.81
	Add CPOH @ 15%				174.72
	Cost of 10 metre				1,339.53
	Cost of 1 metre				133.95
	Say				133.95

18.7.2 20 mm nominal outer dia pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
8637	Chlorinated Polyvinyl - chloride (CPVC) pipe 20 mm outer dia	metre	10.00	63.00	630.00 (X)
	Add 30% for fittings and wastage etc. on X = 30 x 630.00 / 100				189.00
9999	Cement, sand and grit etc.	L.S.	2.73	1.49	4.07
	LABOUR:				
0116	Fitter (grade 1)	day	0.33	301.00	99.33
0117	Assistant Fitter or 2nd class Fitter	day	0.98	273.00	267.54
0114	Beldar	day	0.66	247.00	163.02
	TOTAL				1,352.96
	Add Water Charges @ 1%				13.53
	TOTAL				1,366.49
	Add CPOH @ 15%				204.97
	Cost of 10 metre				1,571.46
	Cost of 1 metre				157.15
	Say				157.15

18.7.3 25 mm nominal outer dia pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
8638	Chlorinated Polyvinyl - chloride (CPVC) pipe 25 mm outer dia	metre	10.00	90.00	900.00 (X)
	Add 30% for fittings and wastage etc. on X = 30 x 900.00 / 100				270.00
9999	Cement, sand and grit etc.	L.S.	2.73	1.49	4.07
	LABOUR:				
0116	Fitter (grade 1)	day	0.33	301.00	99.33
0117	Assistant Fitter or 2nd class Fitter	day	0.98	273.00	267.54
0114	Beldar	day	0.66	247.00	163.02
	TOTAL				1,703.96
	Add Water Charges @ 1%				17.04
	TOTAL				1,721.00
	Add CPOH @ 15%				258.15
	Cost of 10 metre				1,979.15
	Cost of 1 metre				197.92
	Say				197.90

18.7.4 32 mm nominal outer dia pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
8639	Chlorinated Polyvinyl - chloride (CPVC) pipe 32 mm outer dia	metre	10.00	120.00	1,200.00 (X)
	Add 30% for fittings and wastage etc. on X = 30 x 1200.00 / 100				360.00
9999	Cement, sand and grit etc.	L.S.	4.16	1.49	6.20
	LABOUR:				
0116	Fitter (grade 1)	day	0.33	301.00	99.33
0117	Assistant Fitter or 2nd class Fitter	day	0.98	273.00	267.54
0114	Beldar	day	0.98	247.00	242.06
	TOTAL				2,175.13
	Add Water Charges @ 1%				21.75
	TOTAL				2,196.88
	Add CPOH @ 15%				329.53
	Cost of 10 metre				2,526.41
	Cost of 1 metre				252.64
	Say				252.65

18.7.5 40 mm nominal outer dia pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
8640	Chlorinated Polyvinyl - chloride (CPVC) pipe 40 mm outer dia	metre	10.00	170.00	1,700.00 (X)
	Add 30% for fittings and wastage etc. on X = 30 x 1700.00 / 100				510.00
9999	Cement, sand and grit	L.S.	5.33	1.49	7.94
	LABOUR:				
0116	Fitter (grade 1)	day	0.33	301.00	99.33
0117	Assistant Fitter or 2nd class Fitter	day	1.31	273.00	357.63
0114	Beldar	day	1.31	247.00	323.57
	TOTAL				2,998.47
	Add Water Charges @ 1%				29.98
	TOTAL				3,028.45
	Add CPOH @ 15%				454.27
	Cost of 10 metre				3,482.72
	Cost of 1 metre				348.27
	Say				348.25

18.7.6 50 mm nominal outer dia pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
8641	Chlorinated Polyvinyl - chloride (CPVC) pipe 50 mm outer dia	metre	10.00	280.00	2,800.00 (X)
	Add 30% for fittings and wastage etc. on X =30 x 2800.00 / 100				840.00
9999	Cement, sand and grit etc	L.S.	5.33	1.49	7.94

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	LABOUR:				
0116	Fitter (grade 1)	day	0.33	301.00	99.33
0117	Assistant Fitter or 2nd class Fitter	day	1.31	273.00	357.63
0114	Beldar	day	1.31	247.00	323.57
	TOTAL				4,428.47
	Add Water Charges @ 1%				44.28
	TOTAL				4,472.75
	Add CPOH @ 15%				670.91
	Cost of 10 metre				5,143.66
	Cost of 1 metre				514.37
	Say				514.35

18.8 Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings i/c fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings, with one step CPVC solvent cement and the cost of cutting chases and making good the same including testing of joints complete as per direction of Engineer-in-Charge. Concealed work, including cutting chases and making good the wall etc.

18.8.1 15 mm nominal outer dia pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
8636	Chlorinated Polyvinyl - chloride (CPVC) pipe 15 mm outer dia	metre	10.00	51.00	510.00 (X)
	Add 75% for fittings, clamps and wastage etc. on X				
	= 75 x 510.00 / 100				382.50
	Making chases up to 7.5x7.5 cm in walls and making good the same				
18.78	Rate as per Item Number 18.78 of SH: Water supply	metre	10.00	64.50	645.00 (A)
	LABOUR:				
0116	Fitter (grade 1)	day	0.33	301.00	99.33
0117	Assistant Fitter or 2nd class Fitter	day	0.66	273.00	180.18
0114	Beldar	day	0.66	247.00	163.02
	TOTAL				1,980.03
	Add Water Charges @ 1% except on A i.e on (1,980.03 - 645.00 =) 1,335.03				13.35
	TOTAL				1,993.38
	Add CPOH @ 15% except on A i.e on (1,993.38 - 645.00 =) 1,348.38				202.26
	Cost of 10 metre				2,195.64
	Cost of 1 metre				219.56
	Say				219.55

18.8.2 20 mm nominal outer dia pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
8637	Chlorinated Polyvinyl - chloride (CPVC) pipe 20 mm outer dia	metre	10.00	63.00	630.00 (X)
	Add 75% for fittings, clamps and wastage etc. on X				
	= 75 x 630.00 / 100				472.50
	Making chases up to 7.5x7.5 cm in walls and making good the same				
18.78	Rate as per Item Number 18.78 of SH: Water supply	metre	10.00	64.50	645.00 (A)
	LABOUR:				
0116	Fitter (grade 1)	day	0.33	301.00	99.33
0117	Assistant Fitter or 2nd class Fitter	day	0.66	273.00	180.18
0114	Beldar	day	0.66	247.00	163.02
	TOTAL				2,190.03
	Add Water Charges @ 1% except on A i.e on (2,190.03 - 645.00 =) 1,545.03				15.45
	TOTAL				2,205.48
	Add CPOH @ 15% except on A i.e on (2,205.48 - 645.00 =) 1,560.48				234.07
	Cost of 10 metre				2,439.55
	Cost of 1 metre				243.96
	Say				243.95

18.8.3 25 mm nominal outer dia pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
8638	Chlorinated Polyvinyl - chloride (CPVC) pipe 25 mm outer dia	metre	10.00	90.00	900.00 (X)
	Add 75% for fittings, clamps and wastage etc. on X				
	= 75 x 900.00 / 100				675.00
	Making chases up to 7.5x7.5 cm in walls and making good the same				
18.78	Rate as per Item Number 18.78 of SH: Water supply	metre	10.00	64.50	645.00 (A)
	LABOUR:				
0116	Fitter (grade 1)	day	0.33	301.00	99.33
0117	Assistant Fitter or 2nd class Fitter	day	0.66	273.00	180.18
0114	Beldar	day	0.66	247.00	163.02
	TOTAL				2,662.53
	Add Water Charges @ 1% except on A i.e on (2,662.53 - 645.00 =) 2,017.53				20.18
	TOTAL				2,682.71
	Add CPOH @ 15% except on A i.e on (2,682.71 - 645.00 =) 2,037.71				305.66
	Cost of 10 metre				2,988.37
	Cost of 1 metre				298.84
	Say				298.85

18.8.4 32 mm nominal outer dia pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
8639	Chlorinated Polyvinyl - chloride (CPVC) pipe 32 mm outer dia	metre	10.00	120.00	1,200.00 (X)
	Add 75% for fittings, clamps and wastage etc. on X				
	= 75 x 1200.00 / 100				900.00
	Making chases up to 7.5x7.5 cm in walls and making good the same				
18.78	Rate as per Item Number 18.78 of SH: Water supply	metre	10.00	64.50	645.00 (A)
	LABOUR:				
0116	Fitter (grade 1)	day	0.33	301.00	99.33
0117	Assistant Fitter or 2nd class Fitter	day	0.66	273.00	180.18
0114	Beldar	day	0.66	247.00	163.02
	TOTAL				3,187.53
	Add Water Charges @ 1% except on A i.e on (3,187.53 - 645.00 =) 2,542.53				25.43
	TOTAL				3,212.96
	Add CPOH @ 15% except on A i.e on (3,212.96 - 645.00 =) 2,567.96				385.19
	Cost of 10 metre				3,598.15
	Cost of 1 metre				359.82
	Say				359.80

18.9 Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings. This includes jointing of pipes & fittings with one step CPVC solvent cement, trenching, refilling & testing of joints complete as per direction of Engineer-in-Charge. External work

18.9.1 15 mm nominal outer dia pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
8636	Chlorinated Polyvinyl - chloride (CPVC) pipe 15 mm outer dia	metre	10.00	51.00	510.00 (X)
	Add 30% for fittings and wastage etc. on X				
	= 30 x 510.00 / 100				153.00
	LABOUR:				
0116	Fitter (grade 1)	day	0.08	301.00	24.08
0114	Beldar	day	0.16	247.00	39.52
	Trenching and refilling etc.				
0114	Beldar	day	0.66	247.00	163.02
0115	Coolie	day	0.66	247.00	163.02
	TOTAL				1,052.64
	Add Water Charges @ 1%				10.53
	TOTAL				1,063.17
	Add CPOH @ 15%				159.48
	Cost of 10 metre				1,222.65
	Cost of 1 metre				122.27
	Say				122.25

18.9.2 20 mm nominal outer dia pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
8637	Chlorinated Polyvinyl - chloride (CPVC) pipe 20 mm outer dia	metre	10.00	63.00	630.00 (X)
	Add 30% for fittings and wastage etc. on X = 30 x 630.00 / 100				189.00
	LABOUR:				
0116	Fitter (grade 1)	day	0.08	301.00	24.08
0114	Beldar	day	0.16	247.00	39.52
	Trenching and refilling etc.				
0114	Beldar	day	0.66	247.00	163.02
0115	Coolie	day	0.66	247.00	163.02
	TOTAL				1,208.64
	Add Water Charges @ 1%				12.09
	TOTAL				1,220.73
	Add CPOH @ 15%				183.11
	Cost of 10 metre				1,403.84
	Cost of 1 metre				140.38
	Say				140.40

18.9.3 25 mm nominal outer dia pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
8638	Chlorinated Polyvinyl - chloride (CPVC) pipe 25 mm outer dia	metre	10.00	90.00	900.00 (X)
	Add 30% for fittings and wastage etc. on X = 30 x 900.00 / 100				270.00
	LABOUR:				
0116	Fitter (grade 1)	day	0.12	301.00	36.12
0114	Beldar	day	0.25	247.00	61.75
	Trenching and refilling etc.				
0114	Beldar	day	0.66	247.00	163.02
0115	Coolie	day	0.66	247.00	163.02
	TOTAL				1,593.91
	Add Water Charges @ 1%				15.94
	TOTAL				1,609.85
	Add CPOH @ 15%				241.48
	Cost of 10 metre				1,851.33
	Cost of 1 metre				185.13
	Say				185.15

18.9.4 32 mm nominal outer dia pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
8639	Chlorinated Polyvinyl - chloride (CPVC) pipe 32 mm outer dia	metre	10.00	120.00	1,200.00 (X)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Add 30% for fittings and wastage etc. on X = 30 x 1200.00 / 100				360.00
	LABOUR:				
0116	Fitter (grade 1)	day	0.12	301.00	36.12
0114	Beldar	day	0.25	247.00	61.75
	Trenching and refilling etc.				
0114	Beldar	day	0.66	247.00	163.02
0115	Coolie	day	0.66	247.00	163.02
	TOTAL				1,983.91
	Add Water Charges @ 1%				19.84
	TOTAL				2,003.75
	Add CPOH @ 15%				300.56
	Cost of 10 metre				2,304.31
	Cost of 1 metre				230.43
	Say				230.45

18.9.5 40 mm nominal outer dia pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
8640	Chlorinated Polyvinyl - chloride (CPVC) pipe 40 mm outer dia	metre	10.00	170.00	1,700.00 (X)
	Add 30% for fittings and wastage etc. on X = 30 x 1700.00 / 100				510.00
	LABOUR:				
0116	Fitter (grade 1)	day	0.16	301.00	48.16
0114	Beldar	day	0.33	247.00	81.51
	Trenching and refilling etc.				
0114	Beldar	day	0.66	247.00	163.02
0115	Coolie	day	0.66	247.00	163.02
	TOTAL				2,665.71
	Add Water Charges @ 1%				26.66
	TOTAL				2,692.37
	Add CPOH @ 15%				403.86
	Cost of 10 metre				3,096.23
	Cost of 1 metre				309.62
	Say				309.60

18.9.6 50 mm nominal outer dia pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
8641	Chlorinated Polyvinyl - chloride (CPVC) pipe 50 mm outer dia	metre	10.00	280.00	2,800.00 (X)
	Add 30% for fittings and wastage etc. on X = 30 x 2800.00 / 100				840.00
	LABOUR:				
0116	Fitter (grade 1)	day	0.16	301.00	48.16
0114	Beldar	day	0.33	247.00	81.51

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Trenching and refilling etc.				
0114	Beldar	day	0.66	247.00	163.02
0115	Coolie	day	0.66	247.00	163.02
	TOTAL				4,095.71
	Add Water Charges @ 1%				40.96
	TOTAL				4,136.67
	Add CPOH @ 15%				620.50
	Cost of 10 metre				4,757.17
	Cost of 1 metre				475.72
	Say				475.70

18.9.7 62.50 mm nominal inner dia pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
8642	Chlorinated Polyvinyl - chloride (CPVC) pipe 62.5 mm inner dia	metre	10.00	835.00	8,350.00 (X)
	Add 30% for fittings and wastage etc. on X = 30 x 8350.00 / 100				2,505.00
	LABOUR:				
0116	Fitter (grade 1)	day	0.25	301.00	75.25
0114	Beldar	day	0.66	247.00	163.02
	Trenching and refilling etc.				
0114	Beldar	day	0.66	247.00	163.02
0115	Coolie	day	0.66	247.00	163.02
	TOTAL				11,419.31
	Add Water Charges @ 1%				114.19
	TOTAL				11,533.50
	Add CPOH @ 15%				1,730.02
	Cost of 10 metre				13,263.52
	Cost of 1 metre				1,326.35
	Say				1,326.35

18.9.8 75 mm nominal inner dia pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
8643	Chlorinated Polyvinyl - chloride (CPVC) pipe 75 mm inner dia	metre	10.00	1,185.00	11,850.00 (X)
	Add 30% for fittings and wastage etc. on X = 30 x 11850.00 / 100				3,555.00
	LABOUR:				
0116	Fitter (grade 1)	day	0.25	301.00	75.25
0114	Beldar	day	0.66	247.00	163.02
	Trenching and refilling etc.				
0114	Beldar	day	0.66	247.00	163.02

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0115	Coolie	day	0.66	247.00	163.02
	TOTAL				15,969.31
	Add Water Charges @ 1%				159.69
	TOTAL				16,129.00
	Add CPOH @ 15%				2,419.35
	Cost of 10 metre				18,548.35
	Cost of 1 metre				1,854.84
	Say				1,854.85

18.9.9 100 mm nominal inner dia pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
8644	Chlorinated Polyvinyl - chloride (CPVC) pipe 100 mm inner dia	metre	10.00	1,640.00	16,400.00 (X)
	Add 30% for fittings and wastage etc. on X = 30 x 16400.00 / 100				4,920.00
	LABOUR:				
0116	Fitter (grade 1)	day	0.37	301.00	111.37
0114	Beldar	day	0.97	247.00	239.59
	Trenching and refilling etc.				
0114	Beldar	day	0.80	247.00	197.60
0115	Coolie	day	0.80	247.00	197.60
	TOTAL				22,066.16
	Add Water Charges @ 1%				220.66
	TOTAL				22,286.82
	Add CPOH @ 15%				3,343.02
	Cost of 10 metre				25,629.84
	Cost of 1 metre				2,562.98
	Say				2,563.00

18.9.10 150 mm nominal inner dia pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
8645	Chlorinated Polyvinyl - chloride (CPVC) pipe 150 mm inner dia	metre	10.00	2,870.00	28,700.00 (X)
	Add 30% for fittings and wastage etc. on X = 30 x 28700.00 / 100				8,610.00
	LABOUR:				
0116	Fitter (grade 1)	day	0.58	301.00	174.58
0114	Beldar	day	1.54	247.00	380.38
	Trenching and refilling etc.				
0114	Beldar	day	1.20	247.00	296.40
0115	Coolie	day	1.20	247.00	296.40
	TOTAL				38,457.76
	Add Water Charges @ 1%				384.58
	TOTAL				38,842.34
	Add CPOH @ 15%				5,826.35
	Cost of 10 metre				44,668.69
	Cost of 1 metre				4,466.87
	Say				4,466.85

18.10 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

18.10.1 15 mm dia nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
1545	G.I. pipes 15 mm dia	metre	11.50	81.00	931.50
	Weight for carriage = pipe weight + 15% for fiitings =				
	1.15 x 12.30 = 14.145 kg = 0.014145 tonne				
2271	Carriage of G.I. pipes below 100 mm dia	tonne	0.014145	77.87	1.10
9999	White lead, hemp, oil etc	L.S.	8.06	1.49	12.01
9999	Cement, sand and grit etc.	L.S.	2.73	1.49	4.07
	LABOUR:				
0116	Fitter (grade 1)	day	0.33	301.00	99.33
0117	Assistant Fitter or 2nd class Fitter	day	0.66	273.00	180.18
0114	Beldar	day	0.66	247.00	163.02
	TOTAL				1,391.21
	Add Water Charges @ 1%				13.91
	TOTAL				1,405.12
	Add CPOH @ 15%				210.77
	Cost of 10 metre				1,615.89
	Cost of 1 metre				161.59
	Say				161.60

18.10.2 20 mm dia nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
1546	G.I. pipes 20 mm dia metre 11.50 97.00 1,115.50				
	Weight for carriage = pipe weight + 15% for fiitings =				
	1.15 x 15.90= 18.285 kg = 0.018285 tonne				
2271	Carriage of G.I. pipes below 100 mm dia	tonne	0.018285	77.87	1.42
9999	White lead, hemp, oil etc	L.S.	8.06	1.49	12.01
9999	Cement, sand and grit etc.	L.S.	2.73	1.49	4.07
	LABOUR:				
0116	Fitter (grade 1)	day	0.33	301.00	99.33
0117	Assistant Fitter or 2nd class Fitter	day	0.82	273.00	223.86
0114	Beldar	day	0.66	247.00	163.02
	TOTAL				1,619.21
	Add Water Charges @ 1%				16.19
	TOTAL				1,635.40
	Add CPOH @ 15%				245.31
	Cost of 10 metre				1,880.71
	Cost of 1 metre				188.07
	Say				188.05

18.10.3 25 mm dia nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
1547	G.I. pipes 25 mm dia	metre	11.50	134.00	1,541.00
	Weight for carriage = pipe weight + 15% for fiitings =				
	1.15 x 24.60 = 28.29 kg = 0.02829 tonne				
2271	Carriage of G.I. pipes below 100 mm dia	tonne	0.02829	77.87	2.20
9999	White lead, hemp, oil etc	L.S.	9.49	1.49	14.14
9999	Cement, sand and grit etc.	L.S.	4.16	1.49	6.20
	LABOUR:				
0116	Fitter (grade 1)	day	0.33	301.00	99.33
0117	Assistant Fitter or 2nd class Fitter	day	0.98	273.00	267.54
0114	Beldar	day	0.66	247.00	163.02
	TOTAL				2,093.43
	Add Water Charges @ 1%				20.93
	TOTAL				2,114.36
	Add CPOH @ 15%				317.15
	Cost of 10 metre				2,431.51
	Cost of 1 metre				243.15
	Say				243.15

18.10.4 32 mm dia nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
1548	G.I. pipes 32 mm dia	metre	11.50	167.00	1,920.50
	Weight for carriage = pipe weight + 15% for fiitings =				
	1.15 x 31.70 = 36.455 kg = 0.036455 tonne				
2271	Carriage of G.I. pipes below 100 mm dia	tonne	0.036455	77.87	2.84
9999	White lead, hemp, oil etc	L.S.	9.49	1.49	14.14
9999	Cement, sand and grit etc.	L.S.	4.16	1.49	6.20
	LABOUR:				
0116	Fitter (grade 1)	day	0.33	301.00	99.33
0117	Assistant Fitter or 2nd class Fitter	day	0.98	273.00	267.54
0114	Beldar	day	0.98	247.00	242.06
	TOTAL				2,552.61
	Add Water Charges @ 1%				25.53
	TOTAL				2,578.14
	Add CPOH @ 15%				386.72
	Cost of 10 metre				2,964.86
	Cost of 1 metre				296.49
	Say				296.50

18.10.5 40 mm dia nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
1549	G.I. pipes 40 mm dia	metre	11.50	202.00	2,323.00
	Weight for carriage = pipe weight + 15% for fiitings =				
	1.15 x 36.50 = 41.975 kg = 0.041975 tonne				
2271	Carriage of G.I. pipes below 100 mm dia	tonne	0.041975	77.87	3.27
9999	White lead, hemp, oil etc	L.S.	13.52	1.49	20.14
9999	Cement, sand and grit etc.	L.S.	5.33	1.49	7.94
	LABOUR:				
0116	Fitter (grade 1)	day	0.33	301.00	99.33
0117	Assistant Fitter or 2nd class Fitter	day	1.31	273.00	357.63
0114	Beldar	day	1.31	247.00	323.57
	TOTAL				3,134.88
	Add Water Charges @ 1%				31.35
	TOTAL				3,166.23
	Add CPOH @ 15%				474.93
	Cost of 10 metre				3,641.16
	Cost of 1 metre				364.12
	Say				364.10

18.10.6 50 mm dia nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
1550	G.I. pipes 50 mm dia	metre	11.50	254.00	2,921.00
	Weight for carriage = pipe weight + 15% for fiitings =				
	1.15 x 51.70 = 59.455 kg = 0.059455 tonne				
2271	Carriage of G.I. pipes below 100 mm dia	tonne	0.059455	77.87	4.63
9999	White lead, hemp, oil etc	L.S.	13.52	1.49	20.14
9999	Cement, sand and grit etc.	L.S.	5.33	1.49	7.94
	LABOUR:				
0116	Fitter (grade 1)	day	0.33	301.00	99.33
0117	Assistant Fitter or 2nd class Fitter	day	1.64	273.00	447.72
0114	Beldar	day	1.64	247.00	405.08
	TOTAL				3,905.84
	Add Water Charges @ 1%				39.06
	TOTAL				3,944.90
	Add CPOH @ 15%				591.74
	Cost of 10 metre				4,536.64
	Cost of 1 metre				453.66
	Say				453.65

18.11 Providing & Fixing GI pipes complete with GI fittings and clamps including making good the walls etc. concealed pipe including painting with anti corrosive bitumastic paint, cutting chases and making good the wall:

18.11.1 15 mm dia nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
1545	G.I. pipes 15 mm dia	metre	11.50	81.00	931.50
	Weight for carriage = pipe weight + 15% for fiitings =				
	1.15 x 12.30 = 14.145 kg = 0.014145 tonne				
2271	Carriage of G.I. pipes below 100 mm dia	tonne	0.014145	77.87	1.10
9999	White lead, hemp, oil etc	L.S.	8.06	1.49	12.01
	Painting G.I. pipe with anti-corrosive bitumastic paint two or more coats				
18.40.1	Rate as per Item Number 18.40.1 of SH: Water supply	metre	10.00	4.40	44.00 (A)
	Making chases upto 7.5x7.5cm in walls and making good the same				
18.78	Rate as per Item Number 18.78 of SH: Water supply	metre	10.00	64.50	645.00 (A)
	LABOUR:				
0116	Fitter (grade 1)	day	0.33	301.00	99.33
0117	Assistant Fitter or 2nd class Fitter	day	0.66	273.00	180.18
0114	Beldar	day	0.66	247.00	163.02
	TOTAL				2,076.14
	Add Water Charges @ 1% except on A i.e on (2,076.14 - 689.00 =) 1,387.14				13.87
	TOTAL				2,090.01
	Add CPOH @ 15% except on A i.e on (2,090.01 - 689.00 =) 1,401.01				210.15
	Cost of 10 metre				2,300.16
	Cost of 1 metre				230.02
	Say				230.00

18.11.2 20 mm dia nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
1546	G.I. pipes 20 mm dia	metre	11.50	97.00	1,115.50
	Weight for carriage = pipe weight + 15% for fiitings =				
	1.15 x 15.90= 18.285 kg = 0.018285 tonne				
2271	Carriage of G.I. pipes below 100 mm dia	tonne	0.018285	77.87	1.42
9999	White lead, hemp, oil etc	L.S.	8.06	1.49	12.01
	Painting G.I. pipe with anti-corrosive bitumastic paint two or more coats				
18.40.2	Rate as per Item Number 18.40.2 of SH: Water supply	metre	10.00	5.15	51.50 (A)
	Making chases upto 7.5x7.5cm in walls and making good the same				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
18.78	Rate as per Item Number 18.78 of SH: Water supply	metre	10.00	64.50	645.00 (A)
	LABOUR:				
0116	Fitter (grade 1)	day	0.33	301.00	99.33
0117	Assistant Fitter or 2nd class Fitter	day	0.66	273.00	180.18
0114	Beldar	day	0.66	247.00	163.02
	TOTAL				2,267.96
	Add Water Charges @ 1% except on A i.e on (2,267.96 - 696.50 =) 1,571.46				15.71
	TOTAL				2,283.67
	Add CPOH @ 15% except on A i.e on (2,283.67 - 696.50 =) 1,587.17				238.08
	Cost of 10 metre				2,521.75
	Cost of 1 metre				252.18
	Say				252.20

18.12 Providing and fixing G.I. pipes complete with G.I. fittings including trenching and refilling etc. External work

18.12.1 15 mm dia nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
1545	G.I. pipes 15 mm dia	metre	10.20	81.00	826.20
	Weight for carriage = pipe weight + 2% for fiitings =				
	1.02 x 12.30 = 12.546 kg = 0.012546 tonne				
2271	Carriage of G.I. pipes below 100 mm dia	tonne	0.012546	77.87	0.98
9999	White lead, hemp, oil etc	L.S.	5.33	1.49	7.94
	LABOUR:				
0116	Fitter (grade 1)	day	0.08	301.00	24.08
0114	Beldar	day	0.16	247.00	39.52
	Trenching and refilling etc.				
0114	Beldar	day	0.66	247.00	163.02
0115	Coolie	day	0.66	247.00	163.02
	TOTAL				1,224.76
	Add Water Charges @ 1%				12.25
	TOTAL				1,237.01
	Add CPOH @ 15%				185.55
	Cost of 10 metre				1,422.56
	Cost of 1 metre				142.26
	Say				142.25

18.12.2 20 mm dia nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
1546	G.I. pipes 20 mm dia	metre	10.20	97.00	989.40
	Weight for carriage = pipe weight + 2% for fiitings =				
	1.02 x 15.90 = 16.218 kg = 0.016218 tonne				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
2271	Carriage of G.I. pipes below 100 mm dia	tonne	0.016218	77.87	1.26
9999	White lead, hemp, oil etc	L.S.	5.33	1.49	7.94
	LABOUR:				
0116	Fitter (grade 1)	day	0.08	301.00	24.08
0114	Beldar	day	0.16	247.00	39.52
	Trenching and refilling etc.				
0114	Beldar	day	0.66	247.00	163.02
0115	Coolie	day	0.66	247.00	163.02
	TOTAL				1,388.24
	Add Water Charges @ 1%				13.88
	TOTAL				1,402.12
	Add CPOH @ 15%				210.32
	Cost of 10 metre				1,612.44
	Cost of 1 metre				161.24
	Say				161.25

18.12.3 25 mm dia nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
1547	G.I. pipes 25 mm dia	metre	10.20	134.00	1,366.80
	Weight for carriage = pipe weight + 2% for fiitings =				
	1.02 x 24.60 = 25.092 kg = 0.025092 tonne				
2271	Carriage of G.I. pipes below 100 mm dia	tonne	0.025092	77.87	1.95
9999	White lead, hemp, oil etc	L.S.	6.76	1.49	10.07
	LABOUR:				
0116	Fitter (grade 1)	day	0.12	301.00	36.12
0114	Beldar	day	0.25	247.00	61.75
	Trenching and refilling etc.				
0114	Beldar	day	0.66	247.00	163.02
0115	Coolie	day	0.66	247.00	163.02
	TOTAL				1,802.73
	Add Water Charges @ 1%				18.03
	TOTAL				1,820.76
	Add CPOH @ 15%				273.11
	Cost of 10 metre				2,093.87
	Cost of 1 metre				209.39
	Say				209.40

18.12.4 32 mm dia nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
1548	G.I. pipes 32 mm dia	metre	10.20	167.00	1,703.40
	Weight for carriage = pipe weight + 2% for fiitings =				
	1.02 x 31.70 = 32.334 kg = 0.032334 tonne				
2271	Carriage of G.I. pipes below 100 mm dia	tonne	0.032334	77.87	2.52
9999	White lead, hemp, oil etc	L.S.	6.76	1.49	10.07

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	LABOUR:				
0116	Fitter (grade 1)	day	0.12	301.00	36.12
0114	Beldar	day	0.25	247.00	61.75
	Trenching and refilling etc.				
0114	Beldar	day	0.66	247.00	163.02
0115	Coolie	day	0.66	247.00	163.02
	TOTAL				2,139.90
	Add Water Charges @ 1%				21.40
	TOTAL				2,161.30
	Add CPOH @ 15%				324.20
	Cost of 10 metre				2,485.50
	Cost of 1 metre				248.55
	Say				248.55

18.12.5 40 mm dia nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
1549	G.I. pipes 40 mm dia	metre	10.20	202.00	2,060.40
	Weight for carriage = pipe weight + 2% for fiitings =				
	1.02 x 36.50 = 37.23 kg = 0.03723 tonne				
2271	Carriage of G.I. pipes below 100 mm dia	tonne	0.03723	77.87	2.90
9999	White lead, hemp, oil etc	L.S.	9.49	1.49	14.14
	LABOUR:				
0116	Fitter (grade 1)	day	0.16	301.00	48.16
0114	Beldar	day	0.33	247.00	81.51
	Trenching and refilling etc.				
0114	Beldar	day	0.66	247.00	163.02
0115	Coolie	day	0.66	247.00	163.02
	TOTAL				2,533.15
	Add Water Charges @ 1%				25.33
	TOTAL				2,558.48
	Add CPOH @ 15%				383.77
	Cost of 10 metre				2,942.25
	Cost of 1 metre				294.23
	Say				294.20

18.12.6 50 mm dia nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
1550	G.I. pipes 50 mm dia	metre	10.20	254.00	2,590.80
	Weight for carriage = pipe weight + 2% for fiitings =				
	1.02 x 51.70 = 52.73 kg = 0.05273 tonne				
2271	Carriage of G.I. pipes below 100 mm dia	tonne	0.05273	77.87	4.11
9999	White lead, hemp, oil etc	L.S.	9.49	1.49	14.14
	LABOUR:				
0116	Fitter (grade 1)	day	0.16	301.00	48.16

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Beldar	day	0.33	247.00	81.51
	Trenching and refilling etc.				
0114	Beldar	day	0.66	247.00	163.02
0115	Coolie	day	0.66	247.00	163.02
	TOTAL				3,064.76
	Add Water Charges @ 1%				30.65
	TOTAL				3,095.41
	Add CPOH @ 15%				464.31
	Cost of 10 metre				3,559.72
	Cost of 1 metre				355.97
	Say				355.95

18.12.7 65 mm dia nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
1551	G.I. pipes 65 mm dia	metre	10.20	325.00	3,315.00
	Weight for carriage = pipe weight + 2% for fiitings =				
	1.02 x 66.30 = 67.626 kg = 0.067626 tonne				
2271	Carriage of G.I. pipes below 100 mm dia	tonne	0.067626	77.87	5.27
9999	White lead, hemp, oil etc	L.S.	13.52	1.49	20.14
	LABOUR:				
0116	Fitter (grade 1)	day	0.25	301.00	75.25
0114	Beldar	day	0.66	247.00	163.02
	Trenching and refilling etc.				
0114	Beldar	day	0.66	247.00	163.02
0115	Coolie	day	0.66	247.00	163.02
	TOTAL				3,904.72
	Add Water Charges @ 1%				39.05
	TOTAL				3,943.77
	Add CPOH @ 15%				591.57
	Cost of 10 metre				4,535.34
	Cost of 1 metre				453.53
	Say				453.55

18.12.8 80 mm dia nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
1552	G.I. pipes 80 mm dia	metre	10.20	426.00	4,345.20
	Weight for carriage = pipe weight + 2% for fiitings =				
	1.02 x 86.40 = 88.128 kg = 0.088128 tonne				
2271	Carriage of G.I. pipes below 100 mm dia	tonne	0.088128	77.87	6.86
9999	White lead, hemp, oil etc	L.S.	13.52	1.49	20.14
	LABOUR:				
0116	Fitter (grade 1)	day	0.25	301.00	75.25
0114	Beldar	day	0.66	247.00	163.02

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Trenching and refilling etc.				
0114	Beldar	day	0.66	247.00	163.02
0115	Coolie	day	0.66	247.00	163.02
	TOTAL				4,936.51
	Add Water Charges @ 1%				49.37
	TOTAL				4,985.88
	Add CPOH @ 15%				747.88
	Cost of 10 metre				5,733.76
	Cost of 1 metre				573.38
	Say				573.40

18.13 Making connection of G.I. distribution branch with G.I. main of following sizes by providing and fixing tee, including cutting and threading the pipe etc. complete:

18.13.1 25 to 40 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one connection				
	Take 25mm dia as an average size				
	MATERIAL:				
1608	G.I. tees (equal) 25 mm	each	1.00	42.00	42.00
1555	G.I. back (jam) nuts 25 mm dia	each	1.00	8.00	8.00
9999	Carriage of materials and sundries	L.S.	5.33	1.49	7.94
	LABOUR:				
0116	Fitter (grade 1)	day	0.33	301.00	99.33
0114	Beldar	day	0.33	247.00	81.51
	TOTAL				238.78
	Add Water Charges @ 1%				2.39
	TOTAL				241.17
	Add CPOH @ 15%				36.18
	Cost of each				277.35
	Say				277.35

18.13.2 50 to 80 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one connection				
	Take 65mm dia as an average size				
	MATERIAL:				
1612	G.I. tees (equal) 65 mm	each	1.00	270.00	270.00
1559	G.I. back (jam) nuts 65 mm dia	each	1.00	18.00	18.00
9999	Carriage of materials and sundries	L.S.	5.33	1.49	7.94
	LABOUR:				
0116	Fitter (grade 1)	day	0.45	301.00	135.45
0114	Beldar	day	0.45	247.00	111.15
	TOTAL				542.54
	Add Water Charges @ 1%				5.43
	TOTAL				547.97
	Add CPOH @ 15%				82.20
	Cost of each				630.17
	Say				630.15

18.14 Fixing water meter and stop cock in G.I. pipe line including cutting and threading the pipe and making long screws etc. complete (cost of water meter and stop cock to be paid separately).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one metre with stopcock				
	MATERIAL:				
1555	G.I. back (jam) nuts 25 mm dia	each	1.00	8.00	8.00
9999	Carriage of materials and sundries	L.S.	5.33	1.49	7.94
0116	Fitter (grade 1)	day	0.33	301.00	99.33
0114	Beldar	day	0.33	247.00	81.51
	TOTAL				196.78
	Add Water Charges @ 1%				1.97
	TOTAL				198.75
	Add CPOH @ 15%				29.81
	Cost of each				228.56
	Say				228.55

18.15 Providing and fixing brass bib cock of approved quality:

18.15.1 15 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1339	Brass bib-cock 15 mm dia	each	1.00	165.00	165.00
9999	Carriage of materials and fixing charge	L.S.	8.06	1.49	12.01
	TOTAL				177.01
	Add Water Charges @ 1%				1.77
	TOTAL				178.78
	Add CPOH @ 15%				26.82
	Cost of each				205.60
	Say				205.60

18.15.2 20 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1340	Brass bib-cock 20 mm dia	each	1.00	215.00	215.00
9999	Carriage of materials and fixing charge	L.S.	9.49	1.49	14.14
	TOTAL				229.14
	Add Water Charges @ 1%				2.29
	TOTAL				231.43
	Add CPOH @ 15%				34.71
	Cost of each				266.14
	Say				266.15

18.16 Providing and fixing brass stop cock of approved quality:

18.16.1 15 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1342	Brass stop-cock 15 mm dia	each	1.00	165.00	165.00
9999	Carriage of materials and fixing charges	L.S.	8.06	1.49	12.01
	TOTAL				177.01
	Add Water Charges @ 1%				1.77
	TOTAL				178.78
	Add CPOH @ 15%				26.82
	Cost of each				205.60
	Say				205.60

18.16.2 20 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1343	Brass stop-cock 20 mm dia	each	1.00	215.00	215.00
9999	Carriage of materials and fixing charges	L.S.	9.49	1.49	14.14
	TOTAL				229.14
	Add Water Charges @ 1%				2.29
	TOTAL				231.43
	Add CPOH @ 15%				34.71
	Cost of each				266.14
	Say				266.15

18.17 Providing and fixing gun metal gate valve with C.I. wheel of approved quality (screwed end) :

18.17.1 25 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1927	Brass full way valve with C.I. wheel (screwed end) 25 mm dia	each	1.00	305.00	305.00
9999	Carriage of materials and fixing charges	L.S.	10.79	1.49	16.08
	TOTAL				321.08
	Add Water Charges @ 1%				3.21
	TOTAL				324.29
	Add CPOH @ 15%				48.64
	Cost of each				372.93
	Say				372.95

18.17.2 32 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1928	Brass full way valve with C.I. wheel (screwed end) 32 mm dia	each	1.00	370.00	370.00
9999	Carriage of materials and fixing charge	L.S.	12.22	1.49	18.21
	TOTAL				388.21
	Add Water Charges @ 1%				3.88
	TOTAL				392.09
	Add CPOH @ 15%				58.81
	Cost of each				450.90
	Say				450.90

18.17.3 40 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1929	Brass full way valve with C.I. wheel (screwed end) 40 mm dia	each	1.00	450.00	450.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.49	20.14
	TOTAL				470.14
	Add Water Charges @ 1%				4.70
	TOTAL				474.84
	Add CPOH @ 15%				71.23
	Cost of each				546.07
	Say				546.05

18.17.4 50 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1930	Brass full way valve with C.I. wheel (screwed end) 50 mm dia	each	1.00	650.00	650.00
9999	Carriage of materials and fixing charges	L.S.	14.82	1.49	22.08
	TOTAL				672.08
	Add Water Charges @ 1%				6.72
	TOTAL				678.80
	Add CPOH @ 15%				101.82
	Cost of each				780.62
	Say				780.60

18.17.5 65 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1931	Brass full way valve with C.I. wheel (screwed end) 65 mm dia	each	1.00	900.00	900.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Carriage of materials and fixing charges	L.S.	16.12	1.49	24.02
	TOTAL				924.02
	Add Water Charges @ 1%				9.24
	TOTAL				933.26
	Add CPOH @ 15%				139.99
	Cost of each				1,073.25
	Say				1,073.25

18.17.6 80 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1932	Brass full way valve with C.I. wheel (screwed end) 80 mm dia	each	1.00	1,550.00	1,550.00
9999	Carriage of materials and fixing charges	L.S.	18.85	1.49	28.09
	TOTAL				1,578.09
	Add Water Charges @ 1%				15.78
	TOTAL				1,593.87
	Add CPOH @ 15%				239.08
	Cost of each				1,832.95
	Say				1,832.95

18.18 Providing and fixing ball valve (brass) of approved quality, High or low pressure, with plastic floats complete:

18.18.1 15 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1922	H.P. or L.P. ball valve with polythene floats: 15 mm dia	each	1.00	190.00	190.00
9999	Carriage of materials and fixing charges	L.S.	21.58	1.49	32.15
	TOTAL				222.15
	Add Water Charges @ 1%				2.22
	TOTAL				224.37
	Add CPOH @ 15%				33.66
	Cost of each				258.03
	Say				258.05

18.18.2 20 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1923	H.P. or L.P. ball valve with polythene floats: 20 mm dia	each	1.00	270.00	270.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Carriage of materials and fixing charges	L.S.	26.91	1.49	40.10
	TOTAL				310.10
	Add Water Charges @ 1%				3.10
	TOTAL				313.20
	Add CPOH @ 15%				46.98
	Cost of each				360.18
	Say				360.20

18.18.3 25 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1924	H.P. or L.P. ball valve with polythene floats: 25 mm dia	each	1.00	315.00	315.00
9999	Carriage of materials and fixing charges	L.S.	32.24	1.49	48.04
	TOTAL				363.04
	Add Water Charges @ 1%				3.63
	TOTAL				366.67
	Add CPOH @ 15%				55.00
	Cost of each				421.67
	Say				421.65

18.19 Providing and fixing gun metal non-return valve of approved quality (screwed end) :
18.19.1 25 mm nominal bore
18.19.1.1 Horizontal

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1933	Gunmetal non-return valve-horizontal (screwed end) 25 mm dia	each	1.00	310.00	310.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.49	20.14
	TOTAL				330.14
	Add Water Charges @ 1%				3.30
	TOTAL				333.44
	Add CPOH @ 15%				50.02
	Cost of each				383.46
	Say				383.45

18.19.1.2 Vertical

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
3080	Gunmetal non-return valve - vertical (screwed end) 25 mm dia	each	1.00	320.00	320.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Carriage of materials and fixing charges	L.S.	13.52	1.49	20.14
	TOTAL				340.14
	Add Water Charges @ 1%				3.40
	TOTAL				343.54
	Add CPOH @ 15%				51.53
	Cost of each				395.07
	Say				395.05

18.19.2 32 mm nominal bore

18.19.2.1 Horizontal

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1934	Gunmetal non-return valve-horizontal (screwed end) 32 mm dia	each	1.00	400.00	400.00
9999	Carriage of materials and fixing charges	L.S.	14.82	1.49	22.08
	TOTAL				422.08
	Add Water Charges @ 1%				4.22
	TOTAL				426.30
	Add CPOH @ 15%				63.94
	Cost of each				490.24
	Say				490.25

18.19.2.2 Vertical

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
3084	Gunmetal non-return valve - vertical (screwed end) 32 mm dia	each	1.00	490.00	490.00
9999	Carriage of materials and fixing charges	L.S.	14.82	1.49	22.08
	TOTAL				512.08
	Add Water Charges @ 1%				5.12
	TOTAL				517.20
	Add CPOH @ 15%				77.58
	Cost of each				594.78
	Say				594.80

18.19.3 40 mm nominal bore

18.19.3.1 Horizontal

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1935	Gunmetal non-return valve-horizontal (screwed end) 40 mm dia	each	1.00	510.00	510.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Carriage of materials and fixing charges	L.S.	16.12	1.49	24.02
	TOTAL				534.02
	Add Water Charges @ 1%				5.34
	TOTAL				539.36
	Add CPOH @ 15%				80.90
	Cost of each				620.26
	Say				620.25

18.19.3.2 Vertical

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
3088	Gunmetal non-return valve - vertical (screwed end) 40 mm dia	each	1.00	680.00	680.00
9999	Carriage of materials and fixing charges	L.S.	16.12	1.49	24.02
	TOTAL				704.02
	Add Water Charges @ 1%				7.04
	TOTAL				711.06
	Add CPOH @ 15%				106.66
	Cost of each				817.72
	Say				817.70

18.19.4 50 mm nominal bore

18.19.4.1 Horizontal

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1936	Gunmetal non-return valve-horizontal (screwed end) 50 mm dia	each	1.00	780.00	780.00
9999	Carriage of materials and fixing charges	L.S.	17.55	1.49	26.15
	TOTAL				806.15
	Add Water Charges @ 1%				8.06
	TOTAL				814.21
	Add CPOH @ 15%				122.13
	Cost of each				936.34
	Say				936.35

18.19.4.2 Vertical

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
3092	Gunmetal non-return valve - vertical (screwed end) 50 mm dia	each	1.00	930.00	930.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Carriage of materials and fixing charges	L.S.	17.55	1.49	26.15
	TOTAL				956.15
	Add Water Charges @ 1%				9.56
	TOTAL				965.71
	Add CPOH @ 15%				144.86
	Cost of each				1,110.57
	Say				1,110.55

18.19.5 65 mm nominal bore

18.19.5.1 Horizontal

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1937	Gunmetal non-return valve-horizontal (screwed end) 65 mm dia	each	1.00	1,420.00	1,420.00
9999	Carriage of materials and fixing charges	L.S.	18.85	1.49	28.09
	TOTAL				1,448.09
	Add Water Charges @ 1%				14.48
	TOTAL				1,462.57
	Add CPOH @ 15%				219.39
	Cost of each				1,681.96
	Say				1,681.95

18.19.5.2 Vertical

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
3096	Gunmetal non-return valve - vertical (screwed end) 65 mm dia	each	1.00	1,650.00	1,650.00
9999	Carriage of materials and fixing charges	L.S.	18.85	1.49	28.09
	TOTAL				1,678.09
	Add Water Charges @ 1%				16.78
	TOTAL				1,694.87
	Add CPOH @ 15%				254.23
	Cost of each				1,949.10
	Say				1,949.10

18.19.6 80 mm nominal bore

18.19.6.1 Horizontal

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1938	Gunmetal non-return valve-horizontal (screwed end) 80 mm dia	each	1.00	2,030.00	2,030.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Carriage of materials and fixing charges	L.S.	20.28	1.49	30.22
	TOTAL				2,060.22
	Add Water Charges @ 1%				20.60
	TOTAL				2,080.82
	Add CPOH @ 15%				312.12
	Cost of each				2,392.94
	Say				2,392.95

18.19.6.2 Vertical

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
3300	Gunmetal non-return valve - vertical (screwed end) 80 mm dia	each	1.00	2,630.00	2,630.00
9999	Carriage of materials and fixing charges	L.S.	20.28	1.49	30.22
	TOTAL				2,660.22
	Add Water Charges @ 1%				26.60
	TOTAL				2,686.82
	Add CPOH @ 15%				403.02
	Cost of each				3,089.84
	Say				3,089.85

18.20 Providing and fixing brass ferrule with C.I. mouth cover including boring and tapping the main:

18.20.1 15 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1360	C.I.mouth, brass ferrule 15 mm dia	each	1.00	115.00	115.00
9999	Carriage of materials and fixing charges	L.S.	40.30	1.49	60.05
	TOTAL				175.05
	Add Water Charges @ 1%				1.75
	TOTAL				176.80
	Add CPOH @ 15%				26.52
	Cost of each				203.32
	Say				203.30

18.20.2 20 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1361	C.I.mouth, brass ferrule 20 mm dia	each	1.00	145.00	145.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Carriage of materials and fixing charges	L.S.	47.19	1.49	70.31
	TOTAL				215.31
	Add Water Charges @ 1%				2.15
	TOTAL				217.46
	Add CPOH @ 15%				32.62
	Cost of each				250.08
	Say				250.10

18.20.3 25 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1362	C.I.mouth, brass ferrule 25 mm dia	each	1.00	205.00	205.00
9999	Carriage of materials and fixing charges	L.S.	53.82	1.49	80.19
	TOTAL				285.19
	Add Water Charges @ 1%				2.85
	TOTAL				288.04
	Add CPOH @ 15%				43.21
	Cost of each				331.25
	Say				331.25

18.21 Providing and fixing uplasticised PVC connection pipe with brass unions:
18.21.1 30 cm length
18.21.1.1 15 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1687	Unplasticised P.V.C. connection pipe with brass union 30 cm long 15 mm bore	each	1.00	26.00	26.00
9999	Carriage of materials and fixing charges	L.S.	12.22	1.49	18.21
	TOTAL				44.21
	Add Water Charges @ 1%				0.44
	TOTAL				44.65
	Add CPOH @ 15%				6.70
	Cost of each				51.35
	Say				51.35

18.21.1.2 20 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1688	Unplasticised P.V.C. connection pipe with brass union 30 cm long 20 mm bore	each	1.00	33.00	33.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Carriage of materials and fixing charges	L.S.	12.22	1.49	18.21
	TOTAL				51.21
	Add Water Charges @ 1%				0.51
	TOTAL				51.72
	Add CPOH @ 15%				7.76
	Cost of each				59.48
	Say				59.50

18.21.2 45 cm length
18.21.2.1 15 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1689	Unplasticised P.V.C. connection pipe with brass union 45 cm long 15 mm bore	each	1.00	33.00	33.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.49	20.14
	TOTAL				53.14
	Add Water Charges @ 1%				0.53
	TOTAL				53.67
	Add CPOH @ 15%				8.05
	Cost of each				61.72
	Say				61.70

18.21.2.2 20 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1690	Unplasticised P.V.C. connection pipe with brass union 45 cm long 20 mm bore	each	1.00	43.00	43.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.49	20.14
	TOTAL				63.14
	Add Water Charges @ 1%				0.63
	TOTAL				63.77
	Add CPOH @ 15%				9.57
	Cost of each				73.34
	Say				73.35

18.22 Providing and fixing C.P. brass shower rose with 15 or 20 mm inlet:
18.22.1 100 mm diameter

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1878	Shower rose C.P. brass for 15 to 20 mm inlet 100 mm dia	each	1.00	40.00	40.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Carriage of materials and fixing charges	L.S.	6.76	1.49	10.07
	TOTAL				50.07
	Add Water Charges @ 1%				0.50
	TOTAL				50.57
	Add CPOH @ 15%				7.59
	Cost of each				58.16
	Say				58.15

18.22.2 150 mm diameter

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1879	Shower rose C.P.brass for 15 to 20 mm inlet 150 mm dia	each	1.00	55.00	55.00
9999	Carriage of materials and fixing charges	L.S.	8.06	1.49	12.01
	TOTAL				67.01
	Add Water Charges @ 1%				0.67
	TOTAL				67.68
	Add CPOH @ 15%				10.15
	Cost of each				77.83
	Say				77.85

18.23 Laying in position centrifugally cast (spun) iron S&S or flanged pipes (excluding cost of pipe)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 5.14 quintal				
	MATERIAL:				
	10 m of 200 mm dia C.I. pipe class 'A'				
	Weight = (2x257) = 514kg = 5.14 quintal				
	Labour for laying pipe				
0116	Fitter (grade 1)	day	0.17	301.00	51.17
0117	Assistant Fitter or 2nd class Fitter	day	0.17	273.00	46.41
0114	Beldar	day	1.33	247.00	328.51
9999	Sundries	L.S.	16.12	1.49	24.02
	TOTAL				450.11
	Add Water Charges @ 1%				4.50
	TOTAL				454.61
	Add CPOH @ 15%				68.19
	Cost of 5.14 quintal				522.80
	Cost of 1 quintal				101.71
	Say				101.70

18.24 Laying in position S&S or flanged C.I. special such as tees, bends, collars, tapers and caps etc.(excluding cost of specials).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 7 quintal				
	MATERIAL:				
	10 Nos. Tee 200x150mm Weight = 70x10 = 700kg.				
	Labour for laying tee				
0116	Fitter (grade 1)	day	0.93	301.00	279.93
0117	Assistant Fitter or 2nd class Fitter	day	0.62	273.00	169.26
0114	Beldar	day	2.48	247.00	612.56
9999	Sundries	L.S.	40.17	1.49	59.85
	TOTAL				1,121.60
	Add Water Charges @ 1%				11.22
	TOTAL				1,132.82
	Add CPOH @ 15%				169.92
	Cost of 7 quintal				1,302.74
	Cost of 1 quintal				186.11
	Say				186.10

18.25 Providing and laying S&S C.I. standard specials such as tees, bends, collars, tapers, caps etc. (Heavy class) :

18.25.1 Upto 300 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 quintal				
	MATERIAL:				
1464	S & S.C.I. standard specials upto 300 mm dia (heavy class)	quintal	1.00	3,450.00	3,450.00
2309	Carriage of Cast Iron fittings	tonne	0.10	77.87	7.79
	LABOUR:				
	For laying				
18.24	Rate as per Item Number 18.24 of SH: Water supply	quintal	1.00	186.10	186.10 (A)
	TOTAL				3,643.89
	Add Water Charges @ 1% except on A i.e on (3,643.89 - 186.10 =) 3,457.79				34.58
	TOTAL				3,678.47
	Add CPOH @ 15% except on A i.e on (3,678.47 - 186.10 =) 3,492.37				523.86
	Cost of 1 quintal				4,202.33
	Say				4,202.35

18.25.2 Over 300 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 quintal				
	MATERIAL:				
1466	S & S.C.I. standard specials over 300 mm dia (heavy class)	quintal	1.00	3,550.00	3,550.00
2309	Carriage of Cast Iron fittings	tonne	0.10	77.87	7.79

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	LABOUR:				
	For laying				
18.24	Rate as per Item Number 18.24 of SH: Water supply	quintal	1.00	186.10	186.10 (A)
	TOTAL				3,743.89
	Add Water Charges @ 1% except on A i.e on (3,743.89 - 186.10 =) 3,557.79				35.58
	TOTAL				3,779.47
	Add CPOH @ 15% except on A i.e on (3,779.47 - 186.10 =) 3,593.37				539.01
	Cost of 1 quintal				4,318.48
	Say				4,318.50

18.26 Providing and laying flanged C.I. standard specials such as tees, bends, collars, tapers, caps etc., suitable for flanged jointing as per IS : 1538:

18.26.1 Upto 300 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 quintal				
	MATERIAL:				
1468	Flanged C.I. standard specials upto 300 mm dia (heavy class)	quintal	1.00	5,300.00	5,300.00
2309	Carriage of Cast Iron fittings	tonne	0.10	77.87	7.79
	LABOUR:				
	For laying				
18.24	Rate as per Item Number 18.24 of SH: Water supply	quintal	1.00	186.10	186.10 (A)
	TOTAL				5,493.89
	Add Water Charges @ 1% except on A i.e on (5,493.89 - 186.10 =) 5,307.79				53.08
	TOTAL				5,546.97
	Add CPOH @ 15% except on A i.e on (5,546.97 - 186.10 =) 5,360.87				804.13
	Cost of 1 quintal				6,351.10
	Say				6,351.10

18.26.2 Over 300 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 quintal				
	MATERIAL:				
1470	Flanged C.I. standard specials over 300 mm dia (heavy class)	quintal	1.00	5,600.00	5,600.00
2309	Carriage of Cast Iron fittings	tonne	0.10	77.87	7.79
	LABOUR:				
	For laying				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
18.24	Rate as per Item Number 18.24 of SH: Water supply	quintal	1.00	186.10	186.10 (A)
	TOTAL				5,793.89
	Add Water Charges @ 1% except on A i.e on (5,793.89 - 186.10 =) 5,607.79				56.08
	TOTAL				5,849.97
	Add CPOH @ 15% except on A i.e on (5,849.97 - 186.10 =) 5,663.87				849.58
	Cost of 1 quintal				6,699.55
	Say				6,699.55

18.27 Providing and laying S&S centrifugally cast (spun) iron pipes (Class LA) conforming to IS - 1536 :

18.27.1 100 mm dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre MATERIAL: 100mm dia. spun iron pipes (in 5.5 m lengths) weightof 1m pipe = 19.820 kg Weight of 10m pipes 19.820x10= 198.20 kg				
7697	S&S Centrifugally (Spun) C.I. Pipe class LA 100 mm dia	metre	10.00	830.00	8,300.00
2319	Carriage of Spun iron S & S pipes 100 mm dia Labour for laying	100 metre	10.00	191.48	19.15
18.23	Rate as per Item Number 18.23 of SH: Water supply	quintal	1.98	101.70	201.37 (A)
	TOTAL				8,520.52
	Add Water Charges @ 1% except on A i.e on (8,520.52 - 201.37 =) 8,319.15				83.19
	TOTAL				8,603.71
	Add CPOH @ 15% except on A i.e on (8,603.71 - 201.37 =) 8,402.34				1,260.35
	Cost of 10 metre				9,864.06
	Cost of 1 metre				986.41
	Say				986.40

18.27.2 125 mm dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre MATERIAL: 125mm dia. spun iron pipes (in 5.5 m lengths) weightof 1m pipe = 25.82 kg Weight of 10m pipes 25.820x10 = 258.20 kg				
7698	S&S Centrifugally (Spun) C.I. Pipe class LA 125 mm dia	metre	10.00	1,040.00	10,400.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
2320	Carriage of Spun iron S & S pipes 125 mm dia Labour for laying	100 metre	10.00	255.77	25.58
18.23	Rate as per Item Number 18.23 of SH: Water supply	quintal	2.58	101.70	262.39 (A)
	TOTAL				10,687.97
	Add Water Charges @ 1% except on A i.e on (10,687.97 - 262.39 =) 10,425.58				104.26
	TOTAL				10,792.23
	Add CPOH @ 15% except on A i.e on (10,792.23 - 262.39 =) 10,529.84				1,579.48
	Cost of 10 metre				12,371.71
	Cost of 1 metre				1,237.17
	Say				1,237.15

18.27.3 150 mm dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre MATERIAL: 150mm dia. spun iron pipes (in 5.5 m lengths) weight of 1m pipe = 32.18 kg Weight of 10m pipes 32.18x10 = 321.80 kg				
7699	S&S Centrifugally (Spun) C.I. Pipe class LA 150 mm dia	metre	10.00	1,240.00	12,400.00
2321	Carriage of Spun iron S & S pipes 150 mm dia Labour for laying	100 metre	10.00	319.12	31.91
18.23	Rate as per Item Number 18.23 of SH: Water supply	quintal	3.22	101.70	327.47 (A)
	TOTAL				12,759.38
	Add Water Charges @ 1% except on A i.e on (12,759.38 - 327.47 =) 12,431.91				124.32
	TOTAL				12,883.70
	Add CPOH @ 15% except on A i.e on (12,883.70 - 327.47 =) 12,556.23				1,883.43
	Cost of 10 metre				14,767.13
	Cost of 1 metre				1,476.71
	Say				1,476.70

18.27.4 200 mm dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre MATERIAL: 200mm dia. spun iron pipes (in 5.5 m lengths) weight of 1m pipe = 47.090 kg Weight of 10m pipes 47.090x10 = 470.90 kg				
7700	S&S Centrifugally (Spun) C.I. Pipe class LA 200 mm dia	metre	10.00	2,120.00	21,200.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
2322	Carriage of Spun iron S & S pipes 200 mm dia Labour for laying	100 metre	10.00	519.11	51.91
18.23	Rate as per Item Number 18.23 of SH: Water supply	quintal	4.71	101.70	479.01 (A)
	TOTAL				21,730.92
	Add Water Charges @ 1% except on A i.e on (21,730.92 - 479.01 =) 21,251.91				212.52
	TOTAL				21,943.44
	Add CPOH @ 15% except on A i.e on (21,943.44 - 479.01 =) 21,464.43				3,219.66
	Cost of 10 metre				25,163.10
	Cost of 1 metre				2,516.31
	Say				2,516.30

18.27.5 250 mm dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre MATERIAL: 250mm dia. spun iron pipes (in 5.5 m lengths) weightof 1m pipe = 63.450 kg Weight of 10m pipes 63.450x10 = 634.50 kg				
7701	S&S Centrifugally (Spun) C.I. Pipe class LA 250 mm dia	metre	10.00	2,830.00	28,300.00
2323	Carriage of Spun iron S & S pipes 250 mm dia Labour for laying	100 metre	10.00	737.68	73.77
18.23	Rate as per Item Number 18.23 of SH: Water supply	quintal	6.35	101.70	645.79 (A)
	TOTAL				29,019.56
	Add Water Charges @ 1% except on A i.e on (29,019.56 - 645.79 =) 28,373.77				283.74
	TOTAL				29,303.30
	Add CPOH @ 15% except on A i.e on (29,303.30 - 645.79 =) 28,657.51				4,298.63
	Cost of 10 metre				33,601.93
	Cost of 1 metre				3,360.19
	Say				3,360.20

18.27.6 - 300 mm dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre MATERIAL: 300mm dia. spun iron pipes (in 5.5 m lengths) weight of 1m pipe = 81.820 kg Weight of 10m pipes 81.820x10 = 818.20 kg				
7702	S&S Centrifugally (Spun) C.I. Pipe class LA 300 mm dia	metre	10.00	3,740.00	37,400.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
2324	Carriage of Spun iron S & S pipes 300 mm. dia	100 metre	10.00	911.78	91.18
	Labour for laying				
18.23	Rate as per Item Number 18.23 of SH: Water supply	quintal	8.18	101.70	831.91 (A)
	TOTAL				38,323.09
	Add Water Charges @ 1% except on A i.e on (38,323.09 - 831.91 =) 37,491.18				374.91
	TOTAL				38,698.00
	Add CPOH @ 15% except on A i.e on (38,698.00 - 831.91 =) 37,866.09				5,679.91
	Cost of 10 metre				44,377.91
	Cost of 1 metre				4,437.79
	Say				4,437.80

18.27.7 350 mm dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre MATERIAL: 350mm dia. spun iron pipes (in 5.5 m lengths) weight of 1m pipe = 103.10 kg Weight of 10m pipes 103.10x10 =1031.00 kg				
7703	S&S Centrifugally (Spun) C.I. Pipe class LA 350 mm dia	metre	10.00	4,500.00	45,000.00
2325	Carriage of Spun iron S & S pipes 350 mm dia	100 metre	10.00	1,276.50	127.65
	Labour for laying				
18.23	Rate as per Item Number 18.23 of SH: Water supply	quintal	10.31	101.70	1,048.53 (A)
	TOTAL				46,176.18
	Add Water Charges @ 1% except on A i.e on (46,176.18 - 1,048.53 =) 45,127.65				451.28
	TOTAL				46,627.46
	Add CPOH @ 15% except on A i.e on (46,627.46 - 1,048.53 =) 45,578.93				6,836.84
	Cost of 10 metre				53,464.30
	Cost of 1 metre				5,346.43
	Say				5,346.45

18.27.8 400 mm dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre MATERIAL: 400mm dia. spun iron pipes (in 5.5 m lengths) weight of 1m pipe = 125.40 kg Weight of 10m pipes 125.450x10 = 1254.50 kg				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7704	S&S Centrifugally (Spun) C.I. Pipe class LA 400 mm dia	metre	10.00	5,870.00	58,700.00
2326	Carriage of Spun iron S & S pipes 400 mm dia Labour for laying	100 metre	10.00	1,740.68	174.07
18.23	Rate as per Item Number 18.23 of SH: Water supply	quintal	12.55	101.70	1,276.34 (A)
	TOTAL				60,150.41
	Add Water Charges @ 1% except on A i.e on (60,150.41 - 1,276.34 =) 58,874.07				588.74
	TOTAL				60,739.15
	Add CPOH @ 15% except on A i.e on (60,739.15 - 1,276.34 =) 59,462.81				8,919.42
	Cost of 10 metre				69,658.57
	Cost of 1 metre				6,965.86
	Say				6,965.85

18.27.9 450 mm dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre MATERIAL: 450mm dia. spun iron pipes (in 5.5 m lengths) weight of 1m pipe = 151.27 kg Weight of 10m pipes 151.270x 10 = 1512.70 kg				
7705	S&S Centrifugally (Spun) C.I. Pipe class LA 450 mm dia	metre	10.00	7,100.00	71,000.00
2327	Carriage of Spun iron S & S pipes 450 mm dia Labour for laying	100 metre	10.00	2,127.50	212.75
18.23	Rate as per Item Number 18.23 of SH: Water supply	quintal	15.13	101.70	1,538.72 (A)
	TOTAL				72,751.47
	Add Water Charges @ 1% except on A i.e on (72,751.47 - 1,538.72 =) 71,212.75				712.13
	TOTAL				73,463.60
	Add CPOH @ 15% except on A i.e on (73,463.60 - 1,538.72 =) 71,924.88				10,788.73
	Cost of 10 metre				84,252.33
	Cost of 1 metre				8,425.23
	Say				8,425.25

18.27.10 500 mm dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre MATERIAL: 500mm dia. spun iron pipes (in 5.5 m lengths) weight of 1m pipe = 177.09 kg				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Weight of 10m pipes 177.090x10 = 1770.90 kg				
7706	S&S Centrifugally (Spun) C.I. Pipe class LA 500 mm dia	metre	10.00	8,250.00	82,500.00
2328	Carriage of Spun iron S & S pipes 500 mm dia	100 metre	10.00	2,127.50	212.75
	Labour for laying				
18.23	Rate as per Item Number 18.23 of SH: Water supply	quintal	17.71	101.70	1,801.11 (A)
	TOTAL				84,513.86
	Add Water Charges @ 1% except on A i.e on (84,513.86 - 1,801.11 =) 82,712.75				827.13
	TOTAL				85,340.99
	Add CPOH @ 15% except on A i.e on (85,340.99 - 1,801.11 =) 83,539.88				12,530.98
	Cost of 10 metre				97,871.97
	Cost of 1 metre				9,787.20
	Say				9,787.20

18.27.11 600 mm dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
	600mm dia. spun iron pipes (in 5.5 m lengths)				
	weight of 1m pipe = 236.00 kg				
	Weight of 10m pipes 236.000x10 = 2360.00 kg				
7707	S&S Centrifugally (Spun) C.I. Pipe class LA 600 mm dia	metre	10.00	11,450.00	1,14,500.00
2329	Carriage of Spun iron S & S pipes 600mm dia	100 metre	10.00	3,191.25	319.12
	Labour for laying				
18.23	Rate as per Item Number 18.23 of SH: Water supply	quintal	23.60	101.70	2,400.12 (A)
	TOTAL				1,17,219.24
	Add Water Charges @ 1% except on A i.e on (1,17,219.24 - 2,400.12 =) 1,14,819.12				1,148.19
	TOTAL				1,18,367.43
	Add CPOH @ 15% except on A i.e on (1,18,367.43 - 2,400.12 =) 1,15,967.31				17,395.10
	Cost of 10 metre				1,35,762.53
	Cost of 1 metre				13,576.25
	Say				13,576.25

18.28 Providing lead caulked joints to spun iron or C.I. pipes and specials including testing of joints but excluding the cost of pig lead:

18.28.1 100 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 joints				
	MATERIAL:				
1881	Spun yarn	kilogram	1.70	40.00	68.00
	0.17x 10 =1.70 kg				
0761	Fuel wood	quintal	0.28	450.00	126.00
0771	Kerosene oil	litre	0.38	30.00	11.40
9999	Sundries	L.S.	6.76	1.49	10.07
9999	Carriage of materials	L.S.	5.33	1.49	7.94
	LABOUR:				
0116	Fitter (grade 1)	day	1.00	301.00	301.00
0117	Assistant Fitter or 2nd class Fitter	day	1.00	273.00	273.00
0114	Beldar	day	2.00	247.00	494.00
	TOTAL				1,291.41
	Add Water Charges @ 1%				12.91
	TOTAL				1,304.32
	Add CPOH @ 15%				195.65
	Cost of 10 nos				1,499.97
	Cost of each				150.00
	Say				150.00

18.28.2 125 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 joints				
	MATERIAL:				
1881	Spun yarn	kilogram	2.00	40.00	80.00
	0.20x10=2.00 kg				
0761	Fuel wood	quintal	0.37	450.00	166.50
0771	Kerosene oil	litre	0.76	30.00	22.80
9999	Sundries	L.S.	9.49	1.49	14.14
9999	Carriage of materials	L.S.	9.49	1.49	14.14
	LABOUR:				
0116	Fitter (grade 1)	day	1.50	301.00	451.50
0117	Assistant Fitter or 2nd class Fitter	day	1.50	273.00	409.50
0114	Beldar	day	3.00	247.00	741.00
	TOTAL				1,899.58
	Add Water Charges @ 1%				19.00
	TOTAL				1,918.58
	Add CPOH @ 15%				287.79
	Cost of 10 nos				2,206.37
	Cost of each				220.64
	Say				220.65

18.28.3 150 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 joints				
	MATERIAL:				
1881	Spun yarn	kilogram	2.30	40.00	92.00
	0.23x10=2.30 kg				
0761	Fuel wood	quintal	0.42	450.00	189.00
0771	Kerosene oil	litre	0.76	30.00	22.80
9999	Sundries	L.S.	10.79	1.49	16.08
9999	Carriage of materials	L.S.	10.79	1.49	16.08
	LABOUR:				
0116	Fitter (grade 1)	day	1.50	301.00	451.50
0117	Assistant Fitter or 2nd class Fitter	day	1.50	273.00	409.50
0114	Beldar	day	3.00	247.00	741.00
	TOTAL				1,937.96
	Add Water Charges @ 1%				19.38
	TOTAL				1,957.34
	Add CPOH @ 15%				293.60
	Cost of 10 nos				2,250.94
	Cost of each				225.09
	Say				225.10

18.28.4 200 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 joints				
	MATERIAL:				
1881	Spun yarn	kilogram	3.00	40.00	120.00
	0.3x10=3.00 kg				
0761	Fuel wood	quintal	0.56	450.00	252.00
0771	Kerosene oil	litre	0.76	30.00	22.80
9999	Sundries	L.S.	13.52	1.49	20.14
9999	Carriage of materials	L.S.	13.52	1.49	20.14
	LABOUR:				
0116	Fitter (grade 1)	day	2.00	301.00	602.00
0117	Assistant Fitter or 2nd class Fitter	day	2.00	273.00	546.00
0114	Beldar	day	4.00	247.00	988.00
	TOTAL				2,571.08
	Add Water Charges @ 1%				25.71
	TOTAL				2,596.79
	Add CPOH @ 15%				389.52
	Cost of 10 nos				2,986.31
	Cost of each				298.63
	Say				298.65

18.28.5 250 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 joints				
	MATERIAL:				
1881	Spun yarn	kilogram	4.00	40.00	160.00
	0.4x10=400 kg				
0761	Fuel wood	quintal	0.65	450.00	292.50
0771	Kerosene oil	litre	1.14	30.00	34.20
9999	Sundries	L.S.	17.55	1.49	26.15
9999	Carriage of materials	L.S.	17.55	1.49	26.15
	LABOUR:				
0116	Fitter (grade 1)	day	2.50	301.00	752.50
0117	Assistant Fitter or 2nd class Fitter	day	2.50	273.00	682.50
0114	Beldar	day	5.00	247.00	1,235.00
	TOTAL				3,209.00
	Add Water Charges @ 1%				32.09
	TOTAL				3,241.09
	Add CPOH @ 15%				486.16
	Cost of 10 nos				3,727.25
	Cost of each				372.73
	Say				372.70

18.28.6 300 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 joints				
	MATERIAL:				
1881	Spun yarn	kilogram	5.40	40.00	216.00
	0.54x10 =5.40 kg				
0761	Fuel wood	quintal	0.75	450.00	337.50
0771	Kerosene oil	litre	1.52	30.00	45.60
9999	Sundries	L.S.	20.28	1.49	30.22
9999	Carriage of materials	L.S.	20.28	1.49	30.22
	LABOUR:				
0116	Fitter (grade 1)	day	3.00	301.00	903.00
0117	Assistant Fitter or 2nd class Fitter	day	3.00	273.00	819.00
0114	Beldar	day	6.00	247.00	1,482.00
	TOTAL				3,863.54
	Add Water Charges @ 1%				38.64
	TOTAL				3,902.18
	Add CPOH @ 15%				585.33
	Cost of 10 nos				4,487.51
	Cost of each				448.75
	Say				448.75

18.28.7 350 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 joints				
	MATERIAL:				
1881	Spun yarn	kilogram	6.20	40.00	248.00
	0.62x10=6.20 kg				
0761	Fuel wood	quintal	0.93	450.00	418.50
0771	Kerosene oil	litre	1.70	30.00	51.00
9999	Sundries	L.S.	24.18	1.49	36.03
9999	Carriage of materials	L.S.	24.18	1.49	36.03
	LABOUR:				
0116	Fitter (grade 1)	day	3.00	301.00	903.00
0117	Assistant Fitter or 2nd class Fitter	day	3.00	273.00	819.00
0114	Beldar	day	6.00	247.00	1,482.00
	TOTAL				3,993.56
	Add Water Charges @ 1%				39.94
	TOTAL				4,033.50
	Add CPOH @ 15%				605.02
	Cost of 10 nos				4,638.52
	Cost of each				463.85
	Say				463.85

18.28.8 400 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 joints				
	MATERIAL:				
1881	Spun yarn	kilogram	7.40	40.00	296.00
	0.74x10=7.40 kg				
0761	Fuel wood	quintal	1.12	450.00	504.00
0771	Kerosene oil	litre	1.70	30.00	51.00
9999	Sundries	L.S.	26.91	1.49	40.10
9999	Carriage of materials	L.S.	26.91	1.49	40.10
	LABOUR:				
0116	Fitter (grade 1)	day	4.00	301.00	1,204.00
0117	Assistant Fitter or 2nd class Fitter	day	4.00	273.00	1,092.00
0114	Beldar	day	8.00	247.00	1,976.00
	TOTAL				5,203.20
	Add Water Charges @ 1%				52.03
	TOTAL				5,255.23
	Add CPOH @ 15%				788.28
	Cost of 10 nos				6,043.51
	Cost of each				604.35
	Say				604.35

18.28.9 450 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 joints				
	MATERIAL:				
1881	Spun yarn	kilogram	7.90	40.00	316.00
	0.79x10=7.90 kg				
0761	Fuel wood	quintal	1.21	450.00	544.50
0771	Kerosene oil	litre	2.27	30.00	68.10
9999	Sundries	L.S.	31.07	1.49	46.29
9999	Carriage of materials	L.S.	31.07	1.49	46.29
	LABOUR:				
0116	Fitter (grade 1)	day	4.50	301.00	1,354.50
0117	Assistant Fitter or 2nd class Fitter	day	4.50	273.00	1,228.50
0114	Beldar	day	9.00	247.00	2,223.00
	TOTAL				5,827.18
	Add Water Charges @ 1%				58.27
	TOTAL				5,885.45
	Add CPOH @ 15%				882.82
	Cost of 10 nos				6,768.27
	Cost of each				676.83
	Say				676.85

18.28.10 500 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 joints				
	MATERIAL:				
1881	Spun yarn	kilogram	8.50	40.00	340.00
	0.85x10=8.50 kg				
0761	Fuel wood	quintal	1.31	450.00	589.50
0771	Kerosene oil	litre	2.27	30.00	68.10
9999	Sundries	L.S.	33.67	1.49	50.17
9999	Carriage of materials	L.S.	33.67	1.49	50.17
	LABOUR:				
0116	Fitter (grade 1)	day	4.75	301.00	1,429.75
0117	Assistant Fitter or 2nd class Fitter	day	4.75	273.00	1,296.75
0114	Beldar	day	9.50	247.00	2,346.50
	TOTAL				6,170.94
	Add Water Charges @ 1%				61.71
	TOTAL				6,232.65
	Add CPOH @ 15%				934.90
	Cost of 10 nos				7,167.55
	Cost of each				716.76
	Say				716.75

18.28.11 600 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 joints				
	MATERIAL:				
1881	Spun yarn	kilogram	10.20	40.00	408.00
	1.02x10=10.20 kg				
0761	Fuel wood	quintal	1.68	450.00	756.00
0771	Kerosene oil	litre	2.84	30.00	85.20

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries	L.S.	40.30	1.49	60.05
9999	Carriage of materials	L.S.	40.30	1.49	60.05
	LABOUR:				
0116	Fitter (grade 1)	day	6.50	301.00	1,956.50
0117	Assistant Fitter or 2nd class Fitter	day	6.50	273.00	1,774.50
0114	Beldar	day	13.00	247.00	3,211.00
	TOTAL				8,311.30
	Add Water Charges @ 1%				83.11
	TOTAL				8,394.41
	Add CPOH @ 15%				1,259.16
	Cost of 10 nos				9,653.57
	Cost of each				965.36
	Say				965.35

18.29 Supplying pig lead at site of work.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 quintal				
	MATERIAL:				
1397	Pig lead	kilogram	100.00	90.00	9,000.00
2341	Carriage of pig lead	tonne	0.10	77.87	7.79
	TOTAL				9,007.79
	Add Water Charges @ 1%				90.08
	TOTAL				9,097.87
	Add CPOH @ 15%				1,364.68
	Cost of 1 quintal				10,462.55
	Say				10,462.55

18.30 Providing flanged joints to double flanged C.I./ D.I. pipes and specials, including testing of joints:

18.30.1 80 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 joints				
	MATERIAL:				
1373	Rubber insertions for 80 mm dia pipe joints	each	10.00	11.00	110.00
1956	Bolts and nuts 16 mm dia 60 mm long	each	40.00	10.00	400.00
9999	Carriage of matonal	L.S.	2.73	1.49	4.07
	LABOUR:				
0116	Fitter (grade 1)	day	0.15	301.00	45.15
0117	Assistant Fitter or 2nd class Fitter	day	0.15	273.00	40.95
0114	Beldar	day	0.80	247.00	197.60
	TOTAL				797.77
	Add Water Charges @ 1%				7.98
	TOTAL				805.75
	Add CPOH @ 15%				120.86
	Cost of 10 nos				926.61
	Cost of each				92.66
	Say				92.65

18.30.2 100 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 joints				
	MATERIAL:				
1374	Rubber insertions for 100 mm dia pipe joints	each	10.00	14.00	140.00
1956	Bolts and nuts 16 mm dia 60 mm long	each	80.00	10.00	800.00
9999	Carriage of materials	L.S.	4.16	1.49	6.20
	LABOUR:				
0116	Fitter (grade 1)	day	0.25	301.00	75.25
0117	Assistant Fitter or 2nd class Fitter	day	0.25	273.00	68.25
0114	Beldar	day	1.00	247.00	247.00
	TOTAL				1,336.70
	Add Water Charges @ 1%				13.37
	TOTAL				1,350.07
	Add CPOH @ 15%				202.51
	Cost of 10 nos				1,552.58
	Cost of each				155.26
	Say				155.25

18.30.3 125 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 joints				
	MATERIAL:				
1375	Rubber insertions for 125 mm dia pipe joints	each	10.00	15.00	150.00
1957	Bolts and nuts 16 mm dia 65 mm long	each	80.00	11.00	880.00
9999	Carriage of materials	L.S.	4.16	1.49	6.20
	LABOUR:				
0116	Fitter (grade 1)	day	0.25	301.00	75.25
0117	Assistant Fitter or 2nd class Fitter	day	0.25	273.00	68.25
0114	Beldar	day	1.00	247.00	247.00
	TOTAL				1,426.70
	Add Water Charges @ 1%				14.27
	TOTAL				1,440.97
	Add CPOH @ 15%				216.15
	Cost of 10 nos				1,657.12
	Cost of each				165.71
	Say				165.70

18.30.4 150 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 joints				
	MATERIAL:				
1376	Rubber insertions for 150 mm dia pipe joints	each	10.00	17.00	170.00
1958	Bolts and nuts 20 mm dia 65 mm long	each	80.00	13.00	1,040.00
9999	Carriage of materials	L.S.	4.16	1.49	6.20
	LABOUR:				
0116	Fitter (grade 1)	day	0.30	301.00	90.30
0117	Assistant Fitter or 2nd class Fitter	day	0.30	273.00	81.90

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Beldar	day	1.10	247.00	271.70
	TOTAL				1,660.10
	Add Water Charges @ 1%				16.60
	TOTAL				1,676.70
	Add CPOH @ 15%				251.50
	Cost of 10 nos				1,928.20
	Cost of each				192.82
	Say				192.80

18.30.5 200 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 joints				
	MATERIAL:				
1377	Rubber insertions for 200 mm dia pipe joints	each	10.00	22.00	220.00
1959	Bolts and nuts 20 mm dia 70 mm long	each	80.00	13.00	1,040.00
9999	Carriage of materials	L.S.	4.16	1.49	6.20
	LABOUR:				
0116	Fitter (grade 1)	day	0.30	301.00	90.30
0117	Assistant Fitter or 2nd class Fitter	day	0.30	273.00	81.90
0114	Beldar	day	1.10	247.00	271.70
	TOTAL				1,710.10
	Add Water Charges @ 1%				17.10
	TOTAL				1,727.20
	Add CPOH @ 15%				259.08
	Cost of 10 nos				1,986.28
	Cost of each				198.63
	Say				198.65

18.30.6 250 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 joints				
	MATERIAL:				
1378	Rubber insertions for 250 mm dia pipe joints	each	10.00	32.00	320.00
1960	Bolts and nuts 20 mm dia 75 mm long	each	120.00	14.00	1,680.00
9999	Carriage of materials	L.S.	5.33	1.49	7.94
	LABOUR:				
0116	Fitter (grade 1)	day	0.40	301.00	120.40
0117	Assistant Fitter or 2nd class Fitter	day	0.40	273.00	109.20
0114	Beldar	day	1.30	247.00	321.10
	TOTAL				2,558.64
	Add Water Charges @ 1%				25.59
	TOTAL				2,584.23
	Add CPOH @ 15%				387.63
	Cost of 10 nos				2,971.86
	Cost of each				297.19
	Say				297.20

18.30.7 300 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 joints				
	MATERIAL:				
1379	Rubber insertions for 300 mm dia pipe joints	each	10.00	40.00	400.00
1960	Bolts and nuts 20 mm dia 75 mm long	each	120.00	14.00	1,680.00
9999	Carriage of materials	L.S.	5.33	1.49	7.94
	LABOUR:				
0116	Fitter (grade 1)	day	0.40	301.00	120.40
0117	Assistant Fitter or 2nd class Fitter	day	0.40	273.00	109.20
0114	Beldar	day	1.30	247.00	321.10
	TOTAL				2,638.64
	Add Water Charges @ 1%				26.39
	TOTAL				2,665.03
	Add CPOH @ 15%				399.75
	Cost of 10 nos				3,064.78
	Cost of each				306.48
	Say				306.50

18.30.8 350 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 joints				
	MATERIAL:				
1380	Rubber insertions for 350 mm dia pipe joints	each	10.00	45.00	450.00
1961	Bolts and nuts 20 mm dia 80 mm long	each	160.00	15.00	2,400.00
9999	Carriage of materials	L.S.	5.33	1.49	7.94
	LABOUR:				
0116	Fitter (grade 1)	day	0.50	301.00	150.50
0117	Assistant Fitter or 2nd class Fitter	day	0.50	273.00	136.50
0114	Beldar	day	1.50	247.00	370.50
	TOTAL				3,515.44
	Add Water Charges @ 1%				35.15
	TOTAL				3,550.59
	Add CPOH @ 15%				532.59
	Cost of 10 nos				4,083.18
	Cost of each				408.32
	Say				408.30

18.30.9 400 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 joints				
	MATERIAL:				
1381	Rubber insertions for 400 mm dia pipe joints	each	10.00	67.00	670.00
1962	Bolts and nuts 24 mm dia 85 mm long	each	160.00	27.00	4,320.00
9999	Carriage of materials	L.S.	8.06	1.49	12.01
	LABOUR:				
0116	Fitter (grade 1)	day	0.50	301.00	150.50
0117	Assistant Fitter or 2nd class Fitter	day	0.50	273.00	136.50
0114	Beldar	day	1.50	247.00	370.50
	TOTAL				5,659.51
	Add Water Charges @ 1%				56.60
	TOTAL				5,716.11
	Add CPOH @ 15%				857.42
	Cost of 10 nos				6,573.53
	Cost of each				657.35
	Say				657.35

18.30.10 450 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 joints				
	MATERIAL:				
1382	Rubber insertions for 450 mm dia pipe joints	each	10.00	84.00	840.00
1962	Bolts and nuts 24 mm dia 85 mm long	each	200.00	27.00	5,400.00
9999	Carriage of materials	L.S.	8.06	1.49	12.01
	LABOUR:				
0116	Fitter (grade 1)	day	0.60	301.00	180.60
0117	Assistant Fitter or 2nd class Fitter	day	0.60	273.00	163.80
0114	Beldar	day	1.70	247.00	419.90
	TOTAL				7,016.31
	Add Water Charges @ 1%				70.16
	TOTAL				7,086.47
	Add CPOH @ 15%				1,062.97
	Cost of 10 nos				8,149.44
	Cost of each				814.94
	Say				814.95

18.30.11 500 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 joints				
	MATERIAL:				
1383	Rubber insertions for 500 mm dia pipe joints	each	10.00	106.00	1,060.00
1963	Bolts and nuts 24 mm dia 90 mm long	each	200.00	29.00	5,800.00
9999	Carriage of materials	L.S.	8.06	1.49	12.01
	LABOUR:				
0116	Fitter (grade 1)	day	0.65	301.00	195.65
0117	Assistant Fitter or 2nd class Fitter	day	0.65	273.00	177.45
0114	Beldar	day	1.80	247.00	444.60
	TOTAL				7,689.71
	Add Water Charges @ 1%				76.90
	TOTAL				7,766.61
	Add CPOH @ 15%				1,164.99
	Cost of 10 nos				8,931.60
	Cost of each				893.16
	Say				893.15

18.30.12 600 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 joints				
	MATERIAL:				
1384	Rubber insertions for 600 mm dia pipe joints	each	10.00	118.00	1,180.00
1964	Bolts and nuts 27 mm dia 100 mm long	each	200.00	35.00	7,000.00
9999	Carriage of materials	L.S.	9.49	1.49	14.14
	LABOUR:				
0116	Fitter (grade 1)	day	0.75	301.00	225.75
0117	Assistant Fitter or 2nd class Fitter	day	0.75	273.00	204.75
0114	Beldar	day	2.00	247.00	494.00
	TOTAL				9,118.64
	Add Water Charges @ 1%				91.19
	TOTAL				9,209.83
	Add CPOH @ 15%				1,381.47
	Cost of 10 nos				10,591.30
	Cost of each				1,059.13
	Say				1,059.15

18.31 Providing and fixing C.I. sluice valves (with cap) complete with bolts, nuts, rubber insertions etc. (the tail pieces if required will be paid separately) :

18.31.1 100 mm diameter

18.31.1.1 Class I

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sluice valves				
	MATERIAL:				
1940	C.I. sluice valve (with caps) class I: 100 mm dia	each	10.00	2,300.00	23,000.00
	Carriage pf sluice valves				
	wt.= 44.3x10=443kg= 0.443t. say 0.44t				
2309	Carriage of Cast Iron fittings	tonne	0.44	77.87	34.26
	Labour for laying sluice valve				
18.24	Rate as per Item Number 18.24 of SH: Water supply	quintal	4.43	186.10	824.42 (A)
	Providing flanged joints to sluice valves with bolts, nuts and rubber insertion etc.				
18.30.2	Rate as per Item Number 18.30.2 of SH: Water supply	each	20.00	155.25	3,105.00 (A)
	TOTAL				26,963.68
	Add Water Charges @ 1% except on A i.e on (26,963.68 - 3,929.42 =) 23,034.26				230.34
	TOTAL				27,194.02
	Add CPOH @ 15% except on A i.e on (27,194.02 - 3,929.42 =) 23,264.60				3,489.69
	Cost of 10 nos				30,683.71
	Cost of each				3,068.37
	Say				3,068.35

18.31.1.2 Class II

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sluice valves				
	MATERIAL:				
3311	C.I.sluice valve (with caps) class II : 100 mm dia	each	10.00	2,650.00	26,500.00
	Carriage of sluice valves				
	wt.= 56.3x10=563kg = 0.563 t. say 0.56t				
2309	Carriage of Cast Iron fittings	tonne	0.56	77.87	43.61
	Labour for laying sluice valve				
18.24	Rate as per Item Number 18.24 of SH: Water supply	quintal	5.63	186.10	1,047.74 (A)
	Providing flanged joints to sluice valves with bolts, nuts and rubber insertion etc.				
18.30.2	Rate as per Item Number 18.30.2 of SH: Water supply	each	20.00	155.25	3,105.00 (A)
	TOTAL				30,696.35
	Add Water Charges @ 1% except on A i.e on (30,696.35 - 4,152.74 =) 26,543.61				265.44
	TOTAL				30,961.79
	Add CPOH @ 15% except on A i.e on (30,961.79 - 4,152.74 =) 26,809.05				4,021.36
	Cost of 10 nos				34,983.15
	Cost of each				3,498.32
	Say				3,498.30

18.31.2 125 mm diameter

18.31.2.1 Class I

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sluice valves				
	MATERIAL:				
1941	C.I. sluice valve (with caps) class I : 125 mm dia	each	10.00	2,600.00	26,000.00
	Carriage of sluice valves				
	wt.= 56.3x10=563kg = 0.563 t. say 0.56t				
2309	Carriage of Cast Iron fittings	tonne	0.56	77.87	43.61
	Labour for laying sluice valve				
18.24	Rate as per Item Number 18.24 of SH: Water supply	quintal	5.63	186.10	1,047.74 (A)
	Providing flanged joints to sluice valves with bolts, nuts and rubber insertion etc.				
18.30.3	Rate as per Item Number 18.30.3 of SH: Water supply	each	20.00	165.70	3,314.00 (A)
	TOTAL				30,405.35
	Add Water Charges @ 1% except on A i.e on (30,405.35 - 4,361.74 =) 26,043.61				260.44
	TOTAL				30,665.79
	Add CPOH @ 15% except on A i.e on (30,665.79 - 4,361.74 =) 26,304.05				3,945.61
	Cost of 10 nos				34,611.40
	Cost of each				3,461.14
	Say				3,461.15

18.31.2.2 Class II

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sluice valves				
	MATERIAL:				
3314	C.I.sluice valve (with caps) class II : 125 mm dia	each	10.00	3,200.00	32,000.00
	Carriage of sluice valve				
	wt.= 68.3x10 = 683 kg = 0.638 t say o.68 tonne				
2309	Carriage of Cast Iron fittings	tonne	0.68	77.87	52.95
	Labour for laying sluice valve				
18.24	Rate as per Item Number 18.24 of SH: Water supply	quintal	6.83	186.10	1,271.06 (A)
	Providing flanged joints to sluice valves with bolts, nuts and rubber insertion etc.				
18.30.3	Rate as per Item Number 18.30.3 of SH: Water supply	each	20.00	165.70	3,314.00 (A)
	TOTAL				36,638.01
	Add Water Charges @ 1% except on A i.e on (36,638.01 - 4,585.06 =) 32,052.95				320.53
	TOTAL				36,958.54
	Add CPOH @ 15% except on A i.e on (36,958.54 - 4,585.06 =) 32,373.48				4,856.02
	Cost of 10 nos				41,814.56
	Cost of each				4,181.46
	Say				4,181.45

18.31.3 150 mm diameter

18.31.3.1 Class I

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sluice valves				
	MATERIAL:				
1942	C.I. sluice valve (with caps) class I: 150 mm dia	each	10.00	3,410.00	34,100.00
	Carriage of sluice valves				
	wt. =72.5x10=725kg=0.725t.say 0.72t				
2309	Carriage of Cast Iron fittings	tonne	0.72	77.87	56.07
	Labour for laying sluice valve				
18.24	Rate as per Item Number 18.24 of SH: Water supply	quintal	7.25	186.10	1,349.22 (A)
	Providing flanged joints to sluice valves with bolts, nuts and rubber insertion etc.				
18.30.4	Rate as per Item Number 18.30.4 of SH: Water supply	each	20.00	192.80	3,856.00 (A)
	TOTAL				39,361.29
	Add Water Charges @ 1% except on A i.e on (39,361.29 - 5,205.22 =) 34,156.07				341.56
	TOTAL				39,702.85
	Add CPOH @ 15% except on A i.e on (39,702.85 - 5,205.22 =) 34,497.63				5,174.64
	Cost of 10 nos				44,877.49
	Cost of each				4,487.75
	Say				4,487.75

18.31.3.2 Class II

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sluice valves				
	MATERIAL:				
	Carriage of sluice valves				
	wt.= 86.5x10=865kg =0.865t. say 0.865t				
3317	C.I.sluice valve (with caps) class II : 150 mm dia	each	10.00	4,000.00	40,000.00
2309	Carriage of Cast Iron fittings	tonne	0.865	77.87	67.36
	Labour for laying sluice valve				
18.24	Rate as per Item Number 18.24 of SH: Water supply	quintal	8.65	186.10	1,609.76 (A)
	Providing flanged joints to sluice valves with bolts, nuts and rubber insertion etc.				
18.30.4	Rate as per Item Number 18.30.4 of SH: Water supply	each	20.00	192.80	3,856.00 (A)
	TOTAL				45,533.12
	Add Water Charges @ 1% except on A i.e on (45,533.12 - 5,465.76 =) 40,067.36				400.67
	TOTAL				45,933.79
	Add CPOH @ 15% except on A i.e on (45,933.79 - 5,465.76 =) 40,468.03				6,070.20
	Cost of 10 nos				52,003.99
	Cost of each				5,200.40
	Say				5,200.40

18.31.4 200 mm diameter

18.31.4.1 Class I

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sluice valves				
	MATERIAL:				
1943	C.I. sluice valve (with caps) class I : 200 mm dia	each	10.00	6,550.00	65,500.00
	Carriage of sluice valves				
	wt.= 121.5x10=1215kg= 1.215t. say 1.22t				
2309	Carriage of Cast Iron fittings	tonne	1.22	77.87	95.00
	Labour for laying sluice valve				
18.24	Rate as per Item Number 18.24 of SH: Water supply	quintal	12.15	186.10	2,261.11 (A)
	Providing flanged joints to sluice valves with bolts, nuts and rubber insertion etc.				
18.30.5	Rate as per Item Number 18.30.5 of SH: Water supply	each	20.00	198.65	3,973.00 (A)
	TOTAL				71,829.11
	Add Water Charges @ 1% except on A i.e on (71,829.11 - 6,234.11 =) 65,595.00				655.95
	TOTAL				72,485.06
	Add CPOH @ 15% except on A i.e on (72,485.06 - 6,234.11 =) 66,250.95				9,937.64
	Cost of 10 nos				82,422.70
	Cost of each				8,242.27
	Say				8,242.25

18.31.4.2 Class II

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sluice valves				
	MATERIAL:				
3320	C.I.sluice valve (with caps) class II : 200 mm dia	each	10.00	9,100.00	91,000.00
	Carriage of sluice valves				
	wt.= 150.5x10=1505kg=1.505t. say 1.5t				
2309	Carriage of Cast Iron fittings	tonne	1.50	77.87	116.80
	Labour for laying sluice valve				
18.24	Rate as per Item Number 18.24 of SH: Water supply	quintal	15.05	186.10	2,800.80 (A)
	Providing flanged joints to sluice valves with bolts, nuts and rubber insertion etc.				
18.30.5	Rate as per Item Number 18.30.5 of SH: Water supply	each	20.00	198.65	3,973.00 (A)
	TOTAL				97,890.60
	Add Water Charges @ 1% except on A i.e on (97,890.60 - 6,773.80 =) 91,116.80				911.17
	TOTAL				98,801.77
	Add CPOH @ 15% except on A i.e on (98,801.77 - 6,773.80 =) 92,027.97				13,804.20
	Cost of 10 nos				1,12,605.97
	Cost of each				11,260.60
	Say				11,260.60

18.31.5 250 mm diameter

18.31.5.1 Class I

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sluice valves				
	MATERIAL:				
1944	C.I. sluice valve (with caps) class I : 250 mm dia	each	10.00	9,550.00	95,500.00
	Carriage of sluice valves				
	wt.= 179.9x10=1799kg= 1.799t. say 1.80t				
2309	Carriage of Cast Iron fittings	tonne	1.80	77.87	140.17
	Labour for laying sluice valve				
18.24	Rate as per Item Number 18.24 of SH: Water supply	quintal	17.99	186.10	3,347.94 (A)
	Providing flanged joints to sluice valves with bolts, nuts and rubber insertion etc.				
18.30.6	Rate as per Item Number 18.30.6 of SH: Water supply	each	20.00	297.20	5,944.00 (A)
	TOTAL				1,04,932.11
	Add Water Charges @ 1% except on A i.e on (1,04,932.11 - 9,291.94 =) 95,640.17				956.40
	TOTAL				1,05,888.51
	Add CPOH @ 15% except on A i.e on (1,05,888.51 - 9,291.94 =) 96,596.57				14,489.49
	Cost of 10 nos				1,20,378.00
	Cost of each				12,037.80
	Say				12,037.80

18.31.5.2 - Class II

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sluice valves				
	MATERIAL:				
3321	C.I.sluice valve (with caps) class II : 250 mm dia	each	10.00	13,500.00	1,35,000.00
	Carriage of sluice valves				
	wt. =229.9x10=2299kg =2299t. say 2.30t				
2309	Carriage of Cast Iron fittings	tonne	2.30	77.87	179.10
	Labour for laying sluice valve				
18.24	Rate as per Item Number 18.24 of SH: Water supply	quintal	22.99	186.10	4,278.44 (A)
	Providing flanged joints to sluice valves with bolts, nuts and rubber insertion etc.				
18.30.6	Rate as per Item Number 18.30.6 of SH: Water supply	each	20.00	297.20	5,944.00 (A)
	TOTAL				1,45,401.54
	Add Water Charges @ 1% except on A i.e on (1,45,401.54 - 10,222.44 =) 1,35,179.10				1,351.79
	TOTAL				1,46,753.33
	Add CPOH @ 15% except on A i.e on (1,46,753.33 - 10,222.44 =) 1,36,530.89				20,479.63
	Cost of 10 nos				1,67,232.96
	Cost of each				16,723.30
	Say				16,723.30

18.31.6 300 mm diameter

18.31.6.1 Class I

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sluice valves				
	MATERIAL:				
1945	C.I. sluice valve (with caps) class I: 300 mm dia	each	10.00	13,500.00	1,35,000.00
	Carriage of sluice valves				
	wt.= 242.4x10=2424kg = 2.42t. say 2.42t				
2309	Carriage of Cast Iron fittings	tonne	2.42	77.87	188.45
	Labour for laying sluice valve				
18.24	Rate as per Item Number 18.24 of SH: Water supply	quintal	24.24	186.10	4,511.06 (A)
	Providing flanged joints to sluice valves with bolts, nuts and rubber insertion etc.				
18.30.7	Rate as per Item Number 18.30.7 of SH: Water supply	each	20.00	306.50	6,130.00 (A)
	TOTAL				1,45,829.51
	Add Water Charges @ 1% except on A i.e on (1,45,829.51 - 10,641.06 =) 1,35,188.45				1,351.88
	TOTAL				1,47,181.39
	Add CPOH @ 15% except on A i.e on (1,47,181.39 - 10,641.06 =) 1,36,540.33				20,481.05
	Cost of 10 nos				1,67,662.44
	Cost of each				16,766.24
	Say				16,766.25

18.31.6.2 Class II

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sluice valves				
	MATERIAL:				
3326	C.I.sluice valve (with caps) class II : 300 mm dia	each	10.00	17,000.00	1,70,000.00
	Carriage of sluice valves				
	wt.= 303.4x10=3034kg=3.304t.				
2309	Carriage of Cast Iron fittings	tonne	3.034	77.87	236.26
	Labour for laying sluice valve				
18.24	Rate as per Item Number 18.24 of SH: Water supply	quintal	30.34	186.10	5,646.27 (A)
	Providing flanged joints to sluice valves with bolts, nuts and rubber insertion etc.				
18.30.7	Rate as per Item Number 18.30.7 of SH: Water supply	each	20.00	306.50	6,130.00 (A)
	TOTAL				1,82,012.53
	Add Water Charges @ 1% except on A i.e on (1,82,012.53 - 11,776.27 =) 1,70,236.26				1,702.36
	TOTAL				1,83,714.89
	Add CPOH @ 15% except on A i.e on (1,83,714.89 - 11,776.27 =) 1,71,938.62				25,790.79
	Cost of 10 nos				2,09,505.68
	Cost of each				20,950.57
	Say				20,950.60

18.32 Constructing masonry chamber 30x30x50 cm inside, in brick work in cement mortar 1:4 (1 cement :4 coarse sand) for stop cock, with C.I. surface box 100x100x75 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), i/c necessary excavation, foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm thick, finished with a floating coat of neat cement complete as per standard design:

18.32.1 With common burnt clay F.P.S. (non modular) bricks of class designation 7.5

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one chamber MATERIAL: (i) Earth work in excavation including refilling and disposal of surplus earth = 0.68x0.68x0.65m=0.301cum				
2.8.1	Rate as per Item Number 2.8.1 of SH: Earth work	cum	0.30	130.80	39.24 (A)
2.25	Rate as per Item Number 2.25 of SH: Earth work (ii) Cement concrete 1:5:10 (1 Cement: 5 fine sand : 10 graded stone aggregate 40mm nominal size) 0.68x0.68x0.075=0.035cum. Say 0.04 cum	cum	0.30	83.80	25.14 (A)
4.1.11	Rate as per Item Number 4.1.11 of SH: Concrete work (iii) Second class brick work in cement mortar 1:4 (1 Cement: 4 coarse sand) in foundations and plinth 1.66x0.115x0.50=0.095cum. Say 0.10 cum	cum	0.04	3,087.45	123.50 (A)
6.1.1	Rate as per Item Number 6.1.1 of SH: Brick work (iv) 12mm cement plaster 1:3 (1 Cement: 3 Coarse sand) finished with a floating coat of neat cement. 1.20x0.50=0.60sqm. 0.30x0.30=0.09sqm. Total =0.69sqm. Say 0.70sqm	cum	0.10	3,508.25	350.83 (A)
13.9.1	Rate as per Item Number 13.9.1 of SH: Finishing (v) C.I. surface box with hinged cover 100x100x75mm (inside)	sqm	0.70	173.10	121.17 (A)
1304	Surface box for stop cock (vi)	each	1.00	100.00	100.00
9999	Carriage of C.I. surface box (vii) Cement concrete 1:2:4 (1 Cement: 2 Coarse sand ; 4 graded stone aggregate 20mm nominal size) in slab = 0.53mx0.53mx0.075m = 0.02107cum. Less surface box 0.112x0.112x0.076 =(-) 0.00094 cum. = 0.0201 cum. Say 0.02cum	L.S.	1.43	1.49	2.13

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
5.3	Rate as per Item Number 5.3 of SH: Reinforced cement concrete work (viii) Less labour for not lifting the materilas upto floor five level	cum	0.02	5,494.55	109.89 (A)
0115	Coolie (ix)	day	-0.038	247.00	-9.39
9999	Sundries	L.S.	4.16	1.49	6.20
	TOTAL				868.71
	Add Water Charges @ 1% except on A i.e on (868.71 - 769.77 =) 98.94				0.99
	TOTAL				869.70
	Add CPOH @ 15% except on A i.e on (869.70 - 769.77 =) 99.93				14.99
	Cost of each				884.69
	Say				884.70

18.33 Constructing masonry chamber 60x60x75 cm inside, in brick work in cement mortar 1:4 (1 cement : 4 coarse sand) for sluice valve, with C.I. surface box 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), i/c necessary excavation, foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm thick, finished with a floating coat of neat cement complete as per standard design :

18.33.1 With common burnt clay F.P.S. (non modular) bricks of class designation 7.5

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one chamber MATERIAL: (i) Earth work in excavation including refilling and disposal of surplus earth 1.21 x 1.21 x 1.00m= 1.464cum				
2.8.1	Rate as per Item Number 2.8.1 of SH: Earth work	cum	1.46	130.80	190.97 (A)
2.25	Rate as per Item Number 2.25 of SH: Earth work (ii) Cement concrete 1:5:10 (1 Cement: 5 fine sand : 10 graded stone aggregate 40mm nominal size) 1.21xl.21x0.1m=0.146cum. Say 0.15 cum	cum	1.46	83.80	122.35 (A)
4.1.11	Rate as per Item Number 4.1.11 of SH: Concrete work (iii) Second class brick work in cement mortar 1: 4(1 Cement: 4coarse sand) in foundations and plinth 3.32mx0.23mx0.75m=0.573cum. Say 0.57 cum	cum	0.15	3,087.45	463.12 (A)
6.1.1	Rate as per Item Number 6.1.1 of SH: Brick work (iv) 12mm cement plaster 1:3 (1 Cement: 3 Coarse sand) finished with a floating coat of neat cement.	cum	0.57	3,508.25	1,999.70 (A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	2.40x0.75=1.80sqm 0.60x0.60=0.36sqm. =2.16sqm				
13.9.1	Rate as per Item Number 13.9.1 of SH: Finishing (v) C.I. surface box with hinged cover 100x100x75mm (inside)	sqm	2.16	173.10	373.90 (A)
1305	Surface box for sluice valve (vi)	each	1.00	185.00	185.00
9999	Carriage of C.I. surface box (vii) Cement concrete 1:2:4 (1 Cement: 2 Coarse sand : 4 graded stone aggregate 20mm nominal size) in slab = 1.06mx1.06mx0.15m = 0.1685 cum. Less surface box 3.142/4xd²x0. 18m -0.7854x0.156x0.156x0.18 = (-)0.0034 cum = 0.1651 cum. Say 0.17 cum	L.S.	8.06	1.49	12.01
5.3	Rate as per Item Number 5.3 of SH: Reinforced cement concrete work (viii) Less labour for not lifting the materilas upto floor five level	cum	0.17	5,494.55	934.07 (A)
0115	Coolie (ixi) Mild steel reinforcement for RCC work etc. 0.165cum.x80kg/cum. = 13.2kg	day	-0.32	247.00	-79.04
5.22.1	Rate as per Item Number 5.22.1 of SH: Reinforced cement concrete work (x) Form work 0.60mx0.60m=0.36sqm.+ 3.32mx0.15m=0.50sqm. = 0.86 sqm	kilogram	13.20	56.75	749.10 (A)
5.9.3	Rate as per Item Number 5.9.3 of SH: Reinforced cement concrete work (xi)	sqm	0.86	311.20	267.63 (A)
9999	Sundries	L.S.	8.06	1.49	12.01
	TOTAL				5,230.82
	Add Water Charges @ 1% except on A i.e on (5,230.82 - 5,100.84 =) 129.98				1.30
	TOTAL				5,232.12
	Add CPOH @ 15% except on A i.e on (5,232.12 - 5,100.84 =) 131.28				19.69
	Cost of each				5,251.81
	Say				5,251.80

18.34 Constructing masonry chamber 90x90x100 cm inside, in brick work in cement mortar 1:4 (1 cement : 4 coarse sand) for sluice valve, with 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), i/c necessary excavation, foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1: 3 (1 cement : 3 coarse sand) 12 mm thick, finished with a floating coat of neat cement complete as per standard design :

18.34.1 With common burnt clay F.P.S. (non modular) bricks of class designation 7.5

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one chamber MATERIAL: (i) Earth work in excavation including refilling and disposal of surplus earth 1.51 x 1.51 x 1.25 m				
2.8.1	Rate as per Item Number 2.8.1 of SH: Earth work	cum	2.85	130.80	372.78 (A)
2.25	Rate as per Item Number 2.25 of SH: Earth work (ii) Cement concrete 1:5:10(1 Cement: 5 fine sand : 10 graded stone aggregate 40mm nominal size) 1.51x1.51x0.1m=0.228cum. Say 0.23 cum.	cum	2.85	83.80	238.83 (A)
4.1.11	Rate as per Item Number 4.1.11 of SH: Concrete work (iii) Second class brick work in cement mortar 1:4 (1 Cement: 4coarse sand) in foundations and plinth 4.52mx0.23mx 1.00m= 1.04cum.	cum	0.23	3,087.45	710.11 (A)
6.1.1	Rate as per Item Number 6.1.1 of SH: Brick work (iv) 12mm cement plaster 1:3 (1 Cement: 3 Coarse sand) finished with a floating coat of neat cement. 3.60mxl.00m=3.60sqm. 0.90mx0.90m=0.81sqm. Total =4.41 sqm	cum	1.04	3,508.25	3,648.58 (A)
13.9.1	Rate as per Item Number 13.9.1 of SH: Finishing (v) C.I. surface box with chained lid.	sqm	4.41	173.10	763.37 (A)
1305	Surface box for sluice valve (vi)	each	1.00	185.00	185.00
9999	Carriage of C.I. surface box (vii) Cement concrete 1:2:4 (1 Cement: 2 coarse sand ; 4 graded stone aggregate 20mm nominal size) in slab = 1.36mx 1.36mx0.15m = 0.2774 cum. Less surface box 0.7854x0.156mx0. 156mx0.18m = (-)0.0034 cum. = 0.2740 cum. Say 0.27 cum.	L.S.	8.06	1.49	12.01
5.3	Rate as per Item Number 5.3 of SH: Reinforced cement concrete work (viii) Less labour for not lifting the materilas upto floor five level	cum	0.27	5,494.55	1,483.53 (A)
	115 Coolie (ix) Mild steel reinforcement for RCC work etc. 0.274cum.x80kg/cum. = 21.92 kg.	day	-0.51	247.00	-125.97
5.22.1	Rate as per Item Number 5.22.1 of SH: Reinforced cement concrete work (x) Form work	kilogram	21.92	56.75	1,243.96 (A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	0.90mx0.90m=0.81sqm.+ 4.52mx0.15m = 0.68 sqm. Total = 1.49 sqm.				
5.9.3	Rate as per Item Number 5.9.3 of SH: Reinforced cement concrete work (xi)	sqm	1.49	311.20	463.69 (A)
9999	Sundries	L.S.	8.06	1.49	12.01
	TOTAL				9,007.90
	Add Water Charges @ 1% except on A i.e on (9,007.90 - 8,924.85 =) 83.05				0.83
	TOTAL				9,008.73
	Add CPOH @ 15% except on A i.e on (9,008.73 - 8,924.85 =) 83.88				12.58
	Cost of each				9,021.31
	Say				9,021.30

18.35 Constructing masonry chamber 120x120x100 cm inside, in brick work in cement mortar 1:4 (1 cement : 4 coarse sand) for sluice valve, with C.1. 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 20mm nominal size), i/c necessary excavation, foundation concrete 1:5:10 (1 cement : 5 fine sand :10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm thick, finished with a floating coat of neat cement complete as per standard design:

18.35.1 With common burnt clay F.P.S. (non modular) bricks of class designation 7.5

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one chamber MATERIAL: (i) Earth work in excavation including refilling and disposal of surplus earth 1.81X1.81X1.25 m				
2.8.1	Rate as per Item Number 2.8.1 of SH: Earth work	cum	4.10	130.80	536.28 (A)
2.25	Rate as per Item Number 2.25 of SH: Earth work	cum	4.10	83.80	343.58 (A)
	(ii) Cement concrete 1:5:10 (1 Cement: 5 fine sand : 10 graded stone aggregate 40mm nominal size) 1.81xl.81x0.1m=0.328cum. Say 0.33 cum.				
4.1.11	Rate as per Item Number 4.1.11 of SH: Concrete work	cum	0.33	3,087.45	1,018.86 (A)
	(iii) Second class brick work in cement mortar 1:4 (1 Cement: 4coarse sand) in foundations and plinth 5.72x0.23x1.00=1.316cum. Say 1.32 cum.				
6.1.1	Rate as per Item Number 6.1.1 of SH: Brick work	cum	1.32	3,508.25	4,630.89 (A)
	(iv) 12mm cement plaster 1:3 (1 Cement: 3 Coarse sand) finished with a floating coat of neat cement.				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	4.80mxl.00m=4.80sqm. 1.20 x 1.20m=1.44sqm. =6.42sqm.				
13.9.1	Rate as per Item Number 13.9.1 of SH: Finishing	sqm	6.42	173.10	1,111.30 (A)
	(v) C.I. surface box with chained lid				
1305	Surface box for sluice valve	each	1.00	185.00	185.00
	(vi)				
9999	Carriage of C.I. surface box	L.S.	8.06	1.49	12.01
	(vii) Cement concrete 1:2:4 (1 Cement: 2 Coarse sand ; 4 graded stone aggregate 20mm nominal size) in slab = 1.66mx 1.66mx0. 15m = 0.4133 cum. Less surface box 0.7854x0.156x0.156x0. 18 = (-)0.0034 cum. Total = 0.4099 cum. Say 0.41 cum.				
5.3	Rate as per Item Number 5.3 of SH: Reinforced cement concrete work	cum	0.41	5,494.55	2,252.77 (A)
	(viii) Less labour for not lifting the materilas upto floor five level				
0115	Coolie	day	-0.77	247.00	-190.19
	(ixi) Mild steel reinforcement for RCC slab steel @ 80kg/cum. 0.41cum.x80kg/cum. = 32.80kg.				
5.22.1	Rate as per Item Number 5.22.1 of SH: Reinforced cement concrete work	kilogram	32.80	56.75	1,861.40 (A)
	(x) Form work 1.20mxl.20m=1.44sqm.+ 5.72mx0.15m=0.86sqm. = 2.30sqm				
5.9.3	Rate as per Item Number 5.9.3 of SH: Reinforced cement concrete work	sqm	2.30	311.20	715.76 (A)
	(xi)				
9999	Sundries	L.S.	8.06	1.49	12.01
	TOTAL				12,489.67
	Add Water Charges @ 1% except on A i.e on (12,489.67 - 12,470.84 =) 18.83				0.19
	TOTAL				12,489.86
	Add CPOH @ 15% except on A i.e on (12,489.86 - 12,470.84 =) 19.02				2.85
	Cost of each				12,492.71
	Say				12,492.70

18.36 Constructing masonry chamber 60x60x75 cm inside, in brick work in cement mortar 1:4 (1 cement : 4 coarse sand) for fire hydrants, with C.I. surface box 350x350 mm top and 165 mm deep (inside) with chained lid and RCC top slab 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), i/c necessary excavation, foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm thick, finished with a floating coat of neat cement complete as per standard design :

18.36.1 With common burnt clay F.P.S. (non modular) bricks of class designation 7.5

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one chamber MATERIAL: (i) Earth work in excavation including refilling and disposal of surplus earth 1.21X1.21X1.00m =1.464 cum say 1.46cum				
2.8.1	Rate as per Item Number 2.8.1 of SH: Earth work	cum	1.46	130.80	190.97 (A)
2.25	Rate as per Item Number 2.25 of SH: Earth work (ii) Cement concrete 1:5:10 (1 Cement: 5 fine sand : 10 graded stone aggregate 40mm nominal size) 1.21x1.21x0.1m=0.146cum. Say 0.15 cum.	cum	1.46	83.80	122.35 (A)
4.1.11	Rate as per Item Number 4.1.11 of SH: Concrete work (iii) Second class brick work in cement mortar 1:4 (1 Cement: 4 coarse sand) in foundations and plinth 3.32x0.23x0.75=0.573cum. Say 0.57 cum.	cum	0.15	3,087.45	463.12 (A)
6.1.1	Rate as per Item Number 6.1.1 of SH: Brick work (iv) 12mm cement plaster 1:3 (1 Cement: 3 Coarse sand) finished with a floating coat of neat cement. 2.40x0.75=1.80sqm. 0.90mx0.90m=0.36sqm. Total =2.16sqm	cum	0.57	3,508.25	1,999.70 (A)
13.9.1	Rate as per Item Number 13.9.1 of SH: Finishing (v) C.I. surface box with chained lid	sqm	2.16	173.10	373.90 (A)
1305	Surface box for sluice valve (vi)	each	1.00	185.00	185.00
9999	Carriage of C.I. surface box (vii) Cement concrete 1:2:4 (1 Cement: 2 Coarse sand ; 4 graded stone aggregate 20mm nominal size) in slab = 1.06xl.06x0.15 = 0.1685 cum. Less surface box 0.61x0.41mx0.15m= (-)0.0375 cum. = 0.131 cum. Say 0.13 cum	L.S.	53.82	1.49	80.19
5.3	Rate as per Item Number 5.3 of SH: Reinforced cement concrete work (viii) Less labour for not lifting the materilas upto floor five level	cum	0.13	5,494.55	714.29 (A)
0115	Coolie (ixi) Mild steel reinforcement for RCC work etc. 0.131cumx80kg/cum. = 10.48kg	day	-0.24	247.00	-59.28
5.22.1	Rate as per Item Number 5.22.1 of SH: Reinforced cement concrete work (x) Form work 0.60mx0.60m=0.36sqm.+ 3.32mx0.15m = 0.50 sqm. =0.86 sqm	kilogram	10.48	56.75	594.74 (A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
5.9.3	Rate as per Item Number 5.9.3 of SH: Reinforced cement concrete work (xi)	sqm	0.86	311.20	267.63 (A)
9999	Sundries	L.S.	8.06	1.49	12.01
	TOTAL				4,944.62
	Add Water Charges @ 1% except on A i.e on (4,944.62 - 4,726.70 =) 217.92				2.18
	TOTAL				4,946.80
	Add CPOH @ 15% except on A i.e on (4,946.80 - 4,726.70 =) 220.10				33.02
	Cost of each				4,979.82
	Say				4,979.80

18.37 Constructing masonry chamber 60x45x50 cm inside, in brick work in cement mortar 1:4 (1 cement : 4 coarse sand) for water meter complete with C.I. double flap surface box 400x200x200 mm (inside) with locking arrangement and RCC top slab 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), i/c necessary excavation, foundation concrete 1:5:10 (1 cement : 5 fine sand :10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm thick, finished with a floating coat of neat cement complete as per standard design:

18.37.1 With common burnt clay F.P.S. (non modular) bricks of class designation 7.5

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one chamber MATERIAL: (i) Earth work in excavation including refilling and disposal of surplus earth 1.21X1.06X0.85m = 1.09 cum				
2.8.1	Rate as per Item Number 2.8.1 of SH: Earth work	cum	1.09	130.80	142.57 (A)
2.25	Rate as per Item Number 2.25 of SH: Earth work (ii) Cement concrete 1:5:10 (1 Cement: 5 fine sand : 10 graded stone aggregate 40mm nominal size) 1.21 x 1.06x0.1=0.128cum. Say 0.13 cum.	cum	1.09	83.80	91.34 (A)
4.1.11	Rate as per Item Number 4.1.11 of SH: Concrete work (iii) Second class brick work in cement mortar 1:4 (1 Cement: 4 coarse sand) in foundations and plinth 3.02x0.23x0.50=0.347cum. Say 0.35cum	cum	0.13	3,087.45	401.37 (A)
6.1.1	Rate as per Item Number 6.1.1 of SH: Brick work (iv) 12mm cement plaster 1:3 (1 Cement: 3 Coarse sand) finished with a floating coat of neat cement. 2.10x0.50=1.05sqm. 0.60x0.45=0.27sqm. Total = 1.32sqm	cum	0.35	3,508.25	1,227.89 (A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
13.9.1	Rate as per Item Number 13.9.1 of SH: Finishing (v) C.I. surface box 400x200x200mm (inside) with locking arrangement	sqm	1.32	173.10	228.49 (A)
1307	Surface box for water meter (vi)	each	1.00	205.00	205.00
9999	Carriage of C.I. surface box (vii) Cement concrete 1:2:4 (1 Cement: 2 Coarse sand ; 4 graded stone aggregate 20 mmnominal size) in slab = 1.06x0.91x0.25= 0.241 cum. Less surface box 0.42x0.22x0.2= (-)0.018 cum Total = 0.223 cum. Say 0.22 cum.	L.S.	13.52	1.49	20.14
5.3	Rate as per Item Number 5.3 of SH: Reinforced cement concrete work (viii) Less labour for not lifting the materilas upto floor five level	cum	0.22	5,494.55	1,208.80 (A)
0115	Coolie (ix) Mild steel reinforcement for RCC work steel @ 80kg/cum. 0.223 cum.x80kg/cum. = 17.84 kg	day	-0.41	247.00	-101.27
5.22.1	Rate as per Item Number 5.22.1 of SH: Reinforced cement concrete work (x) Form work 0.60mx0.45m=0.27sqm.+ 3.02mx0.25m=0.76sqm. = 1.03sqm	kilogram	17.84	56.75	1,012.42 (A)
5.9.3	Rate as per Item Number 5.9.3 of SH: Reinforced cement concrete work (xi)	sqm	1.03	311.20	320.54 (A)
9999	Sundries	L.S.	8.06	1.49	12.01
	TOTAL				4,769.30
	Add Water Charges @ 1% except on A i.e on (4,769.30 - 4,633.42 =) 135.88				1.36
	TOTAL				4,770.66
	Add CPOH @ 15% except on A i.e on (4,770.66 - 4,633.42 =) 137.24				20.59
	Cost of each				4,791.25
	Say				4,791.25

18.38 Painting G.I. pipes and fittings with synthetic enamel white paint with two coats over a ready mixed priming coat, both of approved quality for new work:

18.38.1 15 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metres MATERIAL: Perimeter = 0.0673 metre Area10x0.0673rn = 0.673sqm. Priming Coat				
13.50.3	Rate as per Item Number 13.50.3 of SH: Finishing	sqm	0.673	20.70	13.93 (A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Painting two coats excluding priming coat with white paint on new work				
13.61.1	Rate as per Item Number 13.61.1 of SH: Finishing	sqm	0.673	53.85	36.24 (A)
9999	Add for delay	L.S.	13.52	1.49	20.14
	TOTAL				70.31
	Add Water Charges @ 1% except on A i.e on (70.31 - 50.17 =) 20.14				0.20
	TOTAL				70.51
	Add CPOH @ 15% except on A i.e on (70.51 - 50.17 =) 20.34				3.05
	Cost of 10 metre				73.56
	Cost of 1 metre				7.36
	Say				7.35

18.38.2 20 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metres				
	MATERIAL:				
	Perimeter = 0.0845 metre				
	Area = 10x0.0845 sqm. = 0.845 sqm.				
	Priming Coat				
13.50.3	Rate as per Item Number 13.50.3 of SH: Finishing	sqm	0.845	20.70	17.49 (A)
	Painting two coats excluding priming coat with white paint on new work				
13.61.1	Rate as per Item Number 13.61.1 of SH: Finishing	sqm	0.845	53.85	45.50 (A)
9999	Add for delay	L.S.	13.52	1.49	20.14
	TOTAL				83.13
	Add Water Charges @ 1% except on A i.e on (83.13 - 62.99 =) 20.14				0.20
	TOTAL				83.33
	Add CPOH @ 15% except on A i.e on (83.33 - 62.99 =) 20.34				3.05
	Cost of 10 metre				86.38
	Cost of 1 metre				8.64
	Say				8.65

18.38.3 25 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
	Perimeter = 0.1061 metre				
	Area= 10x0.1061 sqm. = 1.061 sqm				
	Priming coat				
13.50.3	Rate as per Item Number 13.50.3 of SH: Finishing	sqm	1.061	20.70	21.96 (A)
	Painting two coats excluding priming coat with white paint on new work				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
13.61.1	Rate as per Item Number 13.61.1 of SH: Finishing	sqm	1.061	53.85	57.13 (A)
9999	Add for delay	L.S.	20.28	1.49	30.22
	TOTAL				109.31
	Add Water Charges @ 1% except on A i.e on (109.31 - 79.09 =) 30.22				0.30
	TOTAL				109.61
	Add CPOH @ 15% except on A i.e on (109.61 - 79.09 =) 30.52				4.58
	Cost of 10 metre				114.19
	Cost of 1 metre				11.42
	Say				11.40

18.38.4 32 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metres				
	MATERIAL:				
	Perimeter = 0.1334 metre				
	Area = 10x0.1334 sqm. = 1.334 sqm.				
	Priming Coat				
13.50.3	Rate as per Item Number 13.50.3 of SH: Finishing	sqm	1.334	20.70	27.61 (A)
	Painting two coats excluding priming coat with white paint on new work				
13.61.1	Rate as per Item Number 13.61.1 of SH: Finishing	sqm	1.334	53.85	71.84 (A)
9999	Add for delay	L.S.	20.28	1.49	30.22
	TOTAL				129.67
	Add Water Charges @ 1% except on A i.e on (129.67 - 99.45 =) 30.22				0.30
	TOTAL				129.97
	Add CPOH @ 15% except on A i.e on (129.97 - 99.45 =) 30.52				4.58
	Cost of 10 metre				134.55
	Cost of 1 metre				13.46
	Say				13.45

18.38.5 40 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
	Perimeter = 0.1520 metre				
	Area = 10x0.1520 sqm.= 1.520 sqm.				
	Priming Coat				
13.50.3	Rate as per Item Number 13.50.3 of SH: Finishing	sqm	1.52	20.70	31.46 (A)
	Painting two coats excluding priming coat with white paint on new work				
13.61.1	Rate as per Item Number 13.61.1 of SH: Finishing	sqm	1.52	53.85	81.85 (A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	(a)add for delay	L.S.	26.91	1.49	40.10
	TOTAL				153.41
	Add Water Charges @ 1% except on A i.e on (153.41 - 113.31 =) 40.10				0.40
	TOTAL				153.81
	Add CPOH @ 15% except on A i.e on (153.81 - 113.31 =) 40.50				6.08
	Cost of 10 metre				159.89
	Cost of 1 metre				15.99
	Say				16.00

18.38.6 50 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
	Perimeter = 0.1894 metre				
	Area= 10x0.1894 sqm. = 1.894 sqm.				
	Priming Coat				
13.50.3	Rate as per Item Number 13.50.3 of SH: Finishing	sqm	1.894	20.70	39.21 (A)
	Painting two coats excluding priming coat with white paint on new work				
13.61.1	Rate as per Item Number 13.61.1 of SH: Finishing	sqm	1.894	53.85	101.99 (A)
9999	Add for delay	L.S.	26.91	1.49	40.10
	TOTAL				181.30
	Add Water Charges @ 1% except on A i.e on (181.30 - 141.20 =) 40.10				0.40
	TOTAL				181.70
	Add CPOH @ 15% except on A i.e on (181.70 - 141.20 =) 40.50				6.08
	Cost of 10 metre				187.78
	Cost of 1 metre				18.78
	Say				18.80

18.39 Repainting G.I. pipes and fittings with synthetic enamel white paint with one coat of approved quality:

18.39.1 15 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
	Painting one coat with white paint on old work				
14.54.1	Rate as per Item Number 14.54.1 of SH: Repairs to buildings	sqm	0.673	35.20	23.69 (A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Add for delay	L.S.	8.06	1.49	12.01
	TOTAL				35.70
	Add Water Charges @ 1% except on A i.e on (35.70 - 23.69 =) 12.01				0.12
	TOTAL				35.82
	Add CPOH @ 15% except on A i.e on (35.82 - 23.69 =) 12.13				1.82
	Cost of 10 metre				37.64
	Cost of 1 metre				3.76
	Say				3.75

18.39.2 20 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
	Painting one coat with white paint on old work				
14.54.1	Rate as per Item Number 14.54.1 of SH: Repairs to buildings	sqm	0.845	35.20	29.74 (A)
9999	Add for delay	L.S.	8.06	1.49	12.01
	TOTAL				41.75
	Add Water Charges @ 1% except on A i.e on (41.75 - 29.74 =) 12.01				0.12
	TOTAL				41.87
	Add CPOH @ 15% except on A i.e on (41.87 - 29.74 =) 12.13				1.82
	Cost of 10 metre				43.69
	Cost of 1 metre				4.37
	Say				4.35

18.39.3 25 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
	Painting one coat with white paint on old work				
14.54.1	Rate as per Item Number 14.54.1 of SH: Repairs to buildings	sqm	1.061	35.20	37.35 (A)
9999	Add for delay	L.S.	10.79	1.49	16.08
	TOTAL				53.43
	Add Water Charges @ 1% except on A i.e on (53.43 - 37.35 =) 16.08				0.16
	TOTAL				53.59
	Add CPOH @ 15% except on A i.e on (53.59 - 37.35 =) 16.24				2.44
	Cost of 10 metre				56.03
	Cost of 1 metre				5.60
	Say				5.60

18.39.4 32 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre MATERIAL: Painting one coat with white paint on old work				
14.54.1	Rate as per Item Number 14.54.1 of SH: Repairs to buildings	sqm	1.334	35.20	46.96 (A)
9999	Add for delay	L.S.	10.92	1.49	16.27
	TOTAL				63.23
	Add Water Charges @ 1% except on A i.e on (63.23 - 46.96 =) 16.27				0.16
	TOTAL				63.39
	Add CPOH @ 15% except on A i.e on (63.39 - 46.96 =) 16.43				2.46
	Cost of 10 metre				65.85
	Cost of 1 metre				6.59
	Say				6.60

18.39.5 40 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre MATERIAL: Painting one coat with white paint on old work				
14.54.1	Rate as per Item Number 14.54.1 of SH: Repairs to buildings	sqm	1.52	35.20	53.50 (A)
9999	Add for delay	L.S.	13.52	1.49	20.14
	TOTAL				73.64
	Add Water Charges @ 1% except on A i.e on (73.64 - 53.50 =) 20.14				0.20
	TOTAL				73.84
	Add CPOH @ 15% except on A i.e on (73.84 - 53.50 =) 20.34				3.05
	Cost of 10 metre				76.89
	Cost of 1 metre				7.69
	Say				7.70

18.39.6 50 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre MATERIAL: Painting one coat with white paint on old work				
14.54.1	Rate as per Item Number 14.54.1 of SH: Repairs to buildings	sqm	1.894	35.20	66.67 (A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Add for delay	L.S.	13.52	1.49	20.14
	TOTAL				86.81
	Add Water Charges @ 1% except on A i.e on (86.81 - 66.67 =) 20.14				0.20
	TOTAL				87.01
	Add CPOH @ 15% except on A i.e on (87.01 - 66.67 =) 20.34				3.05
	Cost of 10 metre				90.06
	Cost of 1 metre				9.01
	Say				9.00

18.40 Painting G.I. pipes and fittings with two coats of anti-corrosive bitumastic paint of approved quality :

18.40.1 15 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
	Painting with anti-corrosive paint two coats				
13.65.1	Rate as per Item Number 13.65.1 of SH: Finishing	sqm	0.673	44.55	29.98 (A)
9999	Add for delay	L.S.	8.06	1.49	12.01
	TOTAL				41.99
	Add Water Charges @ 1% except on A i.e on (41.99 - 29.98 =) 12.01				0.12
	TOTAL				42.11
	Add CPOH @ 15% except on A i.e on (42.11 - 29.98 =) 12.13				1.82
	Cost of 10 metre				43.93
	Cost of 1 metre				4.39
	Say				4.40

18.40.2 20 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
	Painting with anti-corrosive paint two coats				
13.65.1	Rate as per Item Number 13.65.1 of SH: Finishing	sqm	0.845	44.55	37.64 (A)
9999	Add for delay	L.S.	8.06	1.49	12.01
	TOTAL				49.65
	Add Water Charges @ 1% except on A i.e on (49.65 - 37.64 =) 12.01				0.12
	TOTAL				49.77
	Add CPOH @ 15% except on A i.e on (49.77 - 37.64 =) 12.13				1.82
	Cost of 10 metre				51.59
	Cost of 1 metre				5.16
	Say				5.15

18.40.3 25 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
	Painting with anti-corrosive paint two coats				
13.65.1	Rate as per Item Number 13.65.1 of SH: Finishing	sqm	1.061	44.55	47.27 (A)
9999	Add for delay	L.S.	10.79	1.49	16.08
	TOTAL				63.35
	Add Water Charges @ 1% except on A i.e on (63.35 - 47.27 =) 16.08				0.16
	TOTAL				63.51
	Add CPOH @ 15% except on A i.e on (63.51 - 47.27 =) 16.24				2.44
	Cost of 10 metre				65.95
	Cost of 1 metre				6.60
	Say				6.60

18.40.4 32 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
	Painting with anti-corrosive paint two coats				
13.65.1	Rate as per Item Number 13.65.1 of SH: Finishing	sqm	1.334	44.55	59.43 (A)
9999	Add for delay	L.S.	10.79	1.49	16.08
	TOTAL				75.51
	Add Water Charges @ 1% except on A i.e on (75.51 - 59.43 =) 16.08				0.16
	TOTAL				75.67
	Add CPOH @ 15% except on A i.e on (75.67 - 59.43 =) 16.24				2.44
	Cost of 10 metre				78.11
	Cost of 1 metre				7.81
	Say				7.80

18.40.5 40 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
	Painting with anti-corrosive paint two coats				
13.65.1	Rate as per Item Number 13.65.1 of SH: Finishing	sqm	1.52	44.55	67.72 (A)
9999	Add for delay	L.S.	12.22	1.49	18.21
	TOTAL				85.93
	Add Water Charges @ 1% except on A i.e on (85.93 - 67.72 =) 18.21				0.18
	TOTAL				86.11
	Add CPOH @ 15% except on A i.e on (86.11 - 67.72 =) 18.39				2.76
	Cost of 10 metre				88.87
	Cost of 1 metre				8.89
	Say				8.90

18.40.6 50 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
	Painting with anti-corrosive paint two coats				
13.65.1	Rate as per Item Number 13.65.1 of SH: Finishing	sqm	1.894	44.55	84.38 (A)
9999	Add for delay	L.S.	12.22	1.49	18.21
	TOTAL				102.59
	Add Water Charges @ 1% except on A i.e on (102.59 - 84.38 =) 18.21				0.18
	TOTAL				102.77
	Add CPOH @ 15% except on A i.e on (102.77 - 84.38 =) 18.39				2.76
	Cost of 10 metre				105.53
	Cost of 1 metre				10.55
	Say				10.55

18.40.7 65 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
	Painting with anti-corrosive paint two coats				
13.65.1	Rate as per Item Number 13.65.1 of SH: Finishing	sqm	2.387	44.55	106.34 (A)
9999	Add for delay	L.S.	13.52	1.49	20.14
	TOTAL				126.48
	Add Water Charges @ 1% except on A i.e on (126.48 - 106.34 =) 20.14				0.20
	TOTAL				126.68
	Add CPOH @ 15% except on A i.e on (126.68 - 106.34 =) 20.34				3.05
	Cost of 10 metre				129.73
	Cost of 1 metre				12.97
	Say				12.95

18.40.8 80 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
	Painting with anti-corrosive paint two coats				
13.65.1	Rate as per Item Number 13.65.1 of SH: Finishing	sqm	2.796	44.55	124.56 (A)
9999	Add for delay	L.S.	14.82	1.49	22.08
	TOTAL				146.64
	Add Water Charges @ 1% except on A i.e on (146.64 - 124.56 =) 22.08				0.22
	TOTAL				146.86
	Add CPOH @ 15% except on A i.e on (146.86 - 124.56 =) 22.30				3.34
	Cost of 10 metre				150.20
	Cost of 1 metre				15.02
	Say				15.00

18.41 Providing and filling sand of grading zone V or coarser grade, all- round the G.I. pipes in external work.

18.41.1 15 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for sand filling alround 15mm dia pipe 10 m long MATERIAL: Width of sand filling = 300mm Depth of sand filling under the pipe=75mm+ Above the pipe = 150mm+ Max. external dia of pipe = 21.8mm = 246.8mm say 247mm Quantity of sand = 10x0.30x0.247 = 0.744 cum. Less for pipe = (3.142 x 0.0218^2 / 4)x10 = (-)0.004 cum. = 0.74 cum				
18.41.1A	Rate as per Item Number 18.41.1A of SH: Water supply	cum	0.74	739.90	547.53 (A)
	TOTAL				547.53
	Cost of 10 metre				547.53
	Cost of 1 metre				54.75
	Say				54.75

18.41.1A Sub analysis item for sand filling component

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum sand MATERIAL:				
6501	Sand zone V (Jamuna)	cum	1.00	500.00	500.00
2335	Carriage of Jamuna sand	cum	1.00	87.60	87.60
	LABOUR:				
0114	Beldar	day	0.09	247.00	22.23
0115	Coolie	day	0.11	247.00	27.17
	TOTAL				637.00
	Add Water Charges @ 1%				6.37
	TOTAL				643.37
	Add CPOH @ 15%				96.51
	Cost of 1 cum				739.88
	Say				739.90

18.41.2 20 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for sand filling alround 20mm dia pipe 10 m long MATERIAL: Width of sand filling = 300mm Depth of sand filling under the pipe=75mm+ Above the pipe = 150mm+ Max. external dia of pipe = 27.3mm = 252.3 Say 252mm				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Quantity of sand = 10x0.30x0.252 = 0.756 cum. Less for pipe =(3.142 x 0.0273^2 / 4)x10 = (-)0.006cum. = 0.750 cum				
18.41.1A	Rate as per Item Number 18.41.1A of SH: Water supply	cum	0.75	739.90	554.92 (A)
	TOTAL				554.92
	Cost of 10 metre				554.92
	Cost of 1 metre				55.49
	Say				55.50

18.41.3 25 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for sand filling alround 25mm dia pipe 10 m long MATERIAL: Width of sand filling = 300mm Depth of sand filling under the pipe=75mm Above the pipe = 150mm Max. external dia of pipe = 34.2mm = 259.2 Say 259mm Quantity of sand = 10x0.30x0.259 = 0.777 cum. Less for pipe (3.142 x 0.0342^2 / 4) x 10 = (-)0.009cum. = 0.768 Say 0.77 cum				
18.41.1A	Rate as per Item Number 18.41.1A of SH: Water supply	cum	0.77	739.90	569.72 (A)
	TOTAL				569.72
	Cost of 10 metre				569.72
	Cost of 1 metre				56.97
	Say				56.95

18.41.4 32 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for sand filling alround 32mm dia pipe 10 m long MATERIAL: Width of sand filling = 300mm Depth of sand filling under the pipe=75mm+ Above the pipe = 150mm+ Max. external dia of pipe = 42.9mm = 267.9 Say 268mm Quantity of sand = 10x0.30x0.268 =0.804 cum Less for pipe (3.142 x 0.0429^2 / 4)x 10 = (-)0.014cum. = 0.790 Say 0.79 cum.				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
18.41.1A	Rate as per Item Number 18.41.1A of SH: Water supply	cum	0.79	739.90	584.52 (A)
	TOTAL				584.52
	Cost of 10 metre				584.52
	Cost of 1 metre				58.45
	Say				58.45

18.41.5 40 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for sand filling alround 40mm dia pipe 10 m long MATERIAL: Width of sand filling = 300mm Depth of sand filling under the pipe=75mm+ Above the pipe = 150mm+ Max. external dia of pipe = 48.8mm = 273.8 Say 274mm Quantity of sand = 10x0.30x0.274 = 0.82cum Less for pipe (3.142 x 0.0488^2 / 4)x10 = (-)0.014cum. = 0.801 Say 0.80 cum				
18.41.1A	Rate as per Item Number 18.41.1A of SH: Water supply	cum	0.80	739.90	591.92 (A)
	TOTAL				591.92
	Cost of 10 metre				591.92
	Cost of 1 metre				59.19
	Say				59.20

18.41.6 50 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for sand filling alround 50mm dia pipe 10 m long MATERIAL: Width of sand filling = 300mm Depth of sand filling under the pipe=75mm+ Above the pipe =150mm+ Max. external dia of pipe = 60.8mm = 285.8 Say 286mm Quantity of sand =10x0.30x0.286 =0.858 cum Less for pipe (3.142 x 0.0608^2 / 4)x10 = (-)0.029cum. = 0.829 Say 0.83 cum				
18.41.1A	Rate as per Item Number 18.41.1A of SH: Water supply	cum	0.83	739.90	614.12 (A)
	TOTAL				614.12
	Cost of 10 metre				614.12
	Cost of 1 metre				61.41
	Say				61.40

18.41.7 65 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for sand filling alround 65mm dia pipe 10 m long MATERIAL: Width of sand filling = 300mm Depth of sand filling under the pipe=75mm+ Above the pipe = 150mm+ Max. external dia of pipe = 76.6mm = 301.6 Say 302mm Quantity of sand =10x0.45x0.302 =1.359cum Less for pipe (3.142 x 0.0766^2 / 4)x10 =(-)0.046cum. = 1.313 Say 1.31 cum				
18.41.1A	Rate as per Item Number 18.41.1A of SH: Water supply	cum	1.31	739.90	969.27 (A)
	TOTAL				969.27
	Cost of 10 metre				969.27
	Cost of 1 metre				96.93
	Say				96.95

18.41.8 80 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for sand filling alround 80mm dia pipe 10 m long MATERIAL: Width of sand filling = 300mm Depth of sand filling under the pipe=75mm+ Above the pipe = 150mm+ Max. external dia of pipe = 89.9mm = 314.9 Say 315mm Quantity of sand = 10x0.45x0.315= 1.418 cum Less for pipe (3.142 x 0.0899^2 / 4)x10 = (-)0.0640cum. = 1.354 Say 1.35 cum				
18.41.1A	Rate as per Item Number 18.41.1A of SH: Water supply	cum	1.35	739.90	998.86 (A)
	TOTAL				998.86
	Cost of 10 metre				998.86
	Cost of 1 metre				99.89
	Say				99.90

18.41.9 100 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for sand filling alround 100mm dia pipe 10 m long Depth of sand filling under the pipe=75mm+ Above the pipe = 150mm+				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Max. external dia of pipe = 115mm = 340mm Quantity of sand = 10x0.45x0.34 = 1.53 cum Less for pipe (3.142 x 0.0115^2 / 4)x10 = (-)0.10 cum. = 1.43 cum				
18.41.1A	Rate as per Item Number 18.41.1A of SH: Water supply	cum	1.43	739.90	1,058.06 (A)
	TOTAL				1,058.06
	Cost of 10 metre				1,058.06
	Cost of 1 metre				105.81
	Say				105.80

18.41.10 150 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for sand filling alround 150mm dia pipe 10 m long Width of sand filling = 300mm Depth of sand filling under the pipe 75mm+ Above the pipe = 150mm+ Max. external dia of pipe = 166.5mm = 391.50mm Say 0.392m Quantity of sand = 10x0.60x0.392 = 2.35 cum Less for pipe (3.142 x 0.0167^2 / 4)x10 = (-)0.22cum. = 2.13 cum				
18.41.1A	Rate as per Item Number 18.41.1A of SH: Water supply	cum	2.13	739.90	1,575.99 (A)
	TOTAL				1,575.99
	Cost of 10 metre				1,575.99
	Cost of 1 metre				157.60
	Say				157.60

18.42 Boring with 100 mm diameter casing pipe for hand pump / tube well in all soils except ordinary hard rocks requiring blasting, including removing the casing pipe after the hand pump/ tube well is lowered and tested:

18.42.1 Upto 6 metres depth

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	LABOUR: For boring and removing the pipe-				
0116	Fitter (grade 1)	day	0.50	301.00	150.50
0114	Beldar	day	3.00	247.00	741.00
0010	Hire charges of Derrick monkey rope and other accessories Depreciation @ 2% of the cost of casing pipe 6metre @ Rs. per metre	day	0.50	775.00	387.50

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1472	Casing pipe 100 mm dia	metre	0.12	335.00	40.20
9999	Sundries	L.S.	13.52	1.49	20.14
	TOTAL				1,339.34
	Add Water Charges @ 1%				13.39
	TOTAL				1,352.73
	Add CPOH @ 15%				202.91
	Cost of 6 metre				1,555.64
	Cost of 1 metre				259.27
	Say				259.25

18.42.2 Beyond 6 m and upto 12 m depth

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 6 metre				
	LABOUR:				
	For boring and removing the pipe-				
0116	Fitter (grade 1)	day	0.62	301.00	186.62
0114	Beldar	day	3.50	247.00	864.50
0010	Hire charges of Derrick monkey rope and other accessories	day	0.62	775.00	480.50
	Depreciation @ 2% of the cost of casing pipe 6metre @ Rs. per metre				
1472	Casing pipe 100 mm dia	metre	0.12	335.00	40.20
9999	Sundries	L.S.	13.52	1.49	20.14
	TOTAL				1,591.96
	Add Water Charges @ 1%				15.92
	TOTAL				1,607.88
	Add CPOH @ 15%				241.18
	Cost of 6 metre				1,849.06
	Cost of 1 metre				308.18
	Say				308.20

18.42.3 Beyond 12 m and upto 18 m depth

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 6 metre				
	LABOUR:				
	For boring and removing the pipe-				
0116	Fitter (grade 1)	day	0.75	301.00	225.75
0114	Beldar	day	4.00	247.00	988.00
0010	Hire charges of Derrick monkey rope and other accessories	day	0.75	775.00	581.25
	Depreciation @ 2% of the cost of casing pipe 6metre @ Rs. per metre				
1472	Casing pipe 100 mm dia	metre	0.12	335.00	40.20
9999	Sundries	L.S.	13.52	1.49	20.14
	TOTAL				1,855.34
	Add Water Charges @ 1%				18.55
	TOTAL				1,873.89
	Add CPOH @ 15%				281.08
	Cost of 6 metre				2,154.97
	Cost of 1 metre				359.16
	Say				359.15

18.43 Providing and placing in position filters of 40 mm diameter G.I. pipe with brass strainer of approved quality.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one strainer 1.5 long				
	MATERIAL:				
1882	Strainer brass 40 mm dia 1.5 metre long	each	1.00	495.00	495.00
9999	Carriage of site	L.S.	13.52	1.49	20.14
	LABOUR:				
0116	Fitter (grade 1)	day	0.17	301.00	51.17
0114	Beldar	day	0.17	247.00	41.99
9999	Sundries including hamp white lead etc.	L.S.	7.15	1.49	10.65
	TOTAL				618.95
	Add Water Charges @ 1%				6.19
	TOTAL				625.14
	Add CPOH @ 15%				93.77
	Cost of 1.5 metre				718.91
	Cost of 1 metre				479.27
	Say				479.25

18.44 Providing and fixing to filter and lowering to proper levels 40 mm G.I. pipe for tube well including cleaning and priming the tube well.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for a depth of 10 metre				
	MATERIAL:				
1549	G.I. pipes 40 mm dia	metre	10.20	202.00	2,060.40
	Carriage of 40mm pipe(36.5kg)				
	Added 2% wastage and fittings				
2271	Carriage of G.I. pipes below 100 mm dia	tonne	0.03723	77.87	2.90
9999	White lead, hamp and oil etc.	L.S.	6.76	1.49	10.07
0116	Fitter (grade 1)	day	0.33	301.00	99.33
0114	Beldar	day	0.75	247.00	185.25
9999	Sundries	L.S.	7.25	1.49	10.80
	TOTAL				2,368.75
	Add Water Charges @ 1%				23.69
	TOTAL				2,392.44
	Add CPOH @ 15%				358.87
	Cost of 10 metre				2,751.31
	Cost of 1 metre				275.13
	Say				275.15

18.45 Providing and placing in position hand pump of approved quality for 40 mm diameter G.I. pipe complete with all accessories.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 pump				
	MATERIAL:				
1693	S.C.I. hand pump	each	1.00	550.00	550.00
9999	Carriage	L.S.	13.52	1.49	20.14
	LABOUR:				
0116	Fitter (grade 1)	day	0.10	301.00	30.10

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Beldar	day	0.10	247.00	24.70
9999	Sundries	L.S.	4.42	1.49	6.59
	TOTAL				631.53
	Add Water Charges @ 1%				6.32
	TOTAL				637.85
	Add CPOH @ 15%				95.68
	Cost of each				733.53
	Say				733.55

18.46 Providing and fixing G.I. Union in G.I. pipe including cutting and threading the pipe and making long screws etc. complete (New work):

18.46.1 15 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1641	G.I. Union 15 mm nominal bore	each	1.00	40.00	40.00
9999	Carriage of materials and sundries	L.S.	1.82	1.49	2.71
	LABOUR:				
0116	Fitter (grade 1)	day	0.11	301.00	33.11
0114	Beldar	day	0.11	247.00	27.17
	TOTAL				102.99
	Add Water Charges @ 1%				1.03
	TOTAL				104.02
	Add CPOH @ 15%				15.60
	Cost of each				119.62
	Say				119.60

18.46.2 20 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1642	G.I. Union 20 mm nominal bore	each	1.00	60.00	60.00
9999	Carriage of materials and sundries	L.S.	1.82	1.49	2.71
	LABOUR:				
0116	Fitter (grade 1)	day	0.11	301.00	33.11
0114	Beldar	day	0.11	247.00	27.17
	TOTAL				122.99
	Add Water Charges @ 1%				1.23
	TOTAL				124.22
	Add CPOH @ 15%				18.63
	Cost of each				142.85
	Say				142.85

18.46.3 25 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1643	G.I. Union 25 mm nominal bore	each	1.00	70.00	70.00
9999	Carriage of materials and sundries	L.S.	1.82	1.49	2.71
	LABOUR:				
0116	Fitter (grade 1)	day	0.11	301.00	33.11
0114	Beldar	day	0.11	247.00	27.17
	TOTAL				132.99
	Add Water Charges @ 1%				1.33
	TOTAL				134.32
	Add CPOH @ 15%				20.15
	Cost of each				154.47
	Say				154.45

18.46.4 32 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1644	G.I. Union 32 mm nominal bore	each	1.00	100.00	100.00
9999	Carriage of materials and sundries	L.S.	1.82	1.49	2.71
	LABOUR:				
0116	Fitter (grade 1)	day	0.11	301.00	33.11
0114	Beldar	day	0.11	247.00	27.17
	TOTAL				162.99
	Add Water Charges @ 1%				1.63
	TOTAL				164.62
	Add CPOH @ 15%				24.69
	Cost of each				189.31
	Say				189.30

18.46.5 40 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1645	G.I. Union 40 mm nominal bore	each	1.00	135.00	135.00
9999	Carriage of materials and sundries	L.S.	1.82	1.49	2.71
	LABOUR:				
0116	Fitter (grade 1)	day	0.11	301.00	33.11
0114	Beldar	day	0.11	247.00	27.17
	TOTAL				197.99
	Add Water Charges @ 1%				1.98
	TOTAL				199.97
	Add CPOH @ 15%				30.00
	Cost of each				229.97
	Say				229.95

18.46.6 50 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1646	G.I. Union 50 mm nominal bore	each	1.00	180.00	180.00
9999	Carriage of materials and sundries	L.S.	1.82	1.49	2.71
	LABOUR:				
0116	Fitter (grade 1)	day	0.15	301.00	45.15
0114	Beldar	day	0.15	247.00	37.05
	TOTAL				264.91
	Add Water Charges @ 1%				2.65
	TOTAL				267.56
	Add CPOH @ 15%				40.13
	Cost of each				307.69
	Say				307.70

18.46.7 65 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1647	G.I. Union 65 mm nominal bore	each	1.00	390.00	390.00
9999	Carriage of materials and sundries	L.S.	1.82	1.49	2.71
	LABOUR:				
0116	Fitter (grade 1)	day	0.15	301.00	45.15
0114	Beldar	day	0.15	247.00	37.05
	TOTAL				474.91
	Add Water Charges @ 1%				4.75
	TOTAL				479.66
	Add CPOH @ 15%				71.95
	Cost of each				551.61
	Say				551.60

18.46.8 80 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1648	G.I. Union 80 mm nominal bore	each	1.00	480.00	480.00
9999	Carriage of materials and sundries	L.S.	1.82	1.49	2.71
	LABOUR:				
0116	Fitter (grade 1)	day	0.15	301.00	45.15
0114	Beldar	day	0.15	247.00	37.05
	TOTAL				564.91
	Add Water Charges @ 1%				5.65
	TOTAL				570.56
	Add CPOH @ 15%				85.58
	Cost of each				656.14
	Say				656.15

18.47 Providing and fixing G.I. Union in existing G.I. pipe line, cutting and threading the pipe and making long screws, including excavation, refilling the earth or cutting of wall and making good the same complete wherever required:

18.47.1 15 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1641	G.I. Union 15 mm nominal bore	each	1.00	40.00	40.00
9999	Carriage of materials and sundries	L.S.	1.82	1.49	2.71
	LABOUR:				
0116	Fitter (grade 1)	day	0.33	301.00	99.33
0114	Beldar	day	0.33	247.00	81.51
	TOTAL				223.55
	Add Water Charges @ 1%				2.24
	TOTAL				225.79
	Add CPOH @ 15%				33.87
	Cost of each				259.66
	Say				259.65

18.47.2 20 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1642	G.I. Union 20 mm nominal bore	each	1.00	60.00	60.00
9999	Carriage of materials and sundries	L.S.	1.82	1.49	2.71
	LABOUR:				
0116	Fitter (grade 1)	day	0.33	301.00	99.33
0114	Beldar	day	0.33	247.00	81.51
	TOTAL				243.55
	Add Water Charges @ 1%				2.44
	TOTAL				245.99
	Add CPOH @ 15%				36.90
	Cost of each				282.89
	Say				282.90

18.47.3 25 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1643	G.I. Union 25 mm nominal bore	each	1.00	70.00	70.00
9999	Carriage of materials and sundries	L.S.	1.82	1.49	2.71
	LABOUR:				
0116	Fitter (grade 1)	day	0.33	301.00	99.33
0114	Beldar	day	0.33	247.00	81.51
	TOTAL				253.55
	Add Water Charges @ 1%				2.54
	TOTAL				256.09
	Add CPOH @ 15%				38.41
	Cost of each				294.50
	Say				294.50

18.47.4 32 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1644	G.I. Union 32 mm nominal bore	each	1.00	100.00	100.00
9999	Carriage of materials and sundries	L.S.	1.82	1.49	2.71
	LABOUR:				
0116	Fitter (grade 1)	day	0.33	301.00	99.33
0114	Beldar	day	0.33	247.00	81.51
	TOTAL				283.55
	Add Water Charges @ 1%				2.84
	TOTAL				286.39
	Add CPOH @ 15%				42.96
	Cost of each				329.35
	Say				329.35

18.47.5 40 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1645	G.I. Union 40 mm nominal bore	each	1.00	135.00	135.00
9999	Carriage of materials and sundries	L.S.	1.82	1.49	2.71
	LABOUR:				
0116	Fitter (grade 1)	day	0.33	301.00	99.33
0114	Beldar	day	0.33	247.00	81.51
	TOTAL				318.55
	Add Water Charges @ 1%				3.19
	TOTAL				321.74
	Add CPOH @ 15%				48.26
	Cost of each				370.00
	Say				370.00

18.47.6 50 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1646	G.I. Union 50 mm nominal bore	each	1.00	180.00	180.00
9999	Carriage of materials and sundries	L.S.	1.82	1.49	2.71
	LABOUR:				
0116	Fitter (grade 1)	day	0.45	301.00	135.45
0114	Beldar	day	0.45	247.00	111.15
	TOTAL				429.31
	Add Water Charges @ 1%				4.29
	TOTAL				433.60
	Add CPOH @ 15%				65.04
	Cost of each				498.64
	Say				498.65

18.47.7 65 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1647	G.I. Union 65 mm nominal bore	each	1.00	390.00	390.00
9999	Carriage of materials and sundries	L.S.	1.82	1.49	2.71
	LABOUR:				
0116	Fitter (grade 1)	day	0.45	301.00	135.45
0114	Beldar	day	0.45	247.00	111.15
	TOTAL				639.31
	Add Water Charges @ 1%				6.39
	TOTAL				645.70
	Add CPOH @ 15%				96.86
	Cost of each				742.56
	Say				742.55

18.47.8 80 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
1648	G.I. Union 80 mm nominal bore	each	1.00	480.00	480.00
9999	Carriage of materials and sundries	L.S.	1.82	1.49	2.71
	LABOUR:				
0116	Fitter (grade 1)	day	0.45	301.00	135.45
0114	Beldar	day	0.45	247.00	111.15
	TOTAL				729.31
	Add Water Charges @ 1%				7.29
	TOTAL				736.60
	Add CPOH @ 15%				110.49
	Cost of each				847.09
	Say				847.10

18.48 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.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 500 litres tank one no.				
	MATERIAL:				
1649	Polyethylene water storage tank with cover and suitable locking arrangement	per litre	500.00	4.45	2,225.00
9999	Carriage to site	L.S.	179.40	1.49	267.31
9999	Placing at terrace	L.S.	89.70	1.49	133.65
	TOTAL				2,625.96
	Add Water Charges @ 1%				26.26
	TOTAL				2,652.22
	Add CPOH @ 15%				397.83
	Cost of 500 litres				3,050.05
	Cost per litre				6.10
	Say				6.10

18.49 Providing and fixing C.P. brass bib cock of approved quality conforming to IS:8931.

18.49.1 15 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7257	C.P. Brass bibcock 15 mm	each	1.00	325.00	325.00
9999	Carriage of materials and fixing charges	L.S.	11.57	1.49	17.24
	TOTAL				342.24
	Add Water Charges @ 1%				3.42
	TOTAL				345.66
	Add CPOH @ 15%				51.85
	Cost of each				397.51
	Say				397.50

18.50 Providing and fixing C.P. brass long nose bib cock of approved quality conforming to IS standards and weighing not less than 810 gms.

18.50.1 15 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7258	C.P. Brass long nose bibcock 15 mm	each	1.00	330.00	330.00
9999	Carriage of materials and fixing charges	L.S.	16.25	1.49	24.21
	TOTAL				354.21
	Add Water Charges @ 1%				3.54
	TOTAL				357.75
	Add CPOH @ 15%				53.66
	Cost of each				411.41
	Say				411.40

18.51 Providing and fixing C.P. brass long body bib cock of approved quality conforming to IS standards and weighing not less than 690 gms.

18.51.1 15 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7259	C.P. Brass long body bibcock 15 mm	each	1.00	350.00	350.00
9999	Carriage of materials and fixing charges	L.S.	13.91	1.49	20.73
	TOTAL				370.73
	Add Water Charges @ 1%				3.71
	TOTAL				374.44
	Add CPOH @ 15%				56.17
	Cost of each				430.61
	Say				430.60

18.52 Providing and fixing C.P. brass stop cock (concealed) of standard design and of approved make conforming to IS:8931.

18.52.1 15 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7260	C.P. Brass stop cock (concealed) 15 mm	each	1.00	350.00	350.00
9999	Carriage of materials and fixing charges	L.S.	11.57	1.49	17.24
	TOTAL				367.24
	Add Water Charges @ 1%				3.67
	TOTAL				370.91
	Add CPOH @ 15%				55.64
	Cost of each				426.55
	Say				426.55

18.53 Providing and fixing C.P. brass angle valve for basin mixer and geyser points of approved quality conforming to IS:8931

18.53.1 15 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7261	C.P. Brass angle valve 15 mm	each	1.00	370.00	370.00
9999	Carriage and fixing changes	L.S.	11.31	1.49	16.85
	TOTAL				386.85
	Add Water Charges @ 1%				3.87
	TOTAL				390.72
	Add CPOH @ 15%				58.61
	Cost of each				449.33
	Say				449.35

18.54 Providing and fixing PTMT bib cock of approved quality and colour.

18.54.1 15 mm nominal bore, 86 mm long, weighing not less than 88 gms

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7400	15 mm PTMT bib cock	each	1.00	100.00	100.00
9999	Carriage of materials and fixing charges	L.S.	8.06	1.49	12.01
	TOTAL				112.01
	Add Water Charges @ 1%				1.12
	TOTAL				113.13
	Add CPOH @ 15%				16.97
	Cost of each				130.10
	Say				130.10

18.54.2 15 mm nominal bore, 122 mm long, weighing not less than 99 gms

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7401	15 mm PTMT bib cock with flange (fancy)	each	1.00	140.00	140.00
9999	Carriage of materials and fixing charges	L.S.	8.06	1.49	12.01
	TOTAL				152.01
	Add Water Charges @ 1%				1.52
	TOTAL				153.53
	Add CPOH @ 15%				23.03
	Cost of each				176.56
	Say				176.55

18.54.3 15 mm nominal bore, 165 mm long, weighing not less than 110 gms

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7402	15 mm PTMT bib-cock long body with flange	each	1.00	160.00	160.00
9999	Carriage of materials and fixing charges	L.S.	8.06	1.49	12.01
	TOTAL				172.01
	Add Water Charges @ 1%				1.72
	TOTAL				173.73
	Add CPOH @ 15%				26.06
	Cost of each				199.79
	Say				199.80

18.54.4 15 mm nominal bore, 90 mm long, weighing not less than 93 gms

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7859	P.T.M.T. Bib cock with nozzle 15 mm	each	1.00	133.00	133.00
9999	Carriage of materials and fixing charges	L.S.	8.06	1.49	12.01
	TOTAL				145.01
	Add Water Charges @ 1%				1.45
	TOTAL				146.46
	Add CPOH @ 15%				21.97
	Cost of each				168.43
	Say				168.45

18.55 Providing and fixing PTMT stop cock of approved quality and colour.

18.55.1 15 mm nominal bore, 86 mm long, weighing not less than 88 gms

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7403	15 mm dia PTMT stop cock(male thread)	each	1.00	100.00	100.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Carriage of materials and fixing charges	L.S.	8.06	1.49	12.01
	TOTAL				112.01
	Add Water Charges @ 1%				1.12
	TOTAL				113.13
	Add CPOH @ 15%				16.97
	Cost of each				130.10
	Say				130.10

18.55.2 20 mm nominal bore, 89 mm long, weighing not less than 88 gms

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7405	20 mm dia PTMT stop cock	each	1.00	130.00	130.00
9999	Carriage of materials and fixing charges	L.S.	8.06	1.49	12.01
	TOTAL				142.01
	Add Water Charges @ 1%				1.42
	TOTAL				143.43
	Add CPOH @ 15%				21.51
	Cost of each				164.94
	Say				164.95

18.55.3 Concealed stop cock, 15 mm nominal bore, 108 mm long, weighing not less than 108 gms

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7861	P.T.M.T. Stop cock (concealed) 15 mm	each	1.00	173.00	173.00
9999	Carriage of materials and fixing charges	L.S.	8.06	1.49	12.01
	TOTAL				185.01
	Add Water Charges @ 1%				1.85
	TOTAL				186.86
	Add CPOH @ 15%				28.03
	Cost of each				214.89
	Say				214.90

18.56 Providing and fixing PTMT pillar cock of approved quality and colour.

18.56.1 15 mm nominal bore, 107 mm long, weighing not less than 110 gms

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7406	PTMT pillar cock	each	1.00	160.00	160.00
9999	Carriage of materials and fixing charges	L.S.	9.49	1.49	14.14
	TOTAL				174.14
	Add Water Charges @ 1%				1.74
	TOTAL				175.88
	Add CPOH @ 15%				26.38
	Cost of each				202.26
	Say				202.25

18.56.2 15 mm nominal bore, 125 mm long foam flow, weighing not less than 120 gms

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7410	PTMT Pillar cock (fancy) 15 mm foam flow	each	1.00	225.00	225.00
9999	Carriage of materials and fixing charges	L.S.	9.49	1.49	14.14
	TOTAL				239.14
	Add Water Charges @ 1%				2.39
	TOTAL				241.53
	Add CPOH @ 15%				36.23
	Cost of each				277.76
	Say				277.75

18.57 Providing and fixing PTMT, push cock of approved quality and colour.
18.57.1 15 mm nominal bore, 98 mm long, weighing not less than 75 gms

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7407	PTMT push cock 15 mm dia	each	1.00	90.00	90.00
9999	Carriage of materials and fixing charges	L.S.	8.06	1.49	12.01
	TOTAL				102.01
	Add Water Charges @ 1%				1.02
	TOTAL				103.03
	Add CPOH @ 15%				15.45
	Cost of each				118.48
	Say				118.50

18.57.2 15 mm nominal bore, 80 mm long, weighing not less than 46 gms

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7408	PTMT push cock 12 mm dia 20 mm BSP	each	1.00	80.00	80.00
9999	Carriage of materials and fixing charges	L.S.	8.06	1.49	12.01
	TOTAL				92.01
	Add Water Charges @ 1%				0.92
	TOTAL				92.93
	Add CPOH @ 15%				13.94
	Cost of each				106.87
	Say				106.85

18.58 Providing and fixing PTMT grating of approved quality and colour.
18.58.1 Circular type
18.58.1.1 100 mm nominal dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7409	PTMT grating 100 mm dia	each	1.00	31.00	31.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Carriage of materials and fixing charges	L.S.	4.16	1.49	6.20
	TOTAL				37.20
	Add Water Charges @ 1%				0.37
	TOTAL				37.57
	Add CPOH @ 15%				5.64
	Cost of each				43.21
	Say				43.20

18.58.1.2 125 mm nominal dia with 25 mm waste hole

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7411	125 mm grating with waste hole	each	1.00	37.00	37.00
9999	Carriage of materials and fixing charges	L.S.	4.16	1.49	6.20
	TOTAL				43.20
	Add Water Charges @ 1%				0.43
	TOTAL				43.63
	Add CPOH @ 15%				6.54
	Cost of each				50.17
	Say				50.15

18.58.2 Rectangular type with openable circular lid

18.58.2.1 150 mm nominal size square 100 mm diameter of the inner hinged round grating

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7412	Rectangular type with openable circular lid 150 mm size 18 mm high with 100 mm dia (110 gm)	each	1.00	101.00	101.00
9999	Carriage of materials and fixing charges	L.S.	4.16	1.49	6.20
	TOTAL				107.20
	Add Water Charges @ 1%				1.07
	TOTAL				108.27
	Add CPOH @ 15%				16.24
	Cost of each				124.51
	Say				124.50

18.59 Providing and fixing C.I. double acting air valve of approved quality with bolts, nuts, rubber insertions etc. complete (The tail pieces, tapers etc. if required will be paid separately):

18.59.1 50 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos. double acting air valves				
	MATERIAL:				
7415	Double acting air valve 50 mm	each	10.00	3,370.00	33,700.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Carriage of air valves	L.S.	26.00	1.49	38.74
9999	Labour for laying of double acting air valve	L.S.	39.00	1.49	58.11
	Providing flanged joints to double acting air valves with bolts, nuts and rubber insertions etc				
18.30.1	Rate as per Item Number 18.30.1 of SH: Water supply	each	10.00	92.65	926.50 (A)
	TOTAL				34,723.35
	Add Water Charges @ 1% except on A i.e on (34,723.35 - 926.50 =) 33,796.85				337.97
	TOTAL				35,061.32
	Add CPOH @ 15% except on A i.e on (35,061.32 - 926.50 =) 34,134.82				5,120.22
	Cost of 10 nos				40,181.54
	Cost of each				4,018.15
	Say				4,018.15

18.59.2 80 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos. double acting air valves				
	MATERIAL:				
7416	Double acting air valve 80 mm	each	10.00	4,930.00	49,300.00
9999	Carriage of air valves	L.S.	26.00	1.49	38.74
9999	Labour for laying of double acting air valve	L.S.	39.00	1.49	58.11
	Providing flanged joints to double acting air valves with bolts, nuts and rubber insertions etc				
18.30.1	Rate as per Item Number 18.30.1 of SH: Water supply	each	10.00	92.65	926.50 (A)
	TOTAL				50,323.35
	Add Water Charges @ 1% except on A i.e on (50,323.35 - 926.50 =) 49,396.85				493.97
	TOTAL				50,817.32
	Add CPOH @ 15% except on A i.e on (50,817.32 - 926.50 =) 49,890.82				7,483.62
	Cost of 10 nos				58,300.94
	Cost of each				5,830.09
	Say				5,830.10

18.59.3 100 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos. double acting air valves				
	MATERIAL:				
7417	Double acting air valve 100 mm	each	10.00	6,400.00	64,000.00
9999	Carriage of air valves	L.S.	26.00	1.49	38.74
9999	Labour for laying of double acting air valve	L.S.	52.00	1.49	77.48

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Providing flanged joints to double acting air valves with bolts, nuts and rubber insertions etc				
18.30.2	Rate as per Item Number 18.30.2 of SH: Water supply	each	10.00	155.25	1,552.50 (A)
	TOTAL				65,668.72
	Add Water Charges @ 1% except on A i.e on (65,668.72 - 1,552.50 =) 64,116.22				641.16
	TOTAL				66,309.88
	Add CPOH @ 15% except on A i.e on (66,309.88 - 1,552.50 =) 64,757.38				9,713.61
	Cost of 10 nos				76,023.49
	Cost of each				7,602.35
	Say				7,602.35

18.60 Providing and fixing enclosed type water meter (bulk type) conforming to IS : 2373 and tested by Municipal Board complete with bolts, nuts, rubber insertions etc. (The tail pieces if required will be paid separately) :

18.60.1 80 mm dia nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no. water meter MATERIAL:				
7418	Water meter (including testing charges) 80 mm	each	1.00	2,030.00	2,030.00
9999	Testing charges	L.S.	130.00	1.49	193.70
9999	Carriage of water meter	L.S.	26.00	1.49	38.74
9999	Labour for laying water meter	L.S.	39.00	1.49	58.11
	Providing flanged joints to double acting air valves with bolts, nuts and rubber insertions etc				
18.30.1	Rate as per Item Number 18.30.1 of SH: Water supply	each	2.00	92.65	185.30 (A)
	TOTAL				2,505.85
	Add Water Charges @ 1% except on A i.e on (2,505.85 - 185.30 =) 2,320.55				23.21
	TOTAL				2,529.06
	Add CPOH @ 15% except on A i.e on (2,529.06 - 185.30 =) 2,343.76				351.56
	Cost of each				2,880.62
	Say				2,880.60

18.60.2 100 mm dia nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no. water meter MATERIAL:				
7419	Water meter (including testing charges) 100 mm	each	1.00	3,150.00	3,150.00
9999	Testing charges	L.S.	130.00	1.49	193.70

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Carriage of water meter	L.S.	26.00	1.49	38.74
9999	Labour for laying water meter	L.S.	52.00	1.49	77.48
	Providing flanged joints to double acting air valves with bolts, nuts and rubber insertions etc				
18.30.2	Rate as per Item Number 18.30.2 of SH: Water supply	each	2.00	155.25	310.50 (A)
	TOTAL				3,770.42
	Add Water Charges @ 1% except on A i.e on (3,770.42 - 310.50 =) 3,459.92				34.60
	TOTAL				3,805.02
	Add CPOH @ 15% except on A i.e on (3,805.02 - 310.50 =) 3,494.52				524.18
	Cost of each				4,329.20
	Say				4,329.20

18.60.3 150 mm dia nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no. water meter				
	MATERIAL:				
7420	Water meter (including testing charges) 150 mm	each	1.00	4,560.00	4,560.00
9999	Testing charges	L.S.	156.00	1.49	232.44
9999	Carriage of water meter	L.S.	39.00	1.49	58.11
9999	Labour for laying water meter	L.S.	65.00	1.49	96.85
	Providing flanged joints to double acting air valves with bolts, nuts and rubber insertions etc				
18.30.4	Rate as per Item Number 18.30.4 of SH: Water supply	each	2.00	192.80	385.60 (A)
	TOTAL				5,333.00
	Add Water Charges @ 1% except on A i.e on (5,333.00 - 385.60 =) 4,947.40				49.47
	TOTAL				5,382.47
	Add CPOH @ 15% except on A i.e on (5,382.47 - 385.60 =) 4,996.87				749.53
	Cost of each				6,132.00
	Say				6,132.00

18.60.4 200 mm dia nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no. water meter				
	MATERIAL:				
7421	Water meter (including testing charges) 200 mm	each	1.00	5,100.00	5,100.00
9999	Testing charges	L.S.	156.00	1.49	232.44
9999	Carriage of water meter	L.S.	52.00	1.49	77.48
9999	Labour for laying water meter	L.S.	104.00	1.49	154.96

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Providing flanged joints to double acting air valves with bolts, nuts and rubber insertions etc				
18.30.5	Rate as per Item Number 18.30.5 of SH: Water supply	each	2.00	198.65	397.30 (A)
	TOTAL				5,962.18
	Add Water Charges @ 1% except on A i.e on (5,962.18 - 397.30 =) 5,564.88				55.65
	TOTAL				6,017.83
	Add CPOH @ 15% except on A i.e on (6,017.83 - 397.30 =) 5,620.53				843.08
	Cost of each				6,860.91
	Say				6,860.90

18.61 Providing and fixing C.I. dirt box strainer for bulk type water meter with nuts, bolts, rubber insertions etc. complete conforming to IS: 2373:

18.61.1 80 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no. dirt box strainer				
	MATERIAL:				
7422	Dirt box strainer 80 mm	each	1.00	2,620.00	2,620.00
9999	Carriage of dirt box strainer	L.S.	26.00	1.49	38.74
9999	Labour for laying dirt box stainer	L.S.	39.00	1.49	58.11
	Providing flanged joints to double acting air valves with bolts, nuts and rubber insertions etc				
18.30.1	Rate as per Item Number 18.30.1 of SH: Water supply	each	2.00	92.65	185.30 (A)
	TOTAL				2,902.15
	Add Water Charges @ 1% except on A i.e on (2,902.15 - 185.30 =) 2,716.85				27.17
	TOTAL				2,929.32
	Add CPOH @ 15% except on A i.e on (2,929.32 - 185.30 =) 2,744.02				411.60
	Cost of each				3,340.92
	Say				3,340.90

18.61.2 100 mm dia.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no. dirt box strainer				
	MATERIAL:				
7423	Dirt box strainer 100 mm	each	1.00	4,180.00	4,180.00
9999	Carriage of dirt box strainer	L.S.	26.00	1.49	38.74
9999	Labour for laying dirt box stainer	L.S.	52.00	1.49	77.48
	Providing flanged joints to double acting air valves with bolts, nuts and rubber insertions etc				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
18.30.2	Rate as per Item Number 18.30.2 of SH: Water supply	each	2.00	155.25	310.50 (A)
	TOTAL				4,606.72
	Add Water Charges @ 1% except on A i.e on (4,606.72 - 310.50 =) 4,296.22				42.96
	TOTAL				4,649.68
	Add CPOH @ 15% except on A i.e on (4,649.68 - 310.50 =) 4,339.18				650.88
	Cost of each				5,300.56
	Say				5,300.55

18.61.3 150 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no. dirt box strainer				
	MATERIAL:				
7424	Dirt box strainer 150 mm	each	1.00	5,420.00	5,420.00
9999	Carriage of dirt box strainer	L.S.	39.00	1.49	58.11
9999	Labour for laying dirt box stainer	L.S.	65.00	1.49	96.85
	Providing flanged joints to double acting air valves with bolts, nuts and rubber insertions etc				
18.30.4	Rate as per Item Number 18.30.4 of SH: Water supply	each	2.00	192.80	385.60 (A)
	TOTAL				5,960.56
	Add Water Charges @ 1% except on A i.e on (5,960.56 - 385.60 =) 5,574.96				55.75
	TOTAL				6,016.31
	Add CPOH @ 15% except on A i.e on (6,016.31 - 385.60 =) 5,630.71				844.61
	Cost of each				6,860.92
	Say				6,860.90

18.61.4 200 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no. dirt box strainer				
	MATERIAL:				
7425	Dirt box strainer 200 mm	each	1.00	7,550.00	7,550.00
9999	Carriage of dirt box strainer	L.S.	52.00	1.49	77.48
9999	Labour for laying dirt box stainer	L.S.	104.00	1.49	154.96
	Providing flanged joints to double acting air valves with bolts, nuts and rubber insertions etc				
18.30.5	Rate as per Item Number 18.30.5 of SH: Water supply	each	2.00	198.65	397.30 (A)
	TOTAL				8,179.74
	Add Water Charges @ 1% except on A i.e on (8,179.74 - 397.30 =) 7,782.44				77.82
	TOTAL				8,257.56
	Add CPOH @ 15% except on A i.e on (8,257.56 - 397.30 =) 7,860.26				1,179.04
	Cost of each				9,436.60
	Say				9,436.60

18.62 Providing and fixing PTMT Ball cock of approved quality, colour and make complete with Epoxy coated aluminium rod with L.P. / H.P.H.D. plastic ball.

18.62.1 15 mm nominal bore, 105 mm long, weighing not less than 138 gms

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7495	PTMT Ball Cock 15mm complete with Epoxy Coated Aluminium Rod & H.D. Ball	each	1.00	134.00	134.00
9999	Carriage of materials and fixing charges	L.S.	21.58	1.49	32.15
	TOTAL				166.15
	Add Water Charges @ 1%				1.66
	TOTAL				167.81
	Add CPOH @ 15%				25.17
	Cost of each				192.98
	Say				193.00

18.62.2 20 mm nominal bore, 120 mm long, weighing not less than 198 gms

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7496	PTMT Ball Cock 20mm complete with Epoxy Coated Aluminium Rod & H.D. Ball	each	1.00	195.00	195.00
9999	Carriage of materials and fixing charges	L.S.	26.91	1.49	40.10
	TOTAL				235.10
	Add Water Charges @ 1%				2.35
	TOTAL				237.45
	Add CPOH @ 15%				35.62
	Cost of each				273.07
	Say				273.05

18.62.3 25 mm nominal bore, 152 mm long, weighing not less than 440 gms

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7497	PTMT Ball Cock 25mm complete with Epoxy Coated Aluminium Rod & H.D. Ball	each	1.00	420.00	420.00
9999	Carriage of materials and fixing charges	L.S.	32.24	1.49	48.04
	TOTAL				468.04
	Add Water Charges @ 1%				4.68
	TOTAL				472.72
	Add CPOH @ 15%				70.91
	Cost of each				543.63
	Say				543.65

18.62.4 40 mm nominal bore, 206 mm long, weighing not less than 690 gms

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7498	PTMT Ball Cock 40mm complete with Epoxy Coated Aluminium Rod & H.D. Ball	each	1.00	780.00	780.00
9999	Carriage of materials and fixing charges	L.S.	32.24	1.49	48.04
	TOTAL				828.04
	Add Water Charges @ 1%				8.28
	TOTAL				836.32
	Add CPOH @ 15%				125.45
	Cost of each				961.77
	Say				961.75

18.62.5 50 mm nominal bore, 242 mm long, weighing not less than 1240 gms

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7499	PTMT Ball Cock 50mm complete with Epoxy Coated Aluminium Rod & H.D. Ball	each	1.00	1,150.00	1,150.00
9999	Carriage of materials and fixing charges	L.S.	32.24	1.49	48.04
	TOTAL				1,198.04
	Add Water Charges @ 1%				11.98
	TOTAL				1,210.02
	Add CPOH @ 15%				181.50
	Cost of each				1,391.52
	Say				1,391.50

18.63 Providing and fixing PTMT angle stop cock 15 mm nominal bore, weighing not less than 85 gms.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7500	PTMT Angle Stop cock with Flange 15 mm	each	1.00	130.00	130.00
9999	Carriage of materials and fixing charges	L.S.	8.06	1.49	12.01
	TOTAL				142.01
	Add Water Charges @ 1%				1.42
	TOTAL				143.43
	Add CPOH @ 15%				21.51
	Cost of each				164.94
	Say				164.95

18.64 Providing and fixing PTMT swivelling shower, 15 mm nominal bore, weighing not less than 40 gms.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7501	PTMT Swiveling shower 15 mm	each	1.00	87.00	87.00
9999	Carriage of materials and fixing charges	L.S.	6.76	1.49	10.07
	TOTAL				97.07
	Add Water Charges @ 1%				0.97
	TOTAL				98.04
	Add CPOH @ 15%				14.71
	Cost of each				112.75
	Say				112.75

18.65 Providing and fixing PTMT Soap Dish Holder having length of 138 mm, breadth 102 mm, height of 75 mm with concealed fitting arrangements, weighing not less than 106 gms.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7509	PTMT Soap Dish/Holder 138x102x75 mm	each	1.00	120.00	120.00
9999	Carriage of materials and fixing charges	L.S.	6.76	1.49	10.07
	TOTAL				130.07
	Add Water Charges @ 1%				1.30
	TOTAL				131.37
	Add CPOH @ 15%				19.71
	Cost of each				151.08
	Say				151.10

18.66 Providing and laying S&S. C.I. Standard specials such as tees, bends, collars tapers and caps etc, suitable for flanged jointing as per IS : 1538:

18.66.1 Upto 300 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 quintal				
	MATERIAL:				
7708	S&S Centrifugally (Spun) C.I. Pipe Specials as per IS 1538 suitable for lead jointing up to 300 mm dia	quintal	1.00	5,850.00	5,850.00
2309	Carriage of Cast Iron fittings	tonne	0.10	77.87	7.79
	Labour for laying				
18.24	Rate as per Item Number 18.24 of SH: Water supply	quintal	1.00	186.10	186.10 (A)
	TOTAL				6,043.89
	Add Water Charges @ 1% except on A i.e on (6,043.89 - 186.10 =) 5,857.79				58.58
	TOTAL				6,102.47
	Add CPOH @ 15% except on A i.e on (6,102.47 - 186.10 =) 5,916.37				887.46
	Cost of 1 quintal				6,989.93
	Say				6,989.95

18.66.2 Above 300 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 quintal				
	MATERIAL:				
7709	S&S Centrifugally (Spun) C.I. Pipe Specials as per IS 1538 suitable for lead jointing over 300 mm dia	quintal	1.00	7,500.00	7,500.00
2309	Carriage of Cast Iron fittings	tonne	0.10	77.87	7.79
	Labour for laying				
18.24	Rate as per Item Number 18.24 of SH: Water supply	quintal	1.00	186.10	186.10 (A)
	TOTAL				7,693.89
	Add Water Charges @ 1% except on A i.e on (7,693.89 - 186.10 =) 7,507.79				75.08
	TOTAL				7,768.97
	Add CPOH @ 15% except on A i.e on (7,768.97 - 186.10 =) 7,582.87				1,137.43
	Cost of 1 quintal				8,906.40
	Say				8,906.40

18.67 Providing and laying S&S C.I. Standard specials suitable for mechanical jointing as per IS : 13382:

18.67.1 Upto 300 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 quintal				
	MATERIAL:				
7710	S&S Centrifugally (Spun) C.I. Pipe specials suitable for mechanical joint as per I.S. 13382 up to 300 mm dia	quintal	1.00	8,200.00	8,200.00
2309	Carriage of Cast Iron fittings	tonne	0.10	77.87	7.79
	Labour for laying				
18.24	Rate as per Item Number 18.24 of SH: Water supply	quintal	1.00	186.10	186.10 (A)
	TOTAL				8,393.89
	Add Water Charges @ 1% except on A i.e on (8,393.89 - 186.10 =) 8,207.79				82.08
	TOTAL				8,475.97
	Add CPOH @ 15% except on A i.e on (8,475.97 - 186.10 =) 8,289.87				1,243.48
	Cost of 1 quintal				9,719.45
	Say				9,719.45

18.67.2 Above 300 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 quintal				
	MATERIAL:				
7711	S&S Centrifugally (Spun) C.I. Pipe Specials suitable for mechanical joint as per I.S. 13382 over 300 mm dia	quintal	1.00	8,880.00	8,880.00
2309	Carriage of Cast Iron fittings	tonne	0.10	77.87	7.79
	Labour for laying				
18.24	Rate as per Item Number 18.24 of SH: Water supply	quintal	1.00	186.10	186.10 (A)
	TOTAL				9,073.89
	Add Water Charges @ 1% except on A i.e on (9,073.89 - 186.10 =) 8,887.79				88.88
	TOTAL				9,162.77
	Add CPOH @ 15% except on A i.e on (9,162.77 - 186.10 =) 8,976.67				1,346.50
	Cost of 1 quintal				10,509.27
	Say				10,509.25

18.68 Providing and laying D.I. specials of class K-12 suitable for push-on jointing as per IS : 9523:

18.68.1 Upto 600 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 quintal				
	MATERIAL:				
7682	Ductile Iron K - 12 specials suitable for push on jointing up to 600 mm dia	quintal	1.00	11,850.00	11,850.00
2309	Carriage of Cast Iron fittings	tonne	0.10	77.87	7.79
	Labour for laying				
18.24	Rate as per Item Number 18.24 of SH: Water supply	quintal	1.00	186.10	186.10 (A)
	TOTAL				12,043.89
	Add Water Charges @ 1% except on A i.e on (12,043.89 - 186.10 =) 11,857.79				118.58
	TOTAL				12,162.47
	Add CPOH @ 15% except on A i.e on (12,162.47 - 186.10 =) 11,976.37				1,796.46
	Cost of 1 quintal				13,958.93
	Say				13,958.95

18.68.2 Above 600 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 quintal				
	MATERIAL:				
7683	Ductile Iron K - 12 specials suitable for push on jointing over 600 mm dia	quintal	1.00	16,280.00	16,280.00
2309	Carriage of Cast Iron fittings	tonne	0.10	77.87	7.79
	Labour for laying				
18.24	Rate as per Item Number 18.24 of SH: Water supply	quintal	1.00	186.10	186.10 (A)
	TOTAL				16,473.89
	Add Water Charges @ 1% except on A i.e on (16,473.89 - 186.10 =) 16,287.79				162.88
	TOTAL				16,636.77
	Add CPOH @ 15% except on A i.e on (16,636.77 - 186.10 =) 16,450.67				2,467.60
	Cost of 1 quintal				19,104.37
	Say				19,104.40

18.69 Providing and laying D.I. Specials of Class K - 12 suitable for mechanical jointing as per IS : 9523 :

18.69.1 Upto 600 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 quintal				
	MATERIAL:				
7684	Ductile Iron specials suitable for mechanical jointing as per I.S. 9523 - up to 600 mm dia	quintal	1.00	12,540.00	12,540.00
2309	Carriage of Cast Iron fittings	tonne	0.10	77.87	7.79
	Labour for laying				
18.24	Rate as per Item Number 18.24 of SH: Water supply	quintal	1.00	186.10	186.10 (A)
	TOTAL				12,733.89
	Add Water Charges @ 1% except on A i.e on (12,733.89 - 186.10 =) 12,547.79				125.48
	TOTAL				12,859.37
	Add CPOH @ 15% except on A i.e on (12,859.37 - 186.10 =) 12,673.27				1,900.99
	Cost of 1 quintal				14,760.36
	Say				14,760.35

18.69.2 Above 600 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 quintal				
	MATERIAL:				
7685	Ductile Iron Specials suitable for mechanical jointing as per I.S. 9523 over 600 mm dia	quintal	1.00	17,580.00	17,580.00
2309	Carriage of Cast Iron fittings	tonne	0.10	77.87	7.79
	Labour for laying				
18.24	Rate as per Item Number 18.24 of SH: Water supply	quintal	1.00	186.10	186.10(A)
	TOTAL				17,773.89
	Add Water Charges @ 1% except on A i.e on (17,773.89 - 186.10 =) 17,587.79				175.88
	TOTAL				17,949.77
	Add CPOH @ 15% except on A i.e on (17,949.77 - 186.10 =) 17,763.67				2,664.55
	Cost of 1 quintal				20,614.32
	Say				20,614.30

18.70 Providing push-on-joints to Centrifugally (Spun) Cast Iron Pipes or Ductile Iron Pipes including testing of joints and including the cost of rubber gasket:

18.70.1 100 mm dia pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 50 joints				
	MATERIAL:				
7666	Rubber Gaskets Conforming to I.S 5382 of S.B.R quality 100 mm dia	each	50.00	26.00	1,300.00
	LABOUR:				
0116	Fitter (grade 1)	day	1.00	301.00	301.00
0117	Assistant Fitter or 2nd class Fitter	day	1.00	273.00	273.00
0114	Beldar	day	1.00	247.00	247.00
	TOTAL				2,121.00
	Add Water Charges @ 1%				21.21
	TOTAL				2,142.21
	Add CPOH @ 15%				321.33
	Cost of 50 joint				2,463.54
	Cost of 1 joint				49.27
	Say				49.25

18.70.2 150 mm dia pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 50 joints				
	MATERIAL:				
7668	Rubber Gaskets Conforming to I.S 5382 of S.B.R quality 150 mm dia	each	50.00	36.00	1,800.00
	LABOUR:				
0116	Fitter (grade 1)	day	1.50	301.00	451.50
0117	Assistant Fitter or 2nd class Fitter	day	1.50	273.00	409.50
0114	Beldar	day	3.00	247.00	741.00
	TOTAL				3,402.00
	Add Water Charges @ 1%				34.02
	TOTAL				3,436.02
	Add CPOH @ 15%				515.40
	Cost of 50 joint				3,951.42
	Cost of 1 joint				79.03
	Say				79.05

18.70.3 200 mm dia pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 50 joints				
	MATERIAL:				
7669	Rubber Gaskets Conforming to 1.S 5382 of S.B.R quality 200 mm dia	each	50.00	62.00	3,100.00
	LABOUR:				
0116	Fitter (grade 1)	day	2.00	301.00	602.00
0117	Assistant Fitter or 2nd class Fitter	day	2.00	273.00	546.00
0114	Beldar	day	4.00	247.00	988.00
	TOTAL				5,236.00
	Add Water Charges @ 1%				52.36
	TOTAL				5,288.36
	Add CPOH @ 15%				793.25
	Cost of 50 joint				6,081.61
	Cost of 1 joint				121.63
	Say				121.65

18.70.4 250 mm dia pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 50 joints				
	MATERIAL:				
7670	Rubber Gaskets Conforming to I.S 5382 of S.B.R quality 250 mm dia	each	50.00	73.00	3,650.00
	LABOUR:				
0116	Fitter (grade 1)	day	2.50	301.00	752.50
0117	Assistant Fitter or 2nd class Fitter	day	2.50	273.00	682.50
0114	Beldar	day	5.00	247.00	1,235.00
	TOTAL				6,320.00
	Add Water Charges @ 1%				63.20
	TOTAL				6,383.20
	Add CPOH @ 15%				957.48
	Cost of 50 joint				7,340.68
	Cost of 1 joint				146.81
	Say				146.80

18.70.5 300 mm dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 50 joints				
	MATERIAL:				
7671	Rubber Gaskets Conforming to I.S 5382 of S.B.R quality 300 mm dia	each	50.00	103.00	5,150.00
	LABOUR:				
0116	Fitter (grade 1)	day	3.00	301.00	903.00
0117	Assistant Fitter or 2nd class Fitter	day	3.00	273.00	819.00
0114	Beldar	day	6.00	247.00	1,482.00
	TOTAL				8,354.00
	Add Water Charges @ 1%				83.54
	TOTAL				8,437.54
	Add CPOH @ 15%				1,265.63
	Cost of 50 joint				9,703.17
	Cost of 1 joint				194.06
	Say				194.05

18.70.6 350 mm dia pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 50 joints				
	MATERIAL:				
7672	Rubber Gaskets Conforming to I.S 5382 of S.B.R quality 350 mm dia	each	50.00	127.00	6,350.00
	LABOUR:				
0116	Fitter (grade 1)	day	3.00	301.00	903.00
0117	Assistant Fitter or 2nd class Fitter	day	3.00	273.00	819.00
0114	Beldar	day	6.00	247.00	1,482.00
	TOTAL				9,554.00
	Add Water Charges @ 1%				95.54
	TOTAL				9,649.54
	Add CPOH @ 15%				1,447.43
	Cost of 50 joint				11,096.97
	Cost of 1 joint				221.94
	Say				221.95

18.70.7 400 mm dia pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 50 joints				
	MATERIAL:				
7673	Rubber Gaskets Conforming to I.S 5382 of S.B.R quality 400 mm dia	each	50.00	234.00	11,700.00
	LABOUR:				
0116	Fitter (grade 1)	day	4.00	301.00	1,204.00
0117	Assistant Fitter or 2nd class Fitter	day	4.00	273.00	1,092.00
0114	Beldar	day	8.00	247.00	1,976.00
	TOTAL				15,972.00
	Add Water Charges @ 1%				159.72
	TOTAL				16,131.72
	Add CPOH @ 15%				2,419.76
	Cost of 50 joint				18,551.48
	Cost of 1 joint				371.03
	Say				371.05

18.70.8 450 mm dia pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 50 joints				
	MATERIAL:				
7674	Rubber Gaskets Conforming to I.S 5382 of S.B.R quality 450 mm dia	each	50.00	260.00	13,000.00
	LABOUR:				
0116	Fitter (grade 1)	day	4.50	301.00	1,354.50
0117	Assistant Fitter or 2nd class Fitter	day	4.50	273.00	1,228.50
0114	Beldar	day	9.00	247.00	2,223.00
	TOTAL				17,806.00
	Add Water Charges @ 1%				178.06
	TOTAL				17,984.06
	Add CPOH @ 15%				2,697.61
	Cost of 50 joint				20,681.67
	Cost of 1 joint				413.63
	Say				413.65

18.70.9 500 mm dia pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 50 joints				
	MATERIAL:				
7675	Rubber Gaskets Conforming to I.S 5382 of S.B.R quality 500 mm dia	each	50.00	285.00	14,250.00
	LABOUR:				
0116	Fitter (grade 1)	day	4.75	301.00	1,429.75
0117	Assistant Fitter or 2nd class Fitter	day	4.75	273.00	1,296.75
0114	Beldar	day	9.50	247.00	2,346.50
	TOTAL				19,323.00
	Add Water Charges @ 1%				193.23
	TOTAL				19,516.23
	Add CPOH @ 15%				2,927.43
	Cost of 50 joint				22,443.66
	Cost of 1 joint				448.87
	Say				448.85

18.70.10 600 mm dia pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 50 joints				
	MATERIAL:				
7676	Rubber Gaskets Conforming to I.S 5382 of S.B.R quality 600 mm dia	each	50.00	352.00	17,600.00
	LABOUR:				
0116	Fitter (grade 1)	day	6.50	301.00	1,956.50
0117	Assistant Fitter or 2nd class Fitter	day	6.50	273.00	1,774.50
0114	Beldar	day	13.00	247.00	3,211.00
	TOTAL				24,542.00
	Add Water Charges @ 1%				245.42
	TOTAL				24,787.42
	Add CPOH @ 15%				3,718.11
	Cost of 50 joint				28,505.53
	Cost of 1 joint				570.11
	Say				570.10

18.70.11 650 mm dia pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 50 joints				
	MATERIAL:				
7677	Rubber Gaskets Conforming to I.S 5382 of S.B.R quality 700 mm dia	each	50.00	542.00	27,100.00
	LABOUR:				
0116	Fitter (grade 1)	day	7.70	301.00	2,317.70
0117	Assistant Fitter or 2nd class Fitter	day	7.70	273.00	2,102.10
0114	Beldar	day	15.40	247.00	3,803.80
	TOTAL				35,323.60
	Add Water Charges @ 1%				353.24
	TOTAL				35,676.84
	Add CPOH @ 15%				5,351.53
	Cost of 50 joint				41,028.37
	Cost of 1 joint				820.57
	Say				820.55

18.70.12 700 mm dia pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 50 joints				
	MATERIAL:				
7678	Rubber Gaskets Conforming to I.S 5382 of S.B.R quality 750 mm dia	each	50.00	636.00	31,800.00
	LABOUR:				
0116	Fitter (grade 1)	day	7.70	301.00	2,317.70
0117	Assistant Fitter or 2nd class Fitter	day	7.70	273.00	2,102.10
0114	Beldar	day	15.40	247.00	3,803.80
	TOTAL				40,023.60
	Add Water Charges @ 1%				400.24
	TOTAL				40,423.84
	Add CPOH @ 15%				6,063.58
	Cost of 50 joint				46,487.42
	Cost of 1 joint				929.75
	Say				929.75

18.70.13 800 mm di a pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 50 joints				
	MATERIAL:				
7679	Rubber Gaskets Conforming to I.S 5382 of S.B.R quality 800 mm dia	each	50.00	684.00	34,200.00
	LABOUR:				
0116	Fitter (grade 1)	day	8.50	301.00	2,558.50
0117	Assistant Fitter or 2nd class Fitter	day	8.50	273.00	2,320.50
0114	Beldar	day	17.00	247.00	4,199.00
	TOTAL				43,278.00
	Add Water Charges @ 1%				432.78
	TOTAL				43,710.78
	Add CPOH @ 15%				6,556.62
	Cost of 50 joint				50,267.40
	Cost of 1 joint				1,005.35
	Say				1,005.35

18.70.14 900 mm dia pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 50 joints				
	MATERIAL:				
7680	Rubber Gaskets Conforming to I.S 5382 of S.B.R quality 900 mm dia	each	50.00	915.00	45,750.00
	LABOUR:				
0116	Fitter (grade 1)	day	10.00	301.00	3,010.00
0117	Assistant Fitter or 2nd class Fitter	day	10.00	273.00	2,730.00
0114	Beldar	day	20.00	247.00	4,940.00
	TOTAL				56,430.00
	Add Water Charges @ 1%				564.30
	TOTAL				56,994.30
	Add CPOH @ 15%				8,549.14
	Cost of 50 joint				65,543.44
	Cost of 1 joint				1,310.87
	Say				1,310.85

18.70.15 1000 mm dia pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 50 joints				
	MATERIAL:				
7681	Rubber Gaskets Conforming to I.S 5382 of S.B.R quality 1000 mm dia	each	50.00	1,138.00	56,900.00
	LABOUR:				
0116	Fitter (grade 1)	day	11.00	301.00	3,311.00
0117	Assistant Fitter or 2nd class Fitter	day	11.00	273.00	3,003.00
0114	Beldar	day	22.00	247.00	5,434.00
	TOTAL				68,648.00
	Add Water Charges @ 1%				686.48
	TOTAL				69,334.48
	Add CPOH @ 15%				10,400.17
	Cost of 50 joint				79,734.65
	Cost of 1 joint				1,594.69
	Say				1,594.70

18.71 Providing and laying Double Flanged (screwed / welded) Centrifugally (Spun) Cast Iron, Class B (IS : 1536) :

18.71.1 100 mm dia C.I. Double Flanged Pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 5 metre				
	MATERIAL:				
	100 mm dia. cast iron pipes double flanged weight of 1m pipe = 27.00 kg				
	Weight of 5 m pipes 27.00x5 = 135.00 kg				
7712	Screwed double flanged centrifugally cast (spun) C.I. Pipe of Class B conforming to I.S. 1536, - 100 mm dia	metre	5.00	1,260.00	6,300.00
2319	Carriage of Spun iron S & S pipes 100 mm dia	100 metre	5.00	191.48	9.57

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Labour for laying				
18.23	Rate as per Item Number 18.23 of SH: Water supply	quintal	1.35	101.70	137.30 (A)
	TOTAL				6,446.87
	Add Water Charges @ 1% except on A i.e on (6,446.87 - 137.30 =) 6,309.57				63.10
	TOTAL				6,509.97
	Add CPOH @ 15% except on A i.e on (6,509.97 - 137.30 =) 6,372.67				955.90
	Cost of 5 metre				7,465.87
	Cost of 1 metre				1,493.17
	Say				1,493.15

18.71.2 150 mm dia C.I. Double Flanged Pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 5 metre				
	MATERIAL:				
	150 mm dia. cast iron pipes double flanged weight of 1m pipe = 44.10 kg				
	Weight of 5 m pipes 44.10x5 = 220.50 kg				
7713	Screwed double flanged centrifugally cast (spun) C.I. Pipe of Class B conforming to I.S. 1536, - 150 mm dia	metre	5.00	1,960.00	9,800.00
2321	Carriage of Spun iron S & S pipes 150 mm dia	100 metre	5.00	319.12	15.96
	Labour for laying				
18.23	Rate as per Item Number 18.23 of SH: Water supply	quintal	2.21	101.70	224.76 (A)
	TOTAL				10,040.72
	Add Water Charges @ 1% except on A i.e on (10,040.72 - 224.76 =) 9,815.96				98.16
	TOTAL				10,138.88
	Add CPOH @ 15% except on A i.e on (10,138.88 - 224.76 =) 9,914.12				1,487.12
	Cost of 5 metre				11,626.00
	Cost of 1 metre				2,325.20
	Say				2,325.20

18.71.3 200 mm dia C.I. Double Flanged Pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 5 metre				
	MATERIAL:				
	200 mm dia. cast iron pipes double flanged weight of 1m pipe = 63.50 kg				
	Weight of 5 m pipes 63.50 0x5 = 317.50 kg				
7714	Screwed double flanged centrifugally cast (spun) C.I. Pipe of Class B conforming to I.S. 1536, - 200 mm dia	metre	5.00	3,170.00	15,850.00
2322	Carriage of Spun iron S & S pipes 200 mm dia	100 metre	5.00	519.11	25.96

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Labour for laying				
18.23	Rate as per Item Number 18.23 of SH: Water supply	quintal	3.18	101.70	323.41 (A)
	TOTAL				16,199.37
	Add Water Charges @ 1% except on A i.e on (16,199.37 - 323.41 =) 15,875.96				158.76
	TOTAL				16,358.13
	Add CPOH @ 15% except on A i.e on (16,358.13 - 323.41 =) 16,034.72				2,405.21
	Cost of 5 metre				18,763.34
	Cost of 1 metre				3,752.67
	Say				3,752.65

18.71.4 250 mm dia C.I. Double Flanged Pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 5 metre				
	MATERIAL:				
	250 mm dia. cast iron pipes double flanged weight of 1m pipe= 85.30 kg				
	Weight of 5 m pipes 85.30 x5 = 426.50 kg				
7715	Screwed double flanged centrifugally cast (spun) C.I. Pipe of Class B conforming to I.S. 1536, - 250 mm dia	metre	5.00	3,730.00	18,650.00
2323	Carriage of Spun iron S & S pipes 250 mm dia	100 metre	5.00	737.68	36.88
	Labour for laying				
18.23	Rate as per Item Number 18.23 of SH: Water supply	quintal	4.27	101.70	434.26 (A)
	TOTAL				19,121.14
	Add Water Charges @ 1% except on A i.e on (19,121.14 - 434.26 =) 18,686.88				186.87
	TOTAL				19,308.01
	Add CPOH @ 15% except on A i.e on (19,308.01 - 434.26 =) 18,873.75				2,831.06
	Cost of 5 metre				22,139.07
	Cost of 1 metre				4,427.81
	Say				4,427.80

18.71.5 300 mm dia C.I. Double Flanged Pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 5 metre				
	MATERIAL:				
	300 mm dia. cast iron pipes double flanged weight of 1m pipe= 110.00 kg				
	Weight of 5 m pipes 110.00x5 = 550.00 kg				
7716	Screwed double flanged centrifugally cast (spun) C.I. Pipe of Class B conforming to I.S. 1536, - 300 mm dia	metre	5.00	4,770.00	23,850.00
2324	Carriage of Spun iron S & S pipes 300 mm. dia	100 metre	5.00	911.78	45.59

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Labour for laying				
18.23	Rate as per Item Number 18.23 of SH: Water supply	quintal	5.50	101.70	559.35 (A)
	TOTAL				24,454.94
	Add Water Charges @ 1% except on A i.e on (24,454.94 - 559.35 =) 23,895.59				238.96
	TOTAL				24,693.90
	Add CPOH @ 15% except on A i.e on (24,693.90 - 559.35 =) 24,134.55				3,620.18
	Cost of 5 metre				28,314.08
	Cost of 1 metre				5,662.82
	Say				5,662.80

18.71.6 350 mm dia C.I. Double Flanged Pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 5 metre				
	MATERIAL:				
	350 mm dia. cast iron pipes double flanged weight of 1m pipe = 135.70 kg				
	Weight of 5 m pipes 135.70x5 = 678.50 kg				
7717	Screwed double flanged centrifugally cast (spun) C.I. Pipe of Class B conforming to I.S. 1536, - 350 mm dia	metre	5.00	6,080.00	30,400.00
2325	Carriage of Spun iron S & S pipes 350 mm dia	100 metre	5.00	1,276.50	63.82
	Labour for laying				
18.23	Rate as per Item Number 18.23 of SH: Water supply	quintal	6.79	101.70	690.54 (A)
	TOTAL				31,154.36
	Add Water Charges @ 1% except on A i.e on (31,154.36 - 690.54 =) 30,463.82				304.64
	TOTAL				31,459.00
	Add CPOH @ 15% except on A i.e on (31,459.00 - 690.54 =) 30,768.46				4,615.27
	Cost of 5 metre				36,074.27
	Cost of 1 metre				7,214.85
	Say				7,214.85

18.71.7 400 mm dia C.I. Double Flanged Pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 5 metre				
	MATERIAL:				
	400 mm dia. cast iron pipes double flanged weight of 1m pipe = 166.80kg				
	Weight of 5 m pipes 166.80x5 = 834.00 kg				
7718	Screwed double flanged centrifugally cast (spun) C.I. Pipe of Class B conforming to I.S. 1536, - 400 mm dia	metre	5.00	7,890.00	39,450.00
2326	Carriage of Spun iron S & S pipes 400 mm dia	100 metre	5.00	1,740.68	87.03

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Labour for laying				
18.23	Rate as per Item Number 18.23 of SH: Water supply	quintal	8.34	101.70	848.18 (A)
	TOTAL				40,385.21
	Add Water Charges @ 1% except on A i.e on (40,385.21 - 848.18 =) 39,537.03				395.37
	TOTAL				40,780.58
	Add CPOH @ 15% except on A i.e on (40,780.58 - 848.18 =) 39,932.40				5,989.86
	Cost of 5 metre				46,770.44
	Cost of 1 metre				9,354.09
	Say				9,354.10

18.71.8 450 mm dia C.I. Double Flanged Pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 5 metre				
	MATERIAL:				
	450 mm dia. cast iron pipes double flanged weight of 1m pipe= 201.600 kg				
	Weight of 5 m pipes 201.600x5 = 1008.00 kg				
7719	Screwed double flanged centrifugally cast (spun) C.I. Pipe of Class B conforming to I.S. 1536, - 450 mm dia	metre	5.00	9,940.00	49,700.00
2327	Carriage of Spun iron S & S pipes 450 mm dia	100 metre	5.00	2,127.50	106.38
	Labour for laying				
18.23	Rate as per Item Number 18.23 of SH: Water supply	quintal	10.08	101.70	1,025.14 (A)
	TOTAL				50,831.52
	Add Water Charges @ 1% except on A i.e on (50,831.52 - 1,025.14 =) 49,806.38				498.06
	TOTAL				51,329.58
	Add CPOH @ 15% except on A i.e on (51,329.58 - 1,025.14 =) 50,304.44				7,545.67
	Cost of 5 metre				58,875.25
	Cost of 1 metre				11,775.05
	Say				11,775.05

18.71.9 500 mm dia C.I. Double Flanged Pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 5 metre				
	MATERIAL:				
	500 mm dia. cast iron pipes double flanged weight of 1m pipe= 234.80 kg				
	Weight of 5 m pipes 234.80x5 = 1174.00 kg				
7720	Screwed double flanged centrifugally cast (spun) C./. Pipe of Class B conforming to I.S. 1536, - 500 mm dia	metre	5.00	12,390.00	61,950.00
2328	Carriage of Spun iron S & S pipes 500 mm dia	100 metre	5.00	2,127.50	106.38

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Labour for laying				
18.23	Rate as per Item Number 18.23 of SH: Water supply	quintal	11.74	101.70	1,193.96 (A)
	TOTAL				63,250.34
	Add Water Charges @ 1% except on A i.e on (63,250.34 - 1,193.96 =) 62,056.38				620.56
	TOTAL				63,870.90
	Add CPOH @ 15% except on A i.e on (63,870.90 - 1,193.96 =) 62,676.94				9,401.54
	Cost of 5 metre				73,272.44
	Cost of 1 metre				14,654.49
	Say				14,654.50

18.71.10 600 mm dia C.I. Double Flanged Pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 5 metre				
	MATERIAL:				
	600 mm dia. cast iron pipes double flanged weight of 1m pipe= 315.30kg				
	Weight of 5 m pipes 315.30x5 = 1576.50 kg				
7721	Screwed double flanged centrifugally cast (spun) C.I. Pipe of Class B conforming to I.S. 1536, - 600 mm dia	metre	5.00	15,330.00	76,650.00
2329	Carriage of Spun iron S & S pipes 600mm dia	100 metre	5.00	3,191.25	159.56
	Labour for laying				
18.23	Rate as per Item Number 18.23 of SH: Water supply	quintal	15.77	101.70	1,603.81 (A)
	TOTAL				78,413.37
	Add Water Charges @ 1% except on A i.e on (78,413.37 - 1,603.81 =) 76,809.56				768.10
	TOTAL				79,181.47
	Add CPOH @ 15% except on A i.e on (79,181.47 - 1,603.81 =) 77,577.66				11,636.65
	Cost of 5 metre				90,818.12
	Cost of 1 metre				18,163.62
	Say				18,163.60

18.72 Providing and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to IS: 8329 :

18.72.1 100 mm dia Ductile Iron Class K-7 pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
	100mm dia. cast iron pipes (in 5.5 m lengths)				
	Weight of 1m pipe= 15.39 kg				
	Weight of 10m pipes 15.39x10= 153.90 kg				
7722	Ductile Iron Class K- 7 pipe conforming to I.S. 8329 - 100 mm dia	metre	10.00	708.00	7,080.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
2343	Carriage of Ductile Iron pipes (k7) 100 mm dia	100 metre	10.00	191.48	19.15
	Labour for laying				
18.23	Rate as per Item Number 18.23 of SH: Water supply	quintal	1.54	101.70	156.62 (A)
	TOTAL				7,255.77
	Add Water Charges @ 1% except on A i.e on (7,255.77 - 156.62 =) 7,099.15				70.99
	TOTAL				7,326.76
	Add CPOH @ 15% except on A i.e on (7,326.76 - 156.62 =) 7,170.14				1,075.52
	Cost of 10 metre				8,402.28
	Cost of 1 metre				840.23
	Say				840.25

18.72.2 150 mm dia Ductile Iron Class K-7 pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
	150 mm dia. cast iron pipes (in 5.5 m lengths)				
	Weight of 1m pipe= 22.750kg				
	Weight of 10m pipes 22.750x 10 = 227.50 kg				
7723	Ductile Iron Class K- 7 pipe conforming to I.S. 8329 - 150 mm dia	metre	10.00	1,035.00	10,350.00
2344	Carriage of Cast iron pipes 150 mm dia	100 metre	10.00	319.12	31.91
	Labour for laying				
18.23	Rate as per Item Number 18.23 of SH: Water supply	quintal	2.28	101.70	231.88 (A)
	TOTAL				10,613.79
	Add Water Charges @ 1% except on A i.e on (10,613.79 - 231.88 =) 10,381.91				103.82
	TOTAL				10,717.61
	Add CPOH @ 15% except on A i.e on (10,717.61 - 231.88 =) 10,485.73				1,572.86
	Cost of 10 metre				12,290.47
	Cost of 1 metre				1,229.05
	Say				1,229.05

18.72.3 200 mm dia Ductile Iron Class K-7 pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
	200 mm dia. cast iron pipes (in 5.5 m lengths)				
	Weight of 1m pipe= 30.090 kg				
	Weight of 10m pipes 30.090x10 = 300.90 kg				
7724	Ductile Iron Class K- 7 pipe conforming to I.S. 8329 - 200 mm dia	metre	10.00	1,415.00	14,150.00
2345	Carriage of Cast iron ptpes 200 mm dia	100 metre	10.00	519.11	51.91

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Labour for laying				
18.23	Rate as per Item Number 18.23 of SH: Water supply	quintal	3.01	101.70	306.12 (A)
	TOTAL				14,508.03
	Add Water Charges @ 1% except on A i.e on (14,508.03 - 306.12 =) 14,201.91				142.02
	TOTAL				14,650.05
	Add CPOH @ 15% except on A i.e on (14,650.05 - 306.12 =) 14,343.93				2,151.59
	Cost of 10 metre				16,801.64
	Cost of 1 metre				1,680.16
	Say				1,680.15

18.72.4 250 mm dia Ductile Iron Class K-7 pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
	250mm dia. cast iron pipes (in 5.5 m lengths)				
	Weight of 1m pipe= 39.310kg				
	Weight of 10m pipes 39.310x10 = 393.10 kg				
7725	Ductile Iron Class K- 7 pipe conforming to I.S. 8329 - 250 mm dia	metre	10.00	1,920.00	19,200.00
2346	Carriage of Cast iron pipes 250 mm dia	100 metre	10.00	737.68	73.77
	Labour for laying				
18.23	Rate as per Item Number 18.23 of SH: Water supply	quintal	3.93	101.70	399.68 (A)
	TOTAL				19,673.45
	Add Water Charges @ 1% except on A i.e on (19,673.45 - 399.68 =) 19,273.77				192.74
	TOTAL				19,866.19
	Add CPOH @ 15% except on A i.e on (19,866.19 - 399.68 =) 19,466.51				2,919.98
	Cost of 10 metre				22,786.17
	Cost of 1 metre				2,278.62
	Say				2,278.60

18.72.5 300 mm dia Ductile Iron Class K-7 pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
	300mm dia. cast iron pipes (in 5.5 m lengths)				
	Weight of 1m pipe =48.400kg				
	Weight of 10m pipes 48.400x10 = 484.00 kg				
7726	Ductile Iron Class K- 7 pipe conforming to I.S. 8329 - 300 mm dia	metre	10.00	2,638.00	26,380.00
2347	Carriage of Cast iron pipes 300 mm dia	100 metre	10.00	911.78	91.18
	Labour for laying				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
18.23	Rate as per Item Number 18.23 of SH: Water supply	quintal	4.84	101.70	492.23 (A)
	TOTAL				26,963.41
	Add Water Charges @ 1% except on A i.e on (26,963.41 - 492.23 =) 26,471.18				264.71
	TOTAL				27,228.12
	Add CPOH @ 15% except on A i.e on (27,228.12 - 492.23 =) 26,735.89				4,010.38
	Cost of 10 metre				31,238.50
	Cost of 1 metre				3,123.85
	Say				3,123.85

18.72.6 350 mm dia Ductile Iron Class K-7 pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
	350mm dia. cast iron pipes (in 5.5 m lengths)				
	Weight of 1m pipe= 66.020kg				
	Weight of 10m pipes 66.020x10 = 660.20 kg				
7727	Ductile Iron Class K- 7 pipe conforming to I.S. 8329 - 350 mm dia	metre	10.00	3,135.00	31,350.00
2348	Carriage of Cast iron pipes 350 mm dia	100 metre	10.00	1,276.50	127.65
	Labour for laying				
18.23	Rate as per Item Number 18.23 of SH: Water supply	quintal	6.60	101.70	671.22 (A)
	TOTAL				32,148.87
	Add Water Charges @ 1% except on A i.e on (32,148.87 - 671.22 =) 31,477.65				314.78
	TOTAL				32,463.65
	Add CPOH @ 15% except on A i.e on (32,463.65 - 671.22 =) 31,792.43				4,768.86
	Cost of 10 metre				37,232.51
	Cost of 1 metre				3,723.25
	Say				3,723.25

18.72.7 400 mm dia Ductile Iron Class K-7 pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
	400mm dia. cast iron pipes (in 5.5 m lengths)				
	Weight of 10m pipes 78.280x10 = 782.80 kg				
7728	Ductile Iron Class K- 7 pipe conforming to I.S. 8329 - 400 mm dia	metre	10.00	3,714.00	37,140.00
2349	Carriage of Cast iron pipes 400 mm dia	100 metre	10.00	1,740.68	174.07
	Labour for laying				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
18.23	Rate as per Item Number 18.23 of SH: Water supply	quintal	7.83	101.70	796.31 (A)
	TOTAL				38,110.38
	Add Water Charges @ 1% except on A i.e on (38,110.38 - 796.31 =) 37,314.07				373.14
	TOTAL				38,483.52
	Add CPOH @ 15% except on A i.e on (38,483.52 - 796.31 =) 37,687.21				5,653.08
	Cost of 10 metre				44,136.60
	Cost of 1 metre				4,413.66
	Say				4,413.65

18.72.8 450 mm dia Ductile Iron Class K-7 pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre MATERIAL: 450mm dia. cast iron pipes (in 5.5 m lengths) Weight of 1m pipe= 91.410kg Weight of 10m pipes 91.410x10 = 914.10 kg				
7729	Ductile Iron Class K- 7 pipe conforming to I.S. 8329 - 450 mm dia	metre	10.00	4,411.00	44,110.00
2350	Carriage of Cast iron pipes 450 mm dia Labour for laying	100 metre	10.00	2,127.50	212.75
18.23	Rate as per Item Number 18.23 of SH: Water supply	quintal	9.14	101.70	929.54 (A)
	TOTAL				45,252.29
	Add Water Charges @ 1% except on A i.e on (45,252.29 - 929.54 =) 44,322.75				443.23
	TOTAL				45,695.52
	Add CPOH @ 15% except on A i.e on (45,695.52 - 929.54 =) 44,765.98				6,714.90
	Cost of 10 metre				52,410.42
	Cost of 1 metre				5,241.04
	Say				5,241.05

18.72.9 500 mm dia Ductile Iron Class K-7 pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre MATERIAL: 500mm dia. cast iron pipes (in 5.5 m lengths) Weight of 1m pipe = 106.640 kg Weight of 10m pipes 106.640x10 = 1066.40 kg				
7730	Ductile Iron Class K- 7 pipe conforming to I.S. 8329 - 500 mm dia	metre	10.00	5,214.00	52,140.00
2351	Carriage of Cast iron pipes 500 mm dia Labour for laying	100 metre	10.00	2,127.50	212.75

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
18.23	Rate as per Item Number 18.23 of SH: Water supply	quintal	10.66	101.70	1,084.12 (A)
	TOTAL				53,436.87
	Add Water Charges @ 1% except on A i.e on (53,436.87 - 1,084.12 =) 52,352.75				523.53
	TOTAL				53,960.40
	Add CPOH @ 15% except on A i.e on (53,960.40 - 1,084.12 =) 52,876.28				7,931.44
	Cost of 10 metre				61,891.84
	Cost of 1 metre				6,189.18
	Say				6,189.20

18.72.10 600 mm dia Ductile Iron Class K-7 pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre MATERIAL: 600mm dia. cast iron pipes (in 5.5 m lengths) Weight of 1m pipe=138.610kg Weight of 10m pipes 138.610x10= 1386.10 kg				
7731	Ductile Iron Class K- 7 pipe conforming to I.S. 8329 - 600 mm dia	metre	10.00	6,801.00	68,010.00
2352	Carriage of Cast iron pipes 600 mm dia Labour for laying	100 metre	10.00	3,191.25	319.12
18.23	Rate as per Item Number 18.23 of SH: Water supply	quintal	13.86	101.70	1,409.56 (A)
	TOTAL				69,738.68
	Add Water Charges @ 1% except on A i.e on (69,738.68 - 1,409.56 =) 68,329.12				683.29
	TOTAL				70,421.97
	Add CPOH @ 15% except on A i.e on (70,421.97 - 1,409.56 =) 69,012.41				10,351.86
	Cost of 10 metre				80,773.83
	Cost of 1 metre				8,077.38
	Say				8,077.40

18.72.11 700 mm dia Ductile Iron Class K-7 pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre MATERIAL: 700mm dia. cast iron pipes (in 5.5 m lengths) Weight of 1m pipe=188.920 kg Weight of 10m pipes 188.920x 10 = 1889.20 kg				
7732	Ductile Iron Class K- 7 pipe conforming to I.S. 8329 - 700 mm dia	metre	10.00	8,739.00	87,390.00
2353	Carriage of Cast iron pipes 700 mm dia Labour for laying	100 metre	10.00	3,191.25	319.12

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
18.23	Rate as per Item Number 18.23 of SH: Water supply	quintal	18.89	101.70	1,921.11 (A)
	TOTAL				89,630.23
	Add Water Charges @ 1% except on A i.e on (89,630.23 - 1,921.11 =) 87,709.12				877.09
	TOTAL				90,507.32
	Add CPOH @ 15% except on A i.e on (90,507.32 - 1,921.11 =) 88,586.21				13,287.93
	Cost of 10 metre				1,03,795.25
	Cost of 1 metre				10,379.53
	Say				10,379.50

18.72.12 800 mm dia Ductile Iron Class K-7 pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre MATERIAL: 800mm dia. cast iron pipes (in 5.5 m lengths) Weight of 1m pipe= 243.510kg Weight of 10m pipes 243.510x10 = 2435.10 kg				
7733	Ductile Iron Class K- 7 pipe conforming to I.S. 8329 - 800 mm dia	metre	10.00	11,156.00	1,11,560.00
2355	Carriage of Cast iron pipes 800 mm dia Labour for laying	100 metre	10.00	3,191.25	319.12
18.23	Rate as per Item Number 18.23 of SH: Water supply	quintal	24.35	101.70	2,476.40 (A)
	TOTAL				1,14,355.52
	Add Water Charges @ 1% except on A i.e on (1,14,355.52 - 2,476.40 =) 1,11,879.12				1,118.79
	TOTAL				1,15,474.31
	Add CPOH @ 15% except on A i.e on (1,15,474.31 - 2,476.40 =) 1,12,997.91				16,949.69
	Cost of 10 metre				1,32,424.00
	Cost of 1 metre				13,242.40
	Say				13,242.40

18.72.13 900 mm dia Ductile Iron Class K-7 pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre MATERIAL: 900 mm dia. cast iron pipes (in 5.5 m lengths) Weight of 1m pipe= 282.74 kg Weight of 10m pipes 282.74x10 = 2827.40 kg				
7734	Ductile Iron Class K- 7 pipe conforming to I.S. 8329 - 900 mm dia	metre	10.00	14,617.00	1,46,170.00
2356	Carriage of Cast iron pipes 900 mm dia Labour for laying	100 metre	10.00	4,786.87	478.69

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
18.23	Rate as per Item Number 18.23 of SH: Water supply	quintal	28.27	101.70	2,875.06 (A)
	TOTAL				1,49,523.75
	Add Water Charges @ 1% except on A i.e on (1,49,523.75 - 2,875.06 =) 1,46,648.69				1,466.49
	TOTAL				1,50,990.24
	Add CPOH @ 15% except on A i.e on (1,50,990.24 - 2,875.06 =) 1,48,115.18				22,217.28
	Cost of 10 metre				1,73,207.52
	Cost of 1 metre				17,320.75
	Say				17,320.75

18.72.14 1000 mm dia Ductile Iron Class K-7 pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre MATERIAL: 1000 mm dia. cast iron pipes (in 5.5 m lengths) Weight of 1m pipe= 348.230kg Weight of 10m pipes 348.230x 10 = 3482.30 kg				
7735	Ductile Iron Class K- 7 pipe conforming to I.S. 8329 - 1000 mm dia	metre	10.00	15,485.00	1,54,850.00
2357	Carriage of Cast iron pipes 1000 mm dia Labour for laying	100 metre	10.00	6,382.50	638.25
18.23	Rate as per Item Number 18.23 of SH: Water supply	quintal	34.82	101.70	3,541.19 (A)
	TOTAL				1,59,029.44
	Add Water Charges @ 1% except on A i.e on (1,59,029.44 - 3,541.19 =) 1,55,488.25				1,554.88
	TOTAL				1,60,584.32
	Add CPOH @ 15% except on A i.e on (1,60,584.32 - 3,541.19 =) 1,57,043.13				23,556.47
	Cost of 10 metre				1,84,140.79
	Cost of 1 metre				18,414.08
	Say				18,414.10

18.72.15 100 mm dia Ductile Iron Class K-9 pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre MATERIAL: 100mm dia. cast iron pipes (in 5.5 m lengths) Weight of 1m pipe= 17.760kg Weight of 10m pipes 17.760x 10=177.60 kg				
7651	Ductile Iron class K - 9 pipe Conforming to I.S. 8329 100 mm dia	metre	10.00	797.00	7,970.00
2319	Carriage of Spun iron S & S pipes 100 mm dia Labour for laying	100 metre	10.00	191.48	19.15

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
18.23	Rate as per Item Number 18.23 of SH: Water supply	quintal	1.776	101.70	180.62 (A)
	TOTAL				8,169.77
	Add Water Charges @ 1% except on A i.e on (8,169.77 - 180.62 =) 7,989.15				79.89
	TOTAL				8,249.66
	Add CPOH @ 15% except on A i.e on (8,249.66 - 180.62 =) 8,069.04				1,210.36
	Cost of 10 metre				9,460.02
	Cost of 1 metre				946.00
	Say				946.00

18.72.16 150 mm dia Ductile Iron Class K-9 pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
	150 mm dia. cast iron pipes (in 5.5 m lengths)				
	Weight of 1m pipe =26.27kg				
	Weight of 10m pipes 26.270x10 = 262.70 kg				
7652	Ductile Iron class K - 9 pipe Conforming to I.S. 8329 150 mm dia	metre	10.00	1,170.00	11,700.00
2321	Carriage of Spun iron S & S pipes 150 mm dia	100 metre	10.00	319.12	31.91
	Labour for laying				
18.23	Rate as per Item Number 18.23 of SH: Water supply	quintal	2.627	101.70	267.17 (A)
	TOTAL				11,999.08
	Add Water Charges @ 1% except on A i.e on (11,999.08 - 267.17 =) 11,731.91				117.32
	TOTAL				12,116.40
	Add CPOH @ 15% except on A i.e on (12,116.40 - 267.17 =) 11,849.23				1,777.38
	Cost of 10 metre				13,893.78
	Cost of 1 metre				1,389.38
	Say				1,389.40

18.72.17 200 mm dia Ductile Iron Class K-9 pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
	200 mm dia. cast iron pipes (in 5.5 m lengths)				
	Weight of 1m pipe= 36.150kg				
	Weight of 10m pipes 36.150x 10 = 361.50 kg				
7653	Ductile Iron class K - 9 pipe Conforming to I.S. 8329 200 mm dia	metre	10.00	1,595.00	15,950.00
2322	Carriage of Spun iron S & S pipes 200 mm dia	100 metre	10.00	519.11	51.91

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Labour for laying				
18.23	Rate as per Item Number 18.23 of SH: Water supply	quintal	3.615	101.70	367.65 (A)
	TOTAL				16,369.56
	Add Water Charges @ 1% except on A i.e on (16,369.56 - 367.65 =) 16,001.91				160.02
	TOTAL				16,529.58
	Add CPOH @ 15% except on A i.e on (16,529.58 - 367.65 =) 16,161.93				2,424.29
	Cost of 10 metre				18,953.87
	Cost of 1 metre				1,895.39
	Say				1,895.40

18.72.18 250 mm dia Ductile Iron Class K-9 pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
	250mm dia. cast iron pipes (in 5.5 m lengths)				
	Weight of 1m pipe = 48.00 kg				
	Weight of 10m pipes 48.000x10 = 480.00 kg				
7654	Ductile Iron class K - 9 pipe Conforming to I.S. 8329 - 250 mm dia	metre	10.00	2,105.00	21,050.00
2323	Carriage of Spun iron S & S pipes 250 mm dia	100 metre	10.00	737.68	73.77
	Labour for laying				
18.23	Rate as per Item Number 18.23 of SH: Water supply	quintal	4.80	101.70	488.16 (A)
	TOTAL				21,611.93
	Add Water Charges @ 1% except on A i.e on (21,611.93 - 488.16 =) 21,123.77				211.24
	TOTAL				21,823.17
	Add CPOH @ 15% except on A i.e on (21,823.17 - 488.16 =) 21,335.01				3,200.25
	Cost of 10 metre				25,023.42
	Cost of 1 metre				2,502.34
	Say				2,502.35

18.72.19 300 mm dia Ductile Iron Class K-9 pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
	300mm dia. cast iron pipes (in 5.5 m lengths)				
	Weight of 1m pipe= 60.490 kg				
	Weight of 10m pipes 60.490x10 = 604.90 kg				
7655	Ductile Iron class K - 9 pipe Conforming to 1.S. 8329 - 300 mm dia	metre	10.00	2,680.00	26,800.00
2324	Carriage of Spun iron S & S pipes 300 mm. dia	100 metre	10.00	911.78	91.18

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Labour for laying				
18.23	Rate as per Item Number 18.23 of SH: Water supply	quintal	6.049	101.70	615.18 (A)
	TOTAL				27,506.36
	Add Water Charges @ 1% except on A i.e on (27,506.36 - 615.18 =) 26,891.18				268.91
	TOTAL				27,775.27
	Add CPOH @ 15% except on A i.e on (27,775.27 - 615.18 =) 27,160.09				4,074.01
	Cost of 10 metre				31,849.28
	Cost of 1 metre				3,184.93
	Say				3,184.95

18.72.20 350 mm dia Ductile Iron Class K-9 pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
	350mm dia. cast iron pipes (in 5.5 m lengths)				
	Weight of 1m pipe = 79.730 kg				
	Weight of 10m pipes 79.730x10 = 797.30 kg				
7656	Ductile Iron class K - 9 pipe Conforming to I.S. 8329 - 350 mm dia	metre	10.00	3,225.00	32,250.00
2325	Carriage of Spun iron S & S pipes 350 mm dia	100 metre	10.00	1,276.50	127.65
	Labour for laying				
18.23	Rate as per Item Number 18.23 of SH: Water supply	quintal	7.973	101.70	810.85 (A)
	TOTAL				33,188.50
	Add Water Charges @ 1% except on A i.e on (33,188.50 - 810.85 =) 32,377.65				323.78
	TOTAL				33,512.28
	Add CPOH @ 15% except on A i.e on (33,512.28 - 810.85 =) 32,701.43				4,905.21
	Cost of 10 metre				38,417.49
	Cost of 1 metre				3,841.75
	Say				3,841.75

18.72.21 400 mm dia Ductile Iron Class K-9 pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
	400mm dia. cast iron pipes (in 5.5 m lengths)				
	Weight of 1m pipe =94.800 kg				
	Weight of 10m pipes 94.800x10 = 948.00 kg				
7657	Ductile Iron class K - 9 pipe Conforming to I.S. 8329 - 400 mm dia	metre	10.00	4,350.00	43,500.00
2326	Carriage of Spun iron S & S pipes 400 mm dia	100 metre	10.00	1,740.68	174.07

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Labour for laying				
18.23	Rate as per Item Number 18.23 of SH: Water supply	quintal	9.48	101.70	964.12 (A)
	TOTAL				44,638.19
	Add Water Charges @ 1% except on A i.e on (44,638.19 - 964.12 =) 43,674.07				436.74
	TOTAL				45,074.93
	Add CPOH @ 15% except on A i.e on (45,074.93 - 964.12 =) 44,110.81				6,616.62
	Cost of 10 metre				51,691.55
	Cost of 1 metre				5,169.16
	Say				5,169.15

18.72.22 450 mm dia Ductile Iron Class K-9 pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
	450mm dia. cast iron pipes (in 5.5 m lengths)				
	Weight of 1m pipe= 110.970kg				
	Weight of 10m pipes 110.970x 10 = 1109.70 kg				
7658	Ductile Iron class K - 9 pipe Conforming to I.S. 8329 - 450 mm dia	metre	10.00	5,085.00	50,850.00
2327	Carriage of Spun iron S & S pipes 450 mm dia	100 metre	10.00	2,127.50	212.75
	Labour for laying				
18.23	Rate as per Item Number 18.23 of SH: Water supply	quintal	11.097	101.70	1,128.56 (A)
	TOTAL				52,191.31
	Add Water Charges @ 1% except on A i.e on (52,191.31 - 1,128.56 =) 51,062.75				510.63
	TOTAL				52,701.94
	Add CPOH @ 15% except on A i.e on (52,701.94 - 1,128.56 =) 51,573.38				7,736.01
	Cost of 10 metre				60,437.95
	Cost of 1 metre				6,043.80
	Say				6,043.80

18.72.23 500 mm dia Ductile Iron Class K-9 pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
	500mm dia. cast iron pipes (in 5.5 m lengths)				
	Weight of 1m pipe =129.480kg				
	Weight of 10m pipes 129.480x10= 1294.80 kg				
7659	Ductile Iron class K - 9 pipe Conforming to I.S. 8329 - 500 mm dia	metre	10.00	6,180.00	61,800.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
2328	Carriage of Spun iron S & S pipes 500 mm dia	100 metre	10.00	2,127.50	212.75
	Labour for laying				
18.23	Rate as per Item Number 18.23 of SH: Water supply	quintal	12.948	101.70	1,316.81 (A)
	TOTAL				63,329.56
	Add Water Charges @ 1% except on A i.e on (63,329.56 - 1,316.81 =) 62,012.75				620.13
	TOTAL				63,949.69
	Add CPOH @ 15% except on A i.e on (63,949.69 - 1,316.81 =) 62,632.88				9,394.93
	Cost of 10 metre				73,344.62
	Cost of 1 metre				7,334.46
	Say				7,334.45

18.72.24 600 mm dia Ductile Iron Class K-9 pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre MATERIAL: 600mm dia. cast iron pipes (in 5.5 m lengths) Weight of 1m pipe= 168.680 kg Weight of 10m pipes 168.680x10= 1686.80 kg				
7660	Ductile Iron class K -9 pipe Conforming to I.S. 8329 - 600 mm dia	metre	10.00	7,430.00	74,300.00
2329	Carriage of Spun iron S & S pipes 600mm dia	100 metre	10.00	3,191.25	319.12
	Labour for laying				
18.23	Rate as per Item Number 18.23 of SH: Water supply	quintal	16.868	101.70	1,715.48 (A)
	TOTAL				76,334.60
	Add Water Charges @ 1% except on A i.e on (76,334.60 - 1,715.48 =) 74,619.12				746.19
	TOTAL				77,080.79
	Add CPOH @ 15% except on A i.e on (77,080.79 - 1,715.48 =) 75,365.31				11,304.80
	Cost of 10 metre				88,385.59
	Cost of 1 metre				8,838.56
	Say				8,838.55

18.72.25 700 mm dia Ductile Iron Class K-9 pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre MATERIAL: 700mm dia. cast iron pipes (in 5.5 m lengths) Weight of 1m pipe= 217.540 kg Weight of 10m pipes 217.540x10 = 2175.40 kg				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7661	Ductile Iron class K - 9 pipe Conforming to I.S. 8329 - 700 mm dia	metre	10.00	10,050.00	1,00,500.00
2330	Carriage of C.I. pipes 500 mm dia Labour for laying	100 metre	10.00	2,127.50	212.75
18.23	Rate as per Item Number 18.23 of SH: Water supply	quintal	21.754	101.70	2,212.38 (A)
	TOTAL				1,02,925.13
	Add Water Charges @ 1% except on A i.e on (1,02,925.13 - 2,212.38 =) 1,00,712.75				1,007.13
	TOTAL				1,03,932.26
	Add CPOH @ 15% except on A i.e on (1,03,932.26 - 2,212.38 =) 1,01,719.88				15,257.98
	Cost of 10 metre				1,19,190.24
	Cost of 1 metre				11,919.02
	Say				11,919.00

18.72.26 750 mm dia Ductile Iron Class K-9 pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre MATERIAL: 750mm dia. cast iron pipes (in 5.5 m lengths) Wt. of 1 m pipe = 242.60 kg. Weight of 10m pipes 242.60x10 = 2426.00 kg				
7662	Ductile Iron class K - 9 pipe Conforming to I.S. 8329 - 750 mm dia	metre	10.00	11,350.00	1,13,500.00
2331	Carriage of R.C.C. pipes 900 mm dia Labour for laying	100 metre	10.00	4,786.87	478.69
18.23	Rate as per Item Number 18.23 of SH: Water supply	quintal	24.26	101.70	2,467.24 (A)
	TOTAL				1,16,445.93
	Add Water Charges @ 1% except on A i.e on (1,16,445.93 - 2,467.24 =) 1,13,978.69				1,139.79
	TOTAL				1,17,585.72
	Add CPOH @ 15% except on A i.e on (1,17,585.72 - 2,467.24 =) 1,15,118.48				17,267.77
	Cost of 10 metre				1,34,853.49
	Cost of 1 metre				13,485.35
	Say				13,485.35

18.72.27 - 800 mm dia Ductile Iron Class K-9 pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre MATERIAL: 800 mm dia. cast iron pfpes (in 5.5 m lengths) Weight of 1m pipe= 267.100 kg Weight of 10m pipes 267.100x10 = 2671.00 kg				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7663	Ductile Iron class K - 9 pipe Conforming to I.S. 8329 - 800 mm dia	metre	10.00	11,990.00	1,19,900.00
2332	Carriage of R.C.C. pipes 1000 mm dia Labour for laying	100 metre	10.00	6,382.50	638.25
18.23	Rate as per Item Number 18.23 of SH: Water supply	quintal	26.71	101.70	2,716.41 (A)
	TOTAL				1,23,254.66
	Add Water Charges @ 1% except on A i.e on (1,23,254.66 - 2,716.41 =) 1,20,538.25				1,205.38
	TOTAL				1,24,460.04
	Add CPOH @ 15% except on A i.e on (1,24,460.04 - 2,716.41 =) 1,21,743.63				18,261.54
	Cost of 10 metre				1,42,721.58
	Cost of 1 metre				14,272.16
	Say				14,272.15

18.72.28 900 mm dia Ductile Iron Class K-9 pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre MATERIAL: 900 mm dia. cast iron pipes (in 5.5 m lengths) Weight of 1m pipe =321.290 kg Weight of 10m pipes 321.290x10 = 3212.90 kg				
7664	Ductile Iron class K - 9 pipe Conforming to 1.S. 8329 - 900 mm dia	metre	10.00	14,030.00	1,40,300.00
2333	Carriage of R. C. C. pipes 1100 mm dia Labour for laying	100 metre	10.00	6,382.50	638.25
18.23	Rate as per Item Number 18.23 of SH: Water supply	quintal	32.129	101.70	3,267.52 (A)
	TOTAL				1,44,205.77
	Add Water Charges @ 1% except on A i.e on (1,44,205.77 - 3,267.52 =) 1,40,938.25				1,409.38
	TOTAL				1,45,615.15
	Add CPOH @ 15% except on A i.e on (1,45,615.15 - 3,267.52 =) 1,42,347.63				21,352.14
	Cost of 10 metre				1,66,967.29
	Cost of 1 metre				16,696.73
	Say				16,696.70

18.72.29 1000 mm dia Ductile Iron Class K-9 pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre MATERIAL: 1000 mm dia. cast iron pipes (in 5.5 m lengths) Weight of 1m pipe = 380.190 kg Weight of 10m pipes 380.190x10 = 3801.90 kg				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7665	Ductile Iron class K - 9 pipe Conforming to I.S. 8329 - 1000 mm dia	metre	10.00	15,750.00	1,57,500.00
2334	Carriage of R.C.C. pipes 1200 mm dia	100 metre	10.00	6,382.50	638.25
	Labour for laying				
18.23	Rate as per Item Number 18.23 of SH: Water supply	quintal	38.019	101.70	3,866.53 (A)
	TOTAL				1,62,004.78
	Add Water Charges @ 1% except on A i.e on (1,62,004.78 - 3,866.53 =) 1,58,138.25				1,581.38
	TOTAL				1,63,586.16
	Add CPOH @ 15% except on A i.e on (1,63,586.16 - 3,866.53 =) 1,59,719.63				23,957.94
	Cost of 10 metre				1,87,544.10
	Cost of 1 metre				18,754.41
	Say				18,754.40

18.73 Providing and laying Double Flanged (Screwed / Welded) Centrifugally (Spun) Ductile Iron Pipes of Class K-9 conforming to IS: 8329:

18.73.1 100 mm dia Ductile Iron Double Flanged

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 5 metre				
	MATERIAL:				
	100 mm dia. ductile iron pipes double flanged				
	Weight of 1m pipe = 21.700 kg				
	Weight of 10m pipes 21.700x5 = 108.50 kg				
7686	Ductile Iron Pipe Class K-9 flanges and welding 100 mm dia	metre	5.00	2,025.00	10,125.00
2319	Carriage of Spun iron S & S pipes 100 mm dia	100 metre	5.00	191.48	9.57
	Labour for laying				
18.23	Rate as per Item Number 18.23 of SH: Water supply	quintal	1.09	101.70	110.85 (A)
	TOTAL				10,245.42
	Add Water Charges @ 1% except on A i.e on (10,245.42 - 110.85 =) 10,134.57				101.35
	TOTAL				10,346.77
	Add CPOH @ 15% except on A i.e on (10,346.77 - 110.85 =) 10,235.92				1,535.39
	Cost of 5 metre				11,882.16
	Cost of 1 metre				2,376.43
	Say				2,376.45

18.73.2 150 mm dia Ductile Iron Double Flanged

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 5 metre				
	MATERIAL:				
	150 mm dia. ductile iron pipes double flanged				
	Weight of 1m pipe = 32.600 kg				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Weight of 5m pipes32.600x5 = 163.00kg				
7687	Ductile Iron Pipe Class K-9 flanges and welding 150 mm dia	metre	5.00	2,825.00	14,125.00
2321	Carriage of Spun iron S & S pipes 150 mm dia	100 metre	5.00	319.12	15.96
	Labour for laying				
18.23	Rate as per Item Number 18.23 of SH: Water supply	quintal	1.63	101.70	165.77 (A)
	TOTAL				14,306.73
	Add Water Charges @ 1% except on A i.e on (14,306.73 - 165.77 =) 14,140.96				141.41
	TOTAL				14,448.14
	Add CPOH @ 15% except on A i.e on (14,448.14 - 165.77 =) 14,282.37				2,142.36
	Cost of 5 metre				16,590.50
	Cost of 1 metre				3,318.10
	Say				3,318.10

18.73.3 200 mm dia Ductile Iron Double Flanged

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 5 metre				
	MATERIAL:				
	200mm dia. ductile iron pipes double flanged				
	Weight of 1m pipe = 44.200 kg				
	Weight of 5m pipes44.200x5 =221.00kg				
7688	Ductile Iron Pipe Class K-9 flanges and welding 200 mm dia	metre	5.00	3,740.00	18,700.00
2322	Carriage of Spun iron S & S pipes 200 mm dia	100 metre	5.00	519.11	25.96
	Labour for laying				
18.23	Rate as per Item Number 18.23 of SH: Water supply	quintal	2.21	101.70	224.76 (A)
	TOTAL				18,950.72
	Add Water Charges @ 1% except on A i.e on (18,950.72 - 224.76 =) 18,725.96				187.26
	TOTAL				19,137.98
	Add CPOH @ 15% except on A i.e on (19,137.98 - 224.76 =) 18,913.22				2,836.98
	Cost of 5 metre				21,974.96
	Cost of 1 metre				4,394.99
	Say				4,395.00

18.73.4 250 mm dia Ductile Iron Double Flanged

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 5 metre				
	MATERIAL:				
	250 mm dia. ductile iron pipes double flanged				
	Weight of 1m pipe =59.400kg				
	Weight of 5m pipes 59.400x5 = 297.00kg				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7689	Ductile Iron Pipe Class K-9 flanges and welding 250 mm dia	metre	5.00	4,935.00	24,675.00
2323	Carriage of Spun iron S & S pipes 250 mm dia Labour for laying	100 metre	5.00	737.68	36.88
18.23	Rate as per Item Number 18.23 of SH: Water supply	quintal	2.97	101.70	302.05 (A)
	TOTAL				25,013.93
	Add Water Charges @ 1% except on A i.e on (25,013.93 - 302.05 =) 24,711.88				247.12
	TOTAL				25,261.05
	Add CPOH @ 15% except on A i.e on (25,261.05 - 302.05 =) 24,959.00				3,743.85
	Cost of 5 metre				29,004.90
	Cost of 1 metre				5,800.98
	Say				5,801.00

18.73.5 300 mm dia Ductile Iron Double Flanged

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 5 metre MATERIAL: 300 mm dia. ductile iron pipes double flanged Weight of 1m pipe =76.400kg Weight of 5m pipes 76.400x5 = 382.00kg				
7690	Ductile Iron Pipe Class K-9 flanges and welding 300 mm dia	metre	5.00	6,330.00	31,650.00
2324	Carriage of Spun iron S & S pipes 300 mm. dia Labour for laying	100 metre	5.00	911.78	45.59
18.23	Rate as per Item Number 18.23 of SH: Water supply	quintal	3.82	101.70	388.49 (A)
	TOTAL				32,084.08
	Add Water Charges @ 1% except on A i.e on (32,084.08 - 388.49 =) 31,695.59				316.96
	TOTAL				32,401.04
	Add CPOH @ 15% except on A i.e on (32,401.04 - 388.49 =) 32,012.55				4,801.88
	Cost of 5 metre				37,202.92
	Cost of 1 metre				7,440.58
	Say				7,440.60

18.73.6 350 mm dia Ductile Iron Double Flanged

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 5 metre MATERIAL: 350 mm dia. ductile iron pipes double flanged Weight of 1m pipe =91.400kg Weight of 5m pipes 91.400x5 = 457.00kg				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7691	Ductile Iron Pipe Class K-9 flanges and welding 350 mm dia	metre	5.00	8,020.00	40,100.00
2325	Carriage of Spun iron S & S pipes 350 mm dia Labour for laying	100 metre	5.00	1,276.50	63.82
18.23	Rate as per Item Number 18.23 of SH: Water supply	quintal	4.57	101.70	464.77 (A)
	TOTAL				40,628.59
	Add Water Charges @ 1% except on A i.e on (40,628.59 - 464.77 =) 40,163.82				401.64
	TOTAL				41,030.23
	Add CPOH @ 15% except on A i.e on (41,030.23 - 464.77 =) 40,565.46				6,084.82
	Cost of 5 metre				47,115.05
	Cost of 1 metre				9,423.01
	Say				9,423.00

18.73.7 400 mm dia Ductile Iron Double Flanged

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 5 metre MATERIAL: 400 mm dia. ductile iron pipes double flanged Weight of 1m pipe =108.100kg Weight of 5m pipes 108.100x5 = 540.50kg				
7692	Ductile Iron Pipe Class K-9 flanges and welding 400 mm dia	metre	5.00	9,645.00	48,225.00
2326	Carriage of Spun iron S & S pipes 400 mm dia Labour for laying	100 metre	5.00	1,740.68	87.03
18.23	Rate as per Item Number 18.23 of SH: Water supply	quintal	5.40	101.70	549.18 (A)
	TOTAL				48,861.21
	Add Water Charges @ 1% except on A i.e on (48,861.21 - 549.18 =) 48,312.03				483.12
	TOTAL				49,344.33
	Add CPOH @ 15% except on A i.e on (49,344.33 - 549.18 =) 48,795.15				7,319.27
	Cost of 5 metre				56,663.60
	Cost of 1 metre				11,332.72
	Say				11,332.70

18.73.8 450 mm dia Ductile Iron Double Flanged

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 5 metre MATERIAL: 450 mm dia. ductile iron pipes double flanged Weight of 1m pipe =127.800kg Weight of 5m pipes 127.800x5 = 639.00kg				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7693	Ductile Iron Pipe Class K-9 flanges and welding 450 mm dia	metre	5.00	11,675.00	58,375.00
2327	Carriage of Spun iron S & S pipes 450 mm dia Labour for laying	100 metre	5.00	2,127.50	106.38
18.23	Rate as per Item Number 18.23 of SH: Water supply	quintal	6.39	101.70	649.86 (A)
	TOTAL				59,131.24
	Add Water Charges @ 1% except on A i.e on (59,131.24 - 649.86 =) 58,481.38				584.81
	TOTAL				59,716.05
	Add CPOH @ 15% except on A i.e on (59,716.05 - 649.86 =) 59,066.19				8,859.93
	Cost of 5 metre				68,575.98
	Cost of 1 metre				13,715.20
	Say				13,715.20

18.73.9 500 mm dia Ductile Iron Double Flanged

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 5 metre MATERIAL: 500 mm dia. ductile iron pipes double flanged Weight of 1m pipe =147.900kg Weight of 5m pipes 147.900x5 = 739.50kg				
7694	Ductile Iron Pipe Class K-9 flanges and welding 500 mm dia	metre	5.00	13,895.00	69,475.00
2328	Carriage of Spun iron S & S pipes 500 mm dia Labour for laying	100 metre	5.00	2,127.50	106.38
18.23	Rate as per Item Number 18.23 of SH: Water supply	quintal	7.40	101.70	752.58 (A)
	TOTAL				70,333.96
	Add Water Charges @ 1% except on A i.e on (70,333.96 - 752.58 =) 69,581.38				695.81
	TOTAL				71,029.77
	Add CPOH @ 15% except on A i.e on (71,029.77 - 752.58 =) 70,277.19				10,541.58
	Cost of 5 metre				81,571.35
	Cost of 1 metre				16,314.27
	Say				16,314.30

18.73.10 600 mm dia Ductile Iron Double Flanged

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 5 metre MATERIAL: 600 mm dia. ductile iron pipes double flanged Weight of 1m pipe =198.900kg Weight of 5m pipes 198.900x5 = 994.50kg				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7695	Ductile Iron Pipe Class K-9 flanges and welding 600 mm dia	metre	5.00	18,760.00	93,800.00
2329	Carriage of Spun iron S & S pipes 600mm dia	100 metre	5.00	3,191.25	159.56
	Labour for laying				
18.23	Rate as per Item Number 18.23 of SH: Water supply	quintal	9.95	101.70	1,011.92 (A)
	TOTAL				94,971.48
	Add Water Charges @ 1% except on A i.e on (94,971.48 - 1,011.92 =) 93,959.56				939.60
	TOTAL				95,911.08
	Add CPOH @ 15% except on A i.e on (95,911.08 - 1,011.92 =) 94,899.16				14,234.87
	Cost of 5 metre				1,10,145.95
	Cost of 1 metre				22,029.19
	Say				22,029.20

18.73.11 700 mm dia Ductile Iron Double Flanged

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 5 metre				
	MATERIAL:				
	700 mm dia. ductile iron pipes double flanged				
	Weight of 1m pipe =254.90 kg				
	Weight of 5m pipes 254.90x5 = 1274.50 kg				
7696	Ductile Iron Pipe Class K-9 flanges and welding 700 mm dia	metre	5.00	23,275.00	1,16,375.00
2330	Carriage of C.I. pipes 500 mm dia	100 metre	5.00	2,127.50	106.38
	Labour for laying				
18.23	Rate as per Item Number 18.23 of SH: Water supply	quintal	12.75	101.70	1,296.68 (A)
	TOTAL				1,17,778.06
	Add Water Charges @ 1% except on A i.e on (1,17,778.06 - 1,296.68 =) 1,16,481.38				1,164.81
	TOTAL				1,18,942.87
	Add CPOH @ 15% except on A i.e on (1,18,942.87 - 1,296.68 =) 1,17,646.19				17,646.93
	Cost of 5 metre				1,36,589.80
	Cost of 1 metre				27,317.96
	Say				27,318.00

18.74 Providing and fixing unplasticised P.V.C. connection pipe with PTMT Nuts, collar and bush of approved quality and colour.

18.74.1 15 mm nominal bore with 30 cm length

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7862	15 mm nominal bore and 30 cm length PVC connection pipe with P.T.M.T. Nuts	each	1.00	33.00	33.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Carriage of materials and fixing charges	L.S.	12.22	1.49	18.21
	TOTAL				51.21
	Add Water Charges @ 1%				0.51
	TOTAL				51.72
	Add CPOH @ 15%				7.76
	Cost of each				59.48
	Say				59.50

18.74.2 15 mm nominal bore with 45 cm length

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7863	15 mm nominal bore and 45 cm length PVC connection pipe with P.T.M.T. Nuts	each	1.00	38.00	38.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.49	20.14
	TOTAL				58.14
	Add Water Charges @ 1%				0.58
	TOTAL				58.72
	Add CPOH @ 15%				8.81
	Cost of each				67.53
	Say				67.55

18.75 Providing and fixing PTMT extension nipple for water tank pipe, fittings of approved quality and colour.

18.75.1 15 mm nominal bore, weighing not less than 32 gms

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7864	P.T.M.T. extension nipple 15 mm	each	1.00	32.00	32.00
9999	Carriage of materials and fixing charges	L.S.	3.38	1.49	5.04
	TOTAL				37.04
	Add Water Charges @ 1%				0.37
	TOTAL				37.41
	Add CPOH @ 15%				5.61
	Cost of each				43.02
	Say				43.00

18.75.2 20 mm nominal bore, weighing not less than 40 gms

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7865	P.T.M.T. extension nipple 20 mm	each	1.00	38.00	38.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Carriage of materials and fixing charges	L.S.	3.38	1.49	5.04
	TOTAL				43.04
	Add Water Charges @ 1%				0.43
	TOTAL				43.47
	Add CPOH @ 15%				6.52
	Cost of each				49.99
	Say				50.00

18.75.3 25 mm nominal bore, weighing not less than 62 gms

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7866	P.T.M.T. extension nipple 25 mm	each	1.00	57.00	57.00
9999	Carriage of materials and fixing charges	L.S.	3.38	1.49	5.04
	TOTAL				62.04
	Add Water Charges @ 1%				0.62
	TOTAL				62.66
	Add CPOH @ 15%				9.40
	Cost of each				72.06
	Say				72.05

18.76 Cutting holes up to 30x30 cm in walls including making good the same:
18.76.1 With common burnt clay F.P.S. (non modular) brick

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 holes Size 30x30cm in 34 cm wall				
	Labour for cutting holes				
0123	Mason (brick layer) 1 st class	day	0.16	301.00	48.16
0124	Mason (brick layer) 2nd class	day	0.16	273.00	43.68
0114	Beldar	day	1.25	247.00	308.75
	Brick work with bricks of class designation 75 in cement mortar 1:4(1 cement: 4 coarse sand)				
	10x0.30x0.30x0.344m = 0.309 cum				
	Les 33% for pipe etc. = (-) 0.102 cum				
	= 0.207 cum Say 0.21 cum				
6.4.1	Rate as per Item Number 6.4.1 of SH: Brick work	cum	0.21	4,067.85	854.25 (A)
	12 mm cement plaster 1:4 (1 cement: 4 coarse				
	sand)				
	10x2x0.3x0.3m = 1.80 sqm				
	Les 33% for pipe etc. = (-) 0.59 sqm				
	= 1.21 sqm Say 1.20 sqm				
13.4.1	Rate as per Item Number 13.4.1 of SH: Finishing	sqm	1.20	132.10	158.52 (A)
9999	Add for delay	L.S.	16.12	1.49	24.02

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries	L.S.	8.06	1.49	12.01
	TOTAL				1,449.39
	Add Water Charges @ 1% except on A i.e on (1,449.39 - 1,012.77 =) 436.62				4.37
	TOTAL				1,453.76
	Add CPOH @ 15% except on A i.e on (1,453.76 - 1,012.77 =) 440.99				66.15
	Cost of 10 nos				1,519.91
	Cost of each				151.99
	Say				152.00

18.77 Cutting holes up to 15x15 cm in R.C.C. floors and roofs for passing drain pipe etc. and repairing the hole after insertion of drain pipe etc. with cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), including finishing complete so as to make it leak proof.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 holes Average size 15x15x15 cm				
	Labour for cutting holes				
0123	Mason (brick layer) 1 st class	day	0.83	301.00	249.83
0124	Mason (brick layer) 2nd class	day	0.83	273.00	226.59
0114	Beldar	day	1.67	247.00	412.49
	Cement concrete 1:2:4 (1 cement: 2 coarse sand ; 4 graded stone aggregate 20 mm nominal size)				
	10x0.15x0.15x0.15 m = 0.033 cum				
	Les 33% for pipe etc. = (-) 0.011 cum				
	= 0.022 cum Say 0.0.02 cum				
4.1.3	Rate as per Item Number 4.1.3 of SH: Concrete work	cum	0.02	4,514.05	90.28 (A)
9999	Finishing top and bottom and making the holes leak proof	L.S.	121.16	1.49	180.53
9999	Add for delay	L.S.	40.30	1.49	60.05
9999	Sundries	L.S.	21.58	1.49	32.15
	TOTAL				1,251.92
	Add Water Charges @ 1% except on A i.e on (1,251.92 - 90.28 =) 1,161.64				11.62
	TOTAL				1,263.54
	Add CPOH @ 15% except on A i.e on (1,263.54 - 90.28 =) 1,173.26				175.99
	Cost of 10 nos				1,439.53
	Cost of each				143.95
	Say				143.95

18.78 Making chases up to 7.5x7.5 cm in walls including making good and finishing with matching surface after housing G.I. pipe etc.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	Labour for making chases				
0123	Mason (brick layer) 1 st class	day	0.25	301.00	75.25

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0124	Mason (brick layer) 2nd class	day	0.25	273.00	68.25
0114	Beldar	day	1.00	247.00	247.00
	Cement concrete 1:3:6 (1 cement: 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) 0.075x0.075x10 m = 0.05625 cum Les 33% for pipe etc. = (-) 0.01856 cum = 0.03769 cum Say 0.04 cum				
4.2.5	Rate as per Item Number 4.2.5 of SH: Concrete work	cum	0.04	4,782.35	191.29 (A)
	TOTAL				581.79
	Add Water Charges @ 1% except on A i.e on (581.79 - 191.29 =) 390.50				3.90
	TOTAL				585.69
	Add CPOH @ 15% except on A i.e on (585.69 - 191.29 =) 394.40				59.16
	Cost of 10 metre				644.85
	Cost of 1 metre				64.49
	Say				64.50

18.79 Making hole up to 20x20 cm and embedding pipes up to 150 mm diameter in masonry and filling with cement concrete 1:3:6 (1 cement : 3 coarse sand 6 graded stone aggregate 20 mm nominal size) including disposal of malba.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metres Cement concrete 1:3:6 (1 cement: 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) 0.2x0.2x10 m = 0.40 cum Less for pipe 3.1416 x 0.15^2 / 4 x 10 m=0.177 cum = 0.223 cum Say 0.22 cum				
4.2.5	Rate as per Item Number 4.2.5 of SH: Concrete work	cum	0.22	4,782.35	1,052.12 (A)
9999	Disposal of malba	L.S.	13.52	1.49	20.14
	TOTAL				1,072.26
	Add Water Charges @ 1% except on A i.e on (1,072.26 - 1,052.12 =) 20.14				0.20
	TOTAL				1,072.46
	Add CPOH @ 15% except on A i.e on (1,072.46 - 1,052.12 =) 20.34				3.05
	Cost of 10 metre				1,075.51
	Cost of 1 metre				107.55
	Say				107.55

18.80 Disinfecting C.I. 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.

18.80.1 80 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 metres				
	MATERIAL:				
	Bleaching powder				
	3x3.1416/4x(80/10)² x(100x100)/1000x0.5 gms.				
	= 754.28 gms Say 0.008 q				
1301	Bleaching powder	quintal	0.008	1,750.00	14.00
	LABOUR:				
0116	Fitter (grade 1)	day	0.33	301.00	99.33
0114	Beldar	day	1.31	247.00	323.57
9999	Sundries including testing of samples	L.S.	9.88	1.49	14.72
	TOTAL				451.62
	Add Water Charges @ 1%				4.52
	TOTAL				456.14
	Add CPOH @ 15%				68.42
	Cost of 100 metre				524.56
	Say				524.55

18.80.2 100 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 metres				
	MATERIAL:				
	Bleaching powder				
	3x(3.1416/4)x(100/10)² x(100x100)/1000x0.5 gms.				
	= 1178.57 gms Say 0.012 q				
1301	Bleaching powder	quintal	0.012	1,750.00	21.00
	LABOUR:				
0116	Fitter (grade 1)	day	0.49	301.00	147.49
0114	Beldar	day	1.64	247.00	405.08
9999	Sundries including testing of samples	L.S.	13.52	1.49	20.14
	TOTAL				593.71
	Add Water Charges @ 1%				5.94
	TOTAL				599.65
	Add CPOH @ 15%				89.95
	Cost of 100 metre				689.60
	Say				689.60

18.80.3 125 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 metres				
	MATERIAL:				
	Bleaching powder				
	3x(3.1416/4)x(125/10)² x(100x100)/1000x0.5 gms.				
	= 1841.52 gms Say 0.018q				
1301	Bleaching powder	quintal	0.018	1,750.00	31.50
	LABOUR:				
0116	Fitter (grade 1)	day	0.66	301.00	198.66

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Beldar	day	1.97	247.00	486.59
9999	Sundries including testing of samples	L.S.	17.94	1.49	26.73
	TOTAL				743.48
	Add Water Charges @ 1%				7.43
	TOTAL				750.91
	Add CPOH @ 15%				112.64
	Cost of 100 metre				863.55
	Say				863.55

18.80.4 150 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 metres				
	MATERIAL:				
	Bleaching powder				
	3x(3.1416/4)x(150/10)² x(100x100)/1000x0.5 gms.				
	= 2651 gms Say 0.027 q				
1301	Bleaching powder	quintal	0.027	1,750.00	47.25
	LABOUR:				
0116	Fitter (grade 1)	day	0.82	301.00	246.82
0114	Beldar	day	2.30	247.00	568.10
9999	Sundries including testing of samples	L.S.	22.88	1.49	34.09
	TOTAL				896.26
	Add Water Charges @ 1%				8.96
	TOTAL				905.22
	Add CPOH @ 15%				135.78
	Cost of 100 metre				1,041.00
	Say				1,041.00

18.80.5 200 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 metres				
	MATERIAL:				
	Bleaching powder				
	3x(3.1416/4)x(200/10)² x(100x100)/1000x0.5 gms.				
	= 4712.39 gms Say 0.047 q				
1301	Bleaching powder	quintal	0.047	1,750.00	82.25
	LABOUR:				
0116	Fitter (grade 1)	day	1.15	301.00	346.15
0114	Beldar	day	2.95	247.00	728.65
9999	Sundries including testing of samples	L.S.	31.46	1.49	46.88
	TOTAL				1,203.93
	Add Water Charges @ 1%				12.04
	TOTAL				1,215.97
	Add CPOH @ 15%				182.40
	Cost of 100 metre				1,398.37
	Say				1,398.35

18.80.6 250 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 metres				
	MATERIAL:				
	Bleaching powder				
	3x(3.1416/4)x(250/10)² x(100x100)/1000x0.5 gms.				
	= 7363.10 gms Say 0.074 q				
1301	Bleaching powder	quintal	0.074	1,750.00	129.50
	LABOUR:				
0116	Fitter (grade 1)	day	1.48	301.00	445.48
0114	Beldar	day	3.61	247.00	891.67
9999	Sundries including testing of samples	L.S.	40.30	1.49	60.05
	TOTAL				1,526.70
	Add Water Charges @ 1%				15.27
	TOTAL				1,541.97
	Add CPOH @ 15%				231.30
	Cost of 100 metre				1,773.27
	Say				1,773.25

18.80.7 300 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 metres				
	MATERIAL:				
	Bleaching powder				
	3x(3.1416/4)x(300/10)² x(100x100)/1000x0.5 gms.				
	= 10602.88 gms Say 0.106 q				
1301	Bleaching powder	quintal	0.106	1,750.00	185.50
	LABOUR:				
0116	Fitter (grade 1)	day	1.64	301.00	493.64
0114	Beldar	day	3.94	247.00	973.18
9999	Sundries including testing of samples	L.S.	44.46	1.49	66.25
	TOTAL				1,718.57
	Add Water Charges @ 1%				17.19
	TOTAL				1,735.76
	Add CPOH @ 15%				260.36
	Cost of 100 metre				1,996.12
	Say				1,996.10

18.80.8 350 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 metres				
	MATERIAL:				
	Bleaching powder				
	3x(3.1416/4)x(350/10)² x(100x100)/1000x0.5 gms.				
	= 14431.70 gms Say 0.144 q				
1301	Bleaching powder	quintal	0.144	1,750.00	252.00
	LABOUR:				
0116	Fitter (grade 1)	day	1.80	301.00	541.80

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Beldar	day	4.27	247.00	1,054.69
9999	Sundries including testing of samples	L.S.	48.36	1.49	72.06
	TOTAL				1,920.55
	Add Water Charges @ 1%				19.21
	TOTAL				1,939.76
	Add CPOH @ 15%				290.96
	Cost of 100 metre				2,230.72
	Say				2,230.70

18.80.9 400 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 metres				
	MATERIAL:				
	Bleaching powder				
	3x(3.1416/4)x(400/10)² x(100x100)/1000x0.5 gms.				
	= 18849.60 gms Say 0.189 q				
1301	Bleaching powder	quintal	0.189	1,750.00	330.75
	LABOUR:				
0116	Fitter (grade 1)	day	1.97	301.00	592.97
0114	Beldar	day	4.59	247.00	1,133.73
9999	Sundries including testing of samples	L.S.	53.82	1.49	80.19
	TOTAL				2,137.64
	Add Water Charges @ 1%				21.38
	TOTAL				2,159.02
	Add CPOH @ 15%				323.85
	Cost of 100 metre				2,482.87
	Say				2,482.85

18.80.10 450 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 metres				
	MATERIAL:				
	Bleaching powder				
	3x(3.1416/4)x(450/10)² x(100x100)/1000x0.5 gms.				
	= 23856.50 gms Say 0.239 q				
1301	Bleaching powder	quintal	0.239	1,750.00	418.25
	LABOUR:				
0116	Fitter (grade 1)	day	2.13	301.00	641.13
0114	Beldar	day	4.92	247.00	1,215.24
9999	Sundries including testing of samples	L.S.	58.24	1.49	86.78
	TOTAL				2,361.40
	Add Water Charges @ 1%				23.61
	TOTAL				2,385.01
	Add CPOH @ 15%				357.75
	Cost of 100 metre				2,742.76
	Say				2,742.75

18.80.11 500 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 metres MATERIAL: Bleaching powder 3x(3.1416/4)x(500/10)² x(100x100)/1000x0.5 gms. = 29452.40 gms Say 0.295 q				
1301	Bleaching powder	quintal	0.295	1,750.00	516.25
	LABOUR:				
0116	Fitter (grade 1)	day	2.30	301.00	692.30
0114	Beldar	day	5.25	247.00	1,296.75
9999	Sundries including testing of samples	L.S.	63.70	1.49	94.91
	TOTAL				2,600.21
	Add Water Charges @ 1%				26.00
	TOTAL				2,626.21
	Add CPOH @ 15%				393.93
	Cost of 100 metre				3,020.14
	Say				3,020.15

18.80.12 600 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 metres MATERIAL: Bleaching powder 3x (3.1416/4)x(600/10)²x (100x100)/100x0.5gms = 42411.5 gms Say 0.424 q				
1301	Bleaching powder	quintal	0.424	1,750.00	742.00
	LABOUR:				
0116	Fitter (grade 1)	day	2.62	301.00	788.62
0114	Beldar	day	5.91	247.00	1,459.77
9999	Sundries including testing of samples	L.S.	71.37	1.49	106.34
	TOTAL				3,096.73
	Add Water Charges @ 1%				30.97
	TOTAL				3,127.70
	Add CPOH @ 15%				469.16
	Cost of 100 metre				3,596.86
	Say				3,596.85

18.81 Extra for every operation of disinfecting the C.I. main by flushing with water containing bleaching powder @ 0.5 gms per litre of water and cleaning the same with fresh water, including getting the samples of water tested in the municipal laboratory :

18.81.1 80 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 metres MATERIAL:				
1301	Bleaching powder	quintal	0.003	1,750.00	5.25
0116	Fitter (grade 1)	day	0.11	301.00	33.11

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Beldar	day	0.49	247.00	121.03
9999	Sundries including testing of samples	L.S.	4.42	1.49	6.59
	TOTAL				165.98
	Add Water Charges @ 1%				1.66
	TOTAL				167.64
	Add CPOH @ 15%				25.15
	Cost of 100 metre				192.79
	Say				192.80

18.81.2 100 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 metres				
	MATERIAL:				
1301	Bleaching powder	quintal	0.004	1,750.00	7.00
0116	Fitter (grade 1)	day	0.16	301.00	48.16
0114	Beldar	day	0.57	247.00	140.79
9999	Sundries including testing of samples	L.S.	4.42	1.49	6.59
	TOTAL				202.54
	Add Water Charges @ 1%				2.03
	TOTAL				204.57
	Add CPOH @ 15%				30.69
	Cost of 100 metre				235.26
	Say				235.25

18.81.3 125 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 metres				
	MATERIAL:				
1301	Bleaching powder	quintal	0.006	1,750.00	10.50
0116	Fitter (grade 1)	day	0.22	301.00	66.22
0114	Beldar	day	0.66	247.00	163.02
9999	Sundries including testing of samples	L.S.	5.46	1.49	8.14
	TOTAL				247.88
	Add Water Charges @ 1%				2.48
	TOTAL				250.36
	Add CPOH @ 15%				37.55
	Cost of 100 metre				287.91
	Say				287.90

18.81.4 150 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 metres				
	MATERIAL:				
1301	Bleaching powder	quintal	0.009	1,750.00	15.75
0116	Fitter (grade 1)	day	0.27	301.00	81.27
0114	Beldar	day	0.74	247.00	182.78

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries including testing of samples	L.S.	7.15	1.49	10.65
	TOTAL				290.45
	Add Water Charges @ 1%				2.90
	TOTAL				293.35
	Add CPOH @ 15%				44.00
	Cost of 100 metre				337.35
	Say				337.35

18.81.5 200 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 metres				
	MATERIAL:				
1301	Bleaching powder	quintal	0.016	1,750.00	28.00
0116	Fitter (grade 1)	day	0.58	301.00	174.58
0114	Beldar	day	0.90	247.00	222.30
9999	Sundries including testing of samples	L.S.	9.88	1.49	14.72
	TOTAL				439.60
	Add Water Charges @ 1%				4.40
	TOTAL				444.00
	Add CPOH @ 15%				66.60
	Cost of 100 metre				510.60
	Say				510.60

18.81.6 250 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 metres				
	MATERIAL:				
1301	Bleaching powder	quintal	0.025	1,750.00	43.75
0116	Fitter (grade 1)	day	0.60	301.00	180.60
0114	Beldar	day	1.10	247.00	271.70
9999	Sundries including testing of samples	L.S.	10.79	1.49	16.08
	TOTAL				512.13
	Add Water Charges @ 1%				5.12
	TOTAL				517.25
	Add CPOH @ 15%				77.59
	Cost of 100 metre				594.84
	Say				594.85

18.81.7 300 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 metres				
	MATERIAL:				
1301	Bleaching powder	quintal	0.035	1,750.00	61.25
0116	Fitter (grade 1)	day	0.60	301.00	180.60
0114	Beldar	day	1.30	247.00	321.10

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries including testing of samples	L.S.	13.52	1.49	20.14
	TOTAL				583.09
	Add Water Charges @ 1%				5.83
	TOTAL				588.92
	Add CPOH @ 15%				88.34
	Cost of 100 metre				677.26
	Say				677.25

18.81.8 350 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 metres				
	MATERIAL:				
1301	Bleaching powder	quintal	0.048	1,750.00	84.00
0116	Fitter (grade 1)	day	0.70	301.00	210.70
0114	Beldar	day	1.50	247.00	370.50
9999	Sundries including testing of samples	L.S.	16.12	1.49	24.02
	TOTAL				689.22
	Add Water Charges @ 1%				6.89
	TOTAL				696.11
	Add CPOH @ 15%				104.42
	Cost of 100 metre				800.53
	Say				800.55

18.81.9 400 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 metres				
	MATERIAL:				
1301	Bleaching powder	quintal	0.063	1,750.00	110.25
0116	Fitter (grade 1)	day	0.80	301.00	240.80
0114	Beldar	day	1.70	247.00	419.90
9999	Sundries including testing of samples	L.S.	17.94	1.49	26.73
	TOTAL				797.68
	Add Water Charges @ 1%				7.98
	TOTAL				805.66
	Add CPOH @ 15%				120.85
	Cost of 100 metre				926.51
	Say				926.50

18.81.10 450 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 metres				
	MATERIAL:				
1301	Bleaching powder	quintal	0.08	1,750.00	140.00
0116	Fitter (grade 1)	day	0.90	301.00	270.90
0114	Beldar	day	1.90	247.00	469.30

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries including testing of samples	L.S.	20.67	1.49	30.80
	TOTAL				911.00
	Add Water Charges @ 1%				9.11
	TOTAL				920.11
	Add CPOH @ 15%				138.02
	Cost of 100 metre				1,058.13
	Say				1,058.15

18.81.11 500 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 metres				
	MATERIAL:				
1301	Bleaching powder	quintal	0.098	1,750.00	171.50
0116	Fitter (grade 1)	day	1.00	301.00	301.00
0114	Beldar	day	2.10	247.00	518.70
9999	Sundries including testing of samples	L.S.	23.27	1.49	34.67
	TOTAL				1,025.87
	Add Water Charges @ 1%				10.26
	TOTAL				1,036.13
	Add CPOH @ 15%				155.42
	Cost of 100 metre				1,191.55
	Say				1,191.55

18.81.12 600 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 metres				
	MATERIAL:				
1301	Bleaching powder	quintal	0.141	1,750.00	246.75
0116	Fitter (grade 1)	day	1.20	301.00	361.20
0114	Beldar	day	2.50	247.00	617.50
9999	Sundries including testing of samples	L.S.	26.00	1.49	38.74
	TOTAL				1,264.19
	Add Water Charges @ 1%				12.64
	TOTAL				1,276.83
	Add CPOH @ 15%				191.52
	Cost of 100 metre				1,468.35
	Say				1,468.35

18.82 Dismantling old C.I. pipes including excavation and refilling trenches after taking out the pipes, breaking lead caulked joints, melting of lead and making into blocks, including stacking of pipes at site lead up to 50 metre:

18.82.1 80 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 40.26m or 11 nos. joints				
	Earth work in excavation for dismantling pipes including refilling of excavated earth				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	1x40.26x55x0.75 m= 16.61 cum Deduct for pipe 1x40.26x ¼ x 3.1416x(0.098)² = (-)0.30 cum Total=16.31cum				
2.8.1	Rate as per Item Number 2.8.1 of SH: Earth work	cum	16.31	130.80	2,133.35 (A)
2.25	Rate as per Item Number 2.25 of SH: Earth work Breaking lead caulked joints' making blocks and stacking MATERIAL:	cum	16.31	83.80	1,366.78 (A)
0761	Fuel wood	quintal	0.373	450.00	167.85
0771	Kerosene oil	litre	0.379	30.00	11.37
	LABOUR:				
0117	Assistant Fitter or 2nd class Fitter	day	0.50	273.00	136.50
0114	Beldar	day	4.00	247.00	988.00
9999	Sundries and carriage	L.S.	53.82	1.49	80.19
	TOTAL				4,884.04
	Add Water Charges @ 1% except on A i.e on (4,884.04 - 3,500.13 =) 1,383.91				13.84
	TOTAL				4,897.88
	Add CPOH @ 15% except on A i.e on (4,897.88 - 3,500.13 =) 1,397.75				209.66
	Cost of 40.26 metre				5,107.54
	Cost of 1 metre				126.86
	Say				126.85

18.82.2 100 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 40.26m or 11 nos. joints Earth work in excavationfor dismantling pipes including refilling of excavated earth 1x40.26x55x0.75 m=16.61 cum Deduct for pipe 1x40.26x ¼ x 3.1416x(0.098)² = (-)0.44 Total = 16.17 cum				
2.8.1	Rate as per Item Number 2.8.1 of SH: Earth work	cum	16.17	130.80	2,115.04 (A)
2.25	Rate as per Item Number 2.25 of SH: Earth work Breaking lead caulked joints,making blockst and stacking MATERIAL:	cum	16.17	83.80	1,355.05 (A)
0761	Fuel wood	quintal	0.466	450.00	209.70
0771	Kerosene oil	litre	0.379	30.00	11.37
	LABOUR:				
0117	Assistant Fitter or 2nd class Fitter	day	0.63	273.00	171.99
0114	Beldar	day	4.50	247.00	1,111.50

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries and carriage	L.S.	53.82	1.49	80.19
	TOTAL				5,054.84
	Add Water Charges @ 1% except on A i.e on (5,054.84 - 3,470.09 =) 1,584.75				15.85
	TOTAL				5,070.69
	Add CPOH @ 15% except on A i.e on (5,070.69 - 3,470.09 =) 1,600.60				240.09
	Cost of 40.26 metre				5,310.78
	Cost of 1 metre				131.91
	Say				131.90

18.82.3 125 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 40.26 m or 11 nos. joints				
	Earth work in excavationfor dismantling pipes including refilling of excavated earth 1x40.26x55x0.75 m= 16.61 cum				
	Deduct for pipe 1x40.26x ¼ x 3.1416 x$(0.144)^2$ =(-) 0.65cum				
	Total=15.96cum				
2.8.1	Rate as per Item Number 2.8.1 of SH: Earth work	cum	15.96	130.80	2,087.57 (A)
2.25	Rate as per Item Number 2.25 of SH: Earth work	cum	15.96	83.80	1,337.45 (A)
	Breaking lead caulked joints,making blockst and stacking				
	MATERIAL:				
0761	Fuel wood	quintal	0.559	450.00	251.55
0771	Kerosene oil	litre	0.568	30.00	17.04
	LABOUR:				
0117	Assistant Fitter or 2nd class Fitter	day	0.75	273.00	204.75
0114	Beldar	day	5.00	247.00	1,235.00
9999	Sundries and carriage	L.S.	53.82	1.49 8	0.19
	TOTAL				5,213.55
	Add Water Charges @ 1% except on A i.e on (5,213.55 - 3,425.02 =) 1,788.53				17.89
	TOTAL				5,231.44
	Add CPOH @ 15% except on A i.e on (5,231.44 - 3,425.02 =) 1,806.42				270.96
	Cost of 40.26 metre				5,502.40
	Cost of 1 metre				136.67
	Say				136.65

18.82.4 150 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 40.26 m or 11 nos. joints				
	Earth work in excavation for dismantling pipes including refilling of excavated earth 1x40.26x55x0.75 m= 16.61 cum				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Deduct for pipe 1x40.26x 3.1416 x $(0.17)^2/4$=(-) 0.91 cum Total Qty=16.61-0.91=15.70 cum				
2.8.1	Rate as per Item Number 2.8.1 of SH: Earth work	cum	15.70	130.80	2,053.56 (A)
2.25	Rate as per Item Number 2.25 of SH: Earth work	cum	15.70	83.80	1,315.66 (A)
	Breaking lead caulked joints,making blockst and stacking				
	MATERIAL:				
0761	Fuel wood	quintal	0.653	450.00	293.85
0771	Kerosene oil	litre	0.568	30.00	17.04
	LABOUR:				
0117	Assistant Fitter or 2nd class Fitter	day	0.88	273.00	240.24
0114	Beldar	day	5.50	247.00	1,358.50
9999	Sundries and carriage	L.S.	67.21	1.49	100.14
	TOTAL				5,378.99
	Add Water Charges @ 1% except on A i.e on (5,378.99 - 3,369.22 =) 2,009.77				20.10
	TOTAL				5,399.09
	Add CPOH @ 15% except on A i.e on (5,399.09 - 3,369.22 =) 2,029.87				304.48
	Cost of 40.26 metre				5,703.57
	Cost of 1 metre				141.67
	Say				141.65

18.82.5 200 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 40.26 m or 11 nos. joints Earth work in excavationfor dismantling pipes including refilling of excavated earth 1x40.26x60x0.75 m=18.12 cum = 16.56 cum Deduct for pipe 1x40.26x 3.1416 x $(0.222)^2/4$ = (-) 1.56cum Total=16.56cum				
2.8.1	Rate as per Item Number 2.8.1 of SH: Earth work	cum	16.56	130.80	2,166.05 (A)
2.25	Rate as per Item Number 2.25 of SH: Earth work	cum	16.56	83.80	1,387.73 (A)
	Breaking lead caulked joints,making blockst and stacking				
	MATERIAL:				
0761	Fuel wood	quintal	0.84	450.00	378.00
0771	Kerosene oil	litre	0.7576	30.00	22.73
	LABOUR:				
0117	Assistant Fitter or 2nd class Fitter	day	1.10	273.00	300.30
0114	Beldar	day	6.50	247.00	1,605.50

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries and carriage	L.S.	67.21	1.49	100.14
	TOTAL				5,960.45
	Add Water Charges @ 1% except on A i.e on (5,960.45 - 3,553.78 =) 2,406.67				24.07
	TOTAL				5,984.52
	Add CPOH @ 15% except on A i.e on (5,984.52 - 3,553.78 =) 2,430.74				364.61
	Cost of 40.26 metre				6,349.13
	Cost of 1 metre				157.70
	Say				157.70

18.82.6 250 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 40.26 m or 11 nos. joints				
	Earth work in excavationfor dismantling pipes including refilling of excavated earth 1x40.26x.65x0.75m= 19.63				
	Deduct for pipe 1x40.26x 3.1416 x $(0.274)^2$ / 4 = (-) 2.37 cum				
	Total = 17.26 cum				
2.8.1	Rate as per Item Number 2.8.1 of SH: Earth work	cum	17.26	130.80	2,257.61 (A)
2.25	Rate as per Item Number 2.25 of SH: Earth work	cum	17.26	83.80	1,446.39 (A)
	Breaking lead caulked joints,making blockst and stacking				
	MATERIAL:				
0761	Fuel wood	quintal	1.026	450.00	461.70
0771	Kerosene oil	litre	1.1365	30.00	34.10
	LABOUR:				
0117	Assistant Fitter or 2nd class Fitter	day	1.30	273.00	354.90
0114	Beldar	day	7.50	247.00	1,852.50
9999	Sundries and carriage	L.S.	80.73	1.49	120.29
	TOTAL				6,527.49
	Add Water Charges @ 1% except on A i.e on (6,527.49 - 3,704.00 =) 2,823.49				28.23
	TOTAL				6,555.72
	Add CPOH @ 15% except on A i.e on (6,555.72 - 3,704.00 =) 2,851.72				427.76
	Cost of 40.26 metre				6,983.48
	Cost of 1 metre				173.46
	Say				173.45

18.82.7 300 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 40.26 m or 11 nos. joints				
	Earth work in excavationfor dismantling pipes including refilling of excavated earth 1x40.26x.65x0.75m= 19.63 = 21.14 cum				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Deduct for pipe 1x40.26x ¼ x 3.1416 x $(0.326)^2$= (-) 3.36 cum Total = 17.79 cum				
2.8.1	Rate as per Item Number 2.8.1 of SH: Earth work	cum	17.79	130.80	2,326.93 (A)
2.25	Rate as per Item Number 2.25 of SH: Earth work Breaking lead caulked joints,making blockst and stacking	cum	17.79	83.80	1,490.80 (A)
	MATERIAL:				
0761	Fuel wood	quintal	1.12	450.00	504.00
0771	Kerosene oil	litre	1.515	30.00	45.45
	LABOUR:				
0117	Assistant Fitter or 2nd class Fitter	day	1.50	273.00	409.50
0114	Beldar	day	8.50	247.00	2,099.50
9999	Sundries and carriage	L.S.	94.12	1.49	140.24
	TOTAL				7,016.42
	Add Water Charges @ 1% except on A i.e on (7,016.42 - 3,817.73 =) 3,198.69				31.99
	TOTAL				7,048.41
	Add CPOH @ 15% except on A i.e on (7,048.41 - 3,817.73 =) 3,230.68				484.60
	Cost of 40.26 metre				7,533.01
	Cost of 1 metre				187.11
	Say				187.10

18.82.8 350 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 40.26 m or 11 nos. joints Earth work in excavationfor dismantling pipes including refilling of excavated earth 1x40.26x.75x0.75 m=22.65 cum Deduct for pipe 1x40.26x ¼ x 3.1416 x $(0378)^2$ = (-) 4.51cum Total = 18.14 cum				
2.8.1	Rate as per Item Number 2.8.1 of SH: Earth work	cum	18.14	130.80	2,372.71 (A)
2.25	Rate as per Item Number 2.25 of SH: Earth work Breaking lead caulked joints,making blockst and stacking	cum	18.14	83.80	1,520.13 (A)
	MATERIAL:				
0761	Fuel wood	quintal	1.213	450.00	545.85
0771	Kerosene oil	litre	1.515	30.00	45.45
	LABOUR:				
0117	Assistant Fitter or 2nd class Fitter	day	1.75	273.00	477.75
0114	Beldar	day	9.50	247.00	2,346.50

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries and carriage	L.S.	107.64	1.49	160.38
	TOTAL				7,468.77
	Add Water Charges @ 1% except on A i.e on (7,468.77 - 3,892.84 =) 3,575.93				35.76
	TOTAL				7,504.53
	Add CPOH @ 15% except on A i.e on (7,504.53 - 3,892.84 =) 3,611.69				541.75
	Cost of 40.26 metre				8,046.28
	Cost of 1 metre				199.86
	Say				199.85

18.82.9 400 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 40.26 m or 11 nos. joints				
	Earth work in excavationfor dismantling pipes including refilling of excavated earth 1x40.26x.80x0.75 m=24.16 cum				
	Deduct for pipe 1x40.26x ¼ x 3.1416 x $(0.429)^2$ = (-) 5.93cum				
	Total = 18.23 cum				
2.8.1	Rate as per Item Number 2.8.1 of SH: Earth work	cum	18.23	130.80	2,384.48 (A)
2.25	Rate as per Item Number 2.25 of SH: Earth work	cum	18.23	83.80	1,527.67 (A)
	Breaking lead caulked joints,making blockst and stacking				
	MATERIAL:				
0761	Fuel wood	quintal	1.306	450.00	587.70
0771	Kerosene oil	litre	1.894	30.00	56.82
	LABOUR:				
0117	Assistant Fitter or 2nd class Fitter	day	2.00	273.00	546.00
0114	Beldar	day	10.50	247.00	2,593.50
9999	Sundries and carriage	L.S.	121.03	1.49	180.33
	TOTAL				7,876.50
	Add Water Charges @ 1% except on A i.e on (7,876.50 - 3,912.15 =) 3,964.35				39.64
	TOTAL				7,916.14
	Add CPOH @ 15% except on A i.e on (7,916.14 - 3,912.15 =) 4,003.99				600.60
	Cost of 40.26 metre				8,516.74
	Cost of 1 metre				211.54
	Say				211.55

18.82.10 450 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 40.26 m or 11 nos. joints				
	Earth work in excavationfor dismantling pipes including refilling of excavated earth 1x40.26x.85x0.75 m=25.67 cum.				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Deduct for pipe 1x40.26x ¼ x 3.1416 x (0.48)² = (-) 7.29cum Total =18.38 cum				
2.8.1	Rate as per Item Number 2.8.1 of SH: Earth work	cum	18.38	130.80	2,404.10 (A)
2.25	Rate as per Item Number 2.25 of SH: Earth work	cum	18.38	83.80	1,540.24 (A)
	Breaking lead caulked joints,making blockst and stacking				
	MATERIAL:				
0761	Fuel wood	quintal	1.40	450.00	630.00
0771	Kerosene oil	litre	2.273	30.00	68.19
	LABOUR:				
0117	Assistant Fitter or 2nd class Fitter	day	2.25	273.00	614.25
0114	Beldar	day	11.50	247.00	2,840.50
9999	Sundries and carriage	L.S.	134.55	1.49	200.48
	TOTAL				8,297.76
	Add Water Charges @ 1% except on A i.e on (8,297.76 - 3,944.34 =) 4,353.42				43.53
	TOTAL				8,341.29
	Add CPOH @ 15% except on A i.e on (8,341.29 - 3,944.34 =) 4,396.95				659.54
	Cost of 40.26 metre				9,000.83
	Cost of 1 metre				223.57
	Say				223.55

18.82.11 500 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 40.26 m or 11 nos. joints Earth work in excavationfor dismantling pipes including refilling of excavated earth 1x40.26x.90x0.75m=27.18cum Deduct for pipe 1x40.26x ¼ x 3.1416 x (0.532)² = (-) 8.94cum Total = 18.24cum				
2.8.1	Rate as per Item Number 2.8.1 of SH: Earth work	cum	18.24	130.80	2,385.79 (A)
2.25	Rate as per Item Number 2.25 of SH: Earth work	cum	18.24	83.80	1,528.51 (A)
	Breaking lead caulked joints,making blockst and stacking				
	MATERIAL:				
0761	Fuel wood	quintal	1.492	450.00	671.40
0771	Kerosene oil	litre	2.652	30.00	79.56
	LABOUR:				
0117	Assistant Fitter or 2nd class Fitter	day	2.50	273.00	682.50
0114	Beldar	day	12.50	247.00	3,087.50

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries and carriage	L.S.	147.94	1.49	220.43
	TOTAL				8,655.69
	Add Water Charges @ 1% except on A i.e on (8,655.69 - 3,914.30 =) 4,741.39				47.41
	TOTAL				8,703.10
	Add CPOH @ 15% except on A i.e on (8,703.10 - 3,914.30 =) 4,788.80				718.32
	Cost of 40.26 metre				9,421.42
	Cost of 1 metre				234.01
	Say				234.00

18.82.12 600 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 40.26 m or 11 nos. joints				
	Earth work in excavationfor dismantling pipes including refilling of excavated earth 1x40.26x1.00x0.75 m=30.20 cum				
	Deduct for pipe 1x40.26x ¼ x 3.1416 x $(0.635)^2$ = (-) 12.76cum				
	Total = 17.44 cum				
2.8.1	Rate as per Item Number 2.8.1 of SH: Earth work	cum	17.44	130.80	2,281.15 (A)
2.25	Rate as per Item Number 2.25 of SH: Earth work	cum	17.44	83.80	1,461.47 (A)
	Breaking lead caulked joints,making blockst and stacking				
	MATERIAL:				
0761	Fuel wood	quintal	1.68	450.00	756.00
0771	Kerosene oil	litre	3.41	30.00	102.30
	LABOUR:				
0117	Assistant Fitter or 2nd class Fitter	day	3.00	273.00	819.00
0114	Beldar	day	14.50	247.00	3,581.50
9999	Sundries and carriage	L.S.	174.85	1.49	260.53
	TOTAL				9,261.95
	Add Water Charges @ 1% except on A i.e on (9,261.95 - 3,742.62 =) 5,519.33				55.19
	TOTAL				9,317.14
	Add CPOH @ 15% except on A i.e on (9,317.14 - 3,742.62 =) 5,574.52				836.18
	Cost of 40.26 metre				10,153.32
	Cost of 1 metre				252.19
	Say				252.20

18.83 Labour for cutting C.I. pipe with steel saw.

18.83.1 80 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one cut				
	LABOUR:				
0116	Fitter (grade 1)	day	0.06	301.00	18.06

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Beldar	day	0.06	247.00	14.82
9999	Sundries	L.S.	1.82	1.49	2.71
	TOTAL				35.59
	Add Water Charges @ 1%				0.36
	TOTAL				35.95
	Add CPOH @ 15%				5.39
	Cost of each cut				41.34
	Say				41.35

18.83.2 100 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one cut				
	LABOUR:				
0116	Fitter (grade 1)	day	0.08	301.00	24.08
0114	Beldar	day	0.08	247.00	19.76
9999	Sundries	L.S.	2.73	1.49	4.07
	TOTAL				47.91
	Add Water Charges @ 1%				0.48
	TOTAL				48.39
	Add CPOH @ 15%				7.26
	Cost of each cut				55.65
	Say				55.65

18.83.3 125 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one cut				
	LABOUR:				
0116	Fitter (grade 1)	day	0.11	301.00	33.11
0114	Beldar	day	0.11	247.00	27.17
9999	Sundries	L.S.	4.42	1.49	6.59
	TOTAL				66.87
	Add Water Charges @ 1%				0.67
	TOTAL				67.54
	Add CPOH @ 15%				10.13
	Cost of each cut				77.67
	Say				77.65

18.83.4 150 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one cut				
	LABOUR:				
0116	Fitter (grade 1)	day	0.15	301.00	45.15
0114	Beldar	day	0.15	247.00	37.05

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries	L.S.	5.33	1.49	7.94
	TOTAL				90.14
	Add Water Charges @ 1%				0.90
	TOTAL				91.04
	Add CPOH @ 15%				13.66
	Cost of each cut				104.70
	Say				104.70

18.83.5 200 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one cut				
	LABOUR:				
0116	Fitter (grade 1)	day	0.20	301.00	60.20
0114	Beldar	day	0.20	247.00	49.40
9999	Sundries	L.S.	7.15	1.49	10.65
	TOTAL				120.25
	Add Water Charges @ 1%				1.20
	TOTAL				121.45
	Add CPOH @ 15%				18.22
	Cost of each cut				139.67
	Say				139.65

18.83.6 250 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one cut				
	LABOUR:				
0116	Fitter (grade 1)	day	0.25	301.00	75.25
0114	Beldar	day	0.25	247.00	61.75
9999	Sundries	L.S.	8.06	1.49	12.01
	TOTAL				149.01
	Add Water Charges @ 1%				1.49
	TOTAL				150.50
	Add CPOH @ 15%				22.58
	Cost of each cut				173.08
	Say				173.10

18.83.7 300 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one cut				
	LABOUR:				
0116	Fitter (grade 1)	day	0.30	301.00	90.30
0114	Beldar	day	0.30	247.00	74.10

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries	L.S.	9.88	1.49	14.72
	TOTAL				179.12
	Add Water Charges @ 1%				1.79
	TOTAL				180.91
	Add CPOH @ 15%				27.14
	Cost of each cut				208.05
	Say				208.05

18.83.8 350 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one cut				
	LABOUR:				
0116	Fitter (grade 1)	day	0.35	301.00	105.35
0114	Beldar	day	0.35	247.00	86.45
9999	Sundries	L.S.	10.79	1.49	16.08
	TOTAL				207.88
	Add Water Charges @ 1%				2.08
	TOTAL				209.96
	Add CPOH @ 15%				31.49
	Cost of each cut				241.45
	Say				241.45

18.83.9 400 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one cut				
	LABOUR:				
0116	Fitter (grade 1)	day	0.40	301.00	120.40
0114	Beldar	day	0.40	247.00	98.80
9999	Sundries	L.S.	12.48	1.49	18.60
	TOTAL				237.80
	Add Water Charges @ 1%				2.38
	TOTAL				240.18
	Add CPOH @ 15%				36.03
	Cost of each cut				276.21
	Say				276.20

18.83.10 450 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one cut				
	LABOUR:				
0116	Fitter (grade 1)	day	0.45	301.00	135.45
0114	Beldar	day	0.45	247.00	111.15
9999	Sundries	L.S.	13.52	1.49	20.14
	TOTAL				266.74
	Add Water Charges @ 1%				2.67
	TOTAL				269.41
	Add CPOH @ 15%				40.41
	Cost of each cut				309.82
	Say				309.80

18.83.11 500 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one cut				
	LABOUR:				
0116	Fitter (grade 1)	day	0.50	301.00	150.50
0114	Beldar	day	0.50	247.00	123.50
9999	Sundries	L.S.	15.21	1.49	22.66
	TOTAL				296.66
	Add Water Charges @ 1%				2.97
	TOTAL				299.63
	Add CPOH @ 15%				44.94
	Cost of each cut				344.57
	Say				344.55

18.83.12 600 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one cut				
	LABOUR:				
0116	Fitter (grade 1)	day	0.60	301.00	180.60
0114	Beldar	day	0.60	247.00	148.20
9999	Sundries	L.S.	16.12	1.49	24.02
	TOTAL				352.82
	Add Water Charges @ 1%				3.53
	TOTAL				356.35
	Add CPOH @ 15%				53.45
	Cost of each cut				409.80
	Say				409.80

18.84 Providing & fixing chrome plated brass battery based infrared sensor operated pillar cock, having foam flow technology.

18.84.1 15 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one No.				
	MATERIAL:				
3327	15 mm Battery Based Sensor Pillar Cock	each	1.00	5,822.50	5,822.50
9999	Carriage of material and fixing charges	L.S.	8.06	1.49	12.01
	TOTAL				5,834.51
	Add Water Charges @ 1%				58.35
	TOTAL				5,892.86
	Add CPOH @ 15%				883.93
	Cost of each				6,776.79
	Say				6,776.80

SUB HEAD : 19

DRAINAGE

19.1 Providing, laying and jointing glazed stoneware pipes class SP-1 with stiff mixture of cement mortar in the proportion of 1:1 (1 cement : 1 fine sand) including testing of joints etc. complete:

19.1.1 100 mm diameter

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 30 metre				
1854	Stoneware pipes grade A (60 cm long) 100 mm dia	each	55.00	36.00	1,980.00
	Added 10% allowance for breakage				
2224	Carriage of S.W. pipes 100 mm dia	100 metre	33.00	116.80	38.54
	Added 10% allowance for breakage				
	Cement for 50 joints = 0.019 tonne				
0367	Portland Cement	tonne	0.019	5,000.00	95.00
2209	Carriage of cement	tonne	0.019	77.87	1.48
0983	Fine sand (zone IV)	cum	0.01	640.00	6.40
2261	Carriage of fine sand (1 part badarpur sand: 2 parts jamuna sand)	cum	0.01	87.60	0.88
1881	Spun yarn	kilogram	4.50	40.00	180.00
	or plain gaskin @ 0.09 kg per joint				
	= 0.09x50 = 4.50 kg				
	LABOUR:				
0123	Mason (brick layer) 1 st class	day	1.00	301.00	301.00
0124	Mason (brick layer) 2nd class	day	1.00	273.00	273.00
0114	Beldar	day	3.00	247.00	741.00
0101	Bhisti	day	1.00	260.00	260.00
	TOTAL				3,877.30
	Add Water Charges @ 1%				38.77
	TOTAL				3,916.07
	Add CPOH @ 15%				587.41
	Cost of 30 metre				4,503.48
	Cost of 1 metre				150.12
	Say				150.10

19.1.2 150 mm diameter

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 30 metre				
	MATERIAL:				
1855	Stoneware pipes grade A (60 cm long) 150 mm dia	each	55.00	53.00	2,915.00
	Added 10% allowance for breakage				
2225	Carriage of S.W. pipes 150 mm dia	100 metre	33.00	233.60	77.09
	Added 10% allowance for breakage				
	Cement of 50 joints = 0.036 tonne				
0367	Portland Cement	tonne	0.036	5,000.00	180.00
2209	Carriage of cement	tonne	0.036	77.87	2.80
0983	Fine sand (zone IV)	cum	0.019	640.00	12.16
2261	Carriage of fine sand (1 part badarpur sand: 2 parts jamuna sand)	cum	0.019	87.60	1.66
1881	Spun yarn	kilogram	9.00	40.00	360.00
	or plain gaskin @ 0.18 kg per joint				
	= 0.18x50 = 9 kg				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	LABOUR:				
0123	Mason (brick layer) 1 st class	day	1.50	301.00	451.50
0124	Mason (brick layer) 2nd class	day	1.50	273.00	409.50
0114	Beldar	day	4.00	247.00	988.00
0101	Bhisti	day	1.00	260.00	260.00
	TOTAL				5,657.71
	Add Water Charges @ 1%				56.58
	TOTAL				5,714.29
	Add CPOH @ 15%				857.14
	Cost of 30 metre				6,571.43
	Cost of 1 metre				219.05
	Say				219.05

19.1.3 200 mm diameter

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 30 metre				
	MATERIAL:				
1856	Stoneware pipes grade A (60 cm long) 200 mm dia	each	55.00	91.00	5,005.00
	Added 10% allowance for breakage				
2226	Carriage of S.W. pipes 200 mm dia	100 metre	33.00	389.33	128.48
	Added 10% allowance for breakage				
	Cement of 50 joints = 0.053 tonne				
0367	Portland Cement	tonne	0.053	5,000.00	265.00
2209	Carriage of cement	tonne	0.053	77.87	4.13
0983	Fine sand (zone IV)	cum	0.028	640.00	17.92
2261	Carriage of fine sand (1 part badarpur sand: 2 parts jamuna sand)	cum	0.028	87.60	2.45
1881	Spun yarn	kilogram	12.00	40.00	480.00
	or plain gaskin @ 0.24 kg per joint				
	= 0.24x50 =12.00 kg				
	LABOUR:				
0123	Mason (brick layer) 1 st class	day	1.75	301.00	526.75
0124	Mason (brick layer) 2nd class	day	1.75	273.00	477.75
0114	Beldar	day	4.50	247.00	1,111.50
0101	Bhisti	day	1.25	260.00	325.00
	TOTAL				8,343.98
	Add Water Charges @ 1%				83.44
	TOTAL				8,427.42
	Add CPOH @ 15%				1,264.11
	Cost of 30 metre				9,691.53
	Cost of 1 metre				323.05
	Say				323.05

19.1.5 250 mm diameter

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 30 metre				
	MATERIAL:				
1858	Stoneware pipes grade A (60 cm long) 250 mm dia	each	55.00	130.00	7,150.00
	Added 10% allowance for breakage				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
2228	Carriage of S.W. pipes 250 mm dia Added 10% allowance for breakage Cement of 50 joints = 0.094 tonne	100 metre	33.00	667.43	220.25
0367	Portland Cement	tonne	0.094	5,000.00	470.00
2209	Carriage of cement	tonne	0.094	77.87	7.32
0983	Fine sand (zone IV)	cum	0.05	640.00	32.00
2261	Carriage of fine sand (1 part badarpur sand: 2 parts jamuna sand)	cum	0.05	87.60	4.38
1881	Spun yarn or plain gaskin @ 0.30 kg per joint = 0.30x50= 15.00 kg	kilogram	15.00	40.00	600.00
	LABOUR:				
0123	Mason (brick layer) 1 st class	day	2.25	301.00	677.25
0124	Mason (brick layer) 2nd class	day	2.25	273.00	614.25
0114	Beldar	day	5.50	247.00	1,358.50
0101	Bhisti	day	1.50	260.00	390.00
	TOTAL				11,523.95
	Add Water Charges @ 1%				115.24
	TOTAL				1,639.19
	Add CPOH @ 15%				1,745.88
	Cost of 30 metre				13,385.07
	Cost of 1 metre				446.17
	Say				446.15

19.1.6 300 mm diameter

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 30 metre				
	MATERIAL:				
1859	Stoneware pipes grade A (60 cm long) 300 mm dia Added 10% allowance for breakage	each	55.00	190.00	10,450.00
2229	Carriage of S.W. pipes 300 mm dia Added 10% allowance for breakage Cement of 50 joints = 0.125 tonne	100 metre	33.00	834.29	275.31
0367	Portland Cement	tonne	0.125	5,000.00	625.00
2209	Carriage of cement	tonne	0.125	77.87	9.73
0983	Fine sand (zone IV)	cum	0.075	640.00	48.00
2261	Carriage of fine sand (1 part badarpur sand: 2 parts jamuna sand)	cum	0.075	87.60	6.57
1881	Spun yarn or plain gaskin @ 0.36 kg / joint = 0.36x50 =18.00 kg	kilogram	18.00	40.00	720.00
	LABOUR:				
0123	Mason (brick layer) 1 st class	day	2.50	301.00	752.50
0124	Mason (brick layer) 2nd class	day	2.50	273.00	682.50
0114	Beldar	day	6.00	247.00	1,482.00
0101	Bhisti	day	1.50	260.00	390.00
	TOTAL				15,441.61
	Add Water Charges @ 1%				154.42
	TOTAL				15,596.03
	Add CPOH @ 15%				2,339.40
	Cost of 30 metre				17,935.43
	Cost of 1 metre				597.85
	Say				597.85

19.2 Providing and laying cement concrete 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size) all-round S.W. pipes including bed concrete as per standard design:

19.2.1 100 mm diameter S.W. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metres Area = W x W/2 + ½ x (3.14 x W^2 / 4) - (3.14 x D^2 / 4) = W^2 x (0.5 + 3.14 / 8) - (3.14 x D^2 / 4) Where W = D + X D = 100 + 12 + 12 = 124 mm or 12.4 cm X = 300 mm as trench depth is less than 1200 mm W = 12.4 + 30 = 42.4 Area = 42.4^2 x (0.5 + 3.14/ 8) - (3.14 x 12.4^2/4) = 1484 sqcm = 0.1484 sqm Say 0.148 sqm For 10 m length quantity of concrete required = 1.48 cum				
4.1.10	Rate as per Item Number 4.1.10 of SH: Concrete work	cum	1.48	3,357.40	4,968.95 (A)
	TOTAL				4,968.95
	Cost of 10 metre				4,968.95
	Cost of 1 metre				496.90
	Say				496.90

19.2.2 150 mm diameter S.W. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metres Area = W x W/2 + ½ x (3.14 x W^2 / 4) - (3.14 x D^2 / 4) = W^2 x (0.5 + 3.14 / 8) - (3.14 x D^2 / 4) Where W = D + X D = 150 + 16 + 16 = 182 mm or 18.2 cm X = 300 mm as trench depth is less than 1200 mm W = 18.2 + 30 = 48.2 Area = 48.2^2 x (0.5 + 3.14/ 8) - (3.14 x 18.2^2/4) = 1807.66 sqcm = 0.1808 sqm Say 0.181 sqm For 10 m length quantity of concrete required = 1.81 cum				
4.1.10	Rate as per Item Number 4.1.10 of SH: Concrete work	cum	1.81	3,357.40	6,076.89 (A)
	TOTAL				6,076.89
	Cost of 10 metre				6,076.89
	Cost of 1 metre				607.69
	Say				607.70

19.2.3 200 mm diameter S.W. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metres Area = W x W/2 + ½ x (3.14 x W^2 / 4) - (3.14 x D^2 / 4) = W^2 x (0.5 + 3.14 / 8) - (3.14 x D^2 / 4) Where W = D + X D = 200 + 17 + 17 = 234 mm or 23.4 cm X = 300 mm as trench depth is less than 1200 mm W = 23.4 + 30 = 53.4 Area = 53.4^2 x (0.5 + 3.14 / 8) - (3.14 x 23.4^2/4) = 2115 sqcm = 0.2115 sqm Say 0.211 sqm For 10 m length quantity of concrete required = 2.11 cum				
4.1.10	Rate as per Item Number 4.1.10 of SH: Concrete work	cum	2.11	3,357.40	7,084.11 (A)
	TOTAL				7,084.11
	Cost of 10 metre				7,084.11
	Cost of 1 metre				708.41
	Say				708.40

19.2.5 250 mm diameter S.W. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metres Area = W x W/2 + ½ x (3.14 x W^2 / 4) - (3.14 x D^2 / 4) = W^2 x (0.5 + 3.14 / 8) - (3.14 x D^2 / 4) Where W = D + X D = 250 + 20 + 20 = 290 mm or 29 cm X = 300 mm as trench depth is less than 1200 mm W = 29 + 30 = 59 Area = 59^2 x (0.5 + 3.14/ 8) - (3.14 x 29^2/4) = 2447 sqcm = 0.2447 sqm. Say 0.244 sqm For 10 m length quantity of concrete required = 2.44 cum				
4.1.10	Rate as per Item Number 4.1.10 of SH: Concrete work	cum	2.44	3,357.40	8,192.06 (A)
	TOTAL				8,192.06
	Cost of 10 metre				8,192.06
	Cost of 1 metre				819.21
	Say				819.20

19.3 Providing and laying cement concrete 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40mm nominal size) up to haunches of S.W. pipes including bed concrete as per standard design:

19.3.1 100 mm diameter S.W. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metres Area = WxD1 + 2x½xR cot QxR- [R²/2(3.14/2-Q)] - (3.14/2)R² = WD1 + R²(cot Q) - R²(3.14/2 - Q) -(3.14/2)R² = WD1+R²(cot Q-3.14 + Q) Where sin Q = [R/(W/2)] = 2R/W W = D + X X = 300 mm, D = 100 + 12 + 12 =124 mm W= 124+ 300 = 424 mm D1 = Depth = 100 + (½ x 124) = 162 mm R = 62 mm sin Q = (2x62)/424 = 0.292 Therefore Q = 17°0' Hence tan Q = 0.3057 Area = 424 x 162 + (62)² (Cot Q - 3.14 + Q) = [68688 + 3844 (1/0.3057 - 180° + 17°0')] sqmm = [68688 + 3844 (3.27 - 163°0' x 3.14/180)] sqmm = (68688 + 3844 x 0.43) sqmm = (68688 + 1652.92) sqmm = 70340.92 sqmm Say 70341 sqmm or 0.070341 sqm For 10 m length qty. of concrete reqd. = 0.07034x10 = 0.7034 cum				
4.1.10	Rate as per Item Number 4.1.10 of SH: Concrete work	cum	0.7034	3,357.40	2,361.60 (A)
	TOTAL				2,361.60
	Cost of 10 metre				2,361.60
	Cost of 1 metre				236.16
	Say				236.15

19.3.2 150 mm diameter S.W. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metres Area = WxD1 + 2x½xRcot Q R- [R²/2(3.14/2-Q)] -(3.14/2)R² = WD1 + R²(Cot Q) - R²(3.14/2 - Q) - (3.14/2)R² = WD1 + R²(Cot Q - 3.14 + Q) Where Sin Q = [R/(W/2)] = 2R/W W = D + X, X = 300mm D= 150+ 16+ 16 = 182 mm W= 182 + 300 = 482 mm D1 = Depth = 150 + (½ x 182) = 241 mm R = 91 mm Sin Q = (2x91)/482 = 0.3776 therefore Q = 22°12' Hence Tan Q = 0.4081				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Area = 482x241 +(91)²(Cot Q - 3.14 + Q) = [116162 + 8281 (1/0.4081-180° +22°12')] sqmm = [116162 + 8281 (2.45-157°48'x3.14/180)] sqmm = [116162 + 8281 x (2.45-2.75)] sqmm = [116162 + 8281 x (-0.30)] sqmm = (116162 - 2484.3) sqmm = 113677.7 sqmm Say 113677.7 sqmm or 0.1136777 sqm For 10 m length qty. of concrete reqd. = 0.1136777x10= 1.136777 cum Say 1.14 cum				
4.1.10	Rate as per Item Number 4.1.10 of SH: Concrete work	cum	1.14	3,357.40	3,827.44 (A)
	TOTAL				3,827.44
	Cost of 10 metre				3,827.44
	Cost of 1 metre				382.74
	Say				382.75

19.3.3 200 mm diameter S.W. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metres Area = WxD1 + 2x½xR Cot Q.R.- [R²/2(3.14/2-Q)] -(3.14/2)R² = WD1 + R²(Cot Q) - R²(3.14/2 - Q) - (3.14/2)R² = WD1 + R²(Cot Q - 3.14 + Q) Where Sin Q = [R/(W/2)] = 2R/W W = D + X, X = 300 mm D = 200 + 17 + 17 = 234 mm W = 234 + 300 = 534 mm D1 = Depth = 150 + (½ x 234) = 267 mm R= 117mm Sin Q = (2x117)/534 = 0.4382 thereforeQ = 26°0' Hence Tan Q = 0.4877 Area = 534 x 267 + (117)² (Cot Q - 3.14 + Q) = [142578 + 13689 (1/0.4877-180° + 26°0')] sqmm = [142578 + 13689 (2.05- 54°0' x 3.14/180)] sqmm = [142578 + 13689 x (2.05-2.69)] sqmm = [142578 + 13689 x (-0.64)] sqmm = (142578 - 8760.96) sqmm = 133817.04 sqmm Say 133817 sqmm or 0.134 sqm For 10 m length qty. of concrete reqd. = 0.134x10= 1.34 cum				
4.1.10	Rate as per Item Number 4.1.10 of SH: Concrete work	cum	1.34	3,357.40	4,498.92 (A)
	TOTAL				4,498.92
	Cost of 10 metre				4,498.92
	Cost of 1 metre				449.89
	Say				449.90

19.3.5 250 mm diameter S.W. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metres Area = WxD1 + 2x½xR - [R²/2(3.14/2-Q)] - (3.14/2)R² = WD1 + R²(Cot Q) - R²(3.14/2 - Q) - (3.14/2)R² = WD1 +R²(CotQ-3.14 + Q) Where Sin Q = [R/(W/2)] = 2R/W W = D + X, X = 300 mm D = 250 + 20 + 20= 290 mm W = 290 + 300 = 590 mm D1 = Depth = 150 + QA x 290) = 295 mm R = 145 mm Sin Q = (2xl45)/590 = 0.49154 therefore Q = 29°26' Hence Tan Q = 0.5635 Area = 590 x 295 + (145)² (Cot Q - 3.14 + Q) =[174050 + 21025(1/0.5635- 180° + 29°26')] sqmm = [174050 + 21025(1.77- 150°34'x 3.14/180)] sqmm = [174050 + 21025 x (1.77-2.63)] sqmm = [174050 + 21025 x (-0.86)] sqmm = (174050 - 18081.5) sqmm = 155968.5 sqmm Say 155968 sqmm or 0.156 sqm For 10 m length qty. of concrete reqd. = 0.156x10= 1.56 cum				
4.1.10	Rate as per Item Number 4.1.10 of SH: Concrete work	cum	1.56	3,357.40	5,237.54 (A)
	TOTAL				5,237.54
	Cost of 10 metre				5,237.54
	Cost of 1 metre				523.75
	Say				523.75

19.3.6 300 mm diameter S.W. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metres Area= WxD1 + 2x½xR - [R²/2(3.14/2-Q)] - (3.14/2)R² = WD1 + R²(Cot Q) - R²(3.14/2 - Q) - (3.14/2)R² = WD1 + R²(Cot Q - 3.14 + Q) Where Sin Q = [R/(W/2)] = 2R/W W = D + X, X = 300 mm D = 300 + 25 + 25 = 350 mm W = 350 + 300 = 650 mm D1 = Depth = 150 + (1/2 x 350) = 325 mm R = 175 mm Sin Q = (2xl75)/650 = 0.5385 therefore Q = 32°34' Hence Tan Q = 0.6387 Area = 650 x 325 + (175)² (Cot Q - 3.14 + Q)				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	= [211250 + 30625(1/0.6387- 180° + 32°34')] sqmm = [211250 + 30625(1.566- 147°26'x 3.14/180)] sqmm = [211250 + 30625 x (1.566-2.571)] sqmm = [211250 + 30625 x (-1.005)] sqmm = [211250 - 30778.13) sqmm = 180471.87 sqmm Say 0.180 sqm For 10 m length qty. of concrete reqd. = 0.180x10= 1.80 cum				
4.1.10	Rate as per Item Number 4.1.10 of SH: Concrete work	cum	1.80	3,357.40	6,043.32 (A)
	TOTAL				6,043.32
	Cost of 10 metre				6,043.32
	Cost of 1 metre				604.33
	Say				604.35

19.4 Providing and fixing square-mouth S.W. gully trap class SP-1 complete with C.I. grating brick masonry chamber with water tight C.I. cover with frame of 300x300 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 :

19.4.1 100x100 mm size P type

19.4.1.1 With common burnt clay F.P.S.(non modular) bricks of class designation 7.5

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one gully trap				
1900	S.W. gully trap P type 100x100 mm	each	1.00	70.00	70.00
1364	C.I. grating 100x100 mm	each	1.00	15.00	15.00
1352	C.I. cover and frame 300x300 mm inside	each	1.00	280.00	280.00
9999	Carriage of materials	L.S.	4.50	1.49	6.70
	Cement concrete 1:5:10 (1 cement: 5 fine sand : 10 graded stone aggregate 40 mm nominal size) 0.68x0.68x0.10 m = 0.046 cum Concrete around trap 0.30x0.30x0.675 m = 0.061 cum Total =0.107 cum Deduct: 0.345/3x[0.09+0.01+(0.09x0.01)/2] = 0.015 cum 3.14/4x$(0.124)^2$x0.47 = 0.006 cum Total = 0.021 cum Net quantity = 0.107 cum (-) 0.021 cum = 0.086 cum say 0.09 cum				
4.1.11	Rate as per Item Number 4.1.11 of SH: Concrete work Brick work with 75 class designation brick in cement mortar 1:4(1 cement: 4 coarse sand) 1.66x0.115x0.675 m = 0.129 cum say 0.13 cum	cum	0.09	3,087.45	277.87 (A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
6.1.1	Rate as per Item Number 6.1.1 of SH: Brick work Cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) 1.66x0.115x0.04 m = 0.008 cum	cum	0.13	3,508.25	456.07 (A)
4.2.3	Rate as per Item Number 4.2.3 of SH: Concrete work 12 mm cement plaster 1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement: [l/2x0.358x(l.20+0.40)] = 0.286 sqm say 0.29 sqm	cum	0.008	5,272.40	42.18 (A)
13.9.1	Rate as per Item Number 13.9.1 of SH: Finishing	sqm	0.29	173.10	50.20 (A)
	TOTAL				1,198.02
	Add Water Charges @ 1% except on A i.e on (1,198.02 - 826.32 =) 371.70				3.72
	TOTAL				1,201.74
	Add CPOH @ 15% except on A i.e on (1,201.74 - 826.32 =) 375.42				56.31
	Cost of each				1,258.05
	Say				1,258.05

19.4.1.2 With Sewer bricks conforming to IS : 4885

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one gully trap				
1900	S.W. gully trap P type 100x100 mm	each	1.00	70.00	70.00
1364	C.I. grating 100x100 mm	each	1.00	15.00	15.00
1352	C.I. cover and frame 300x300 mm inside	each	1.00	280.00	280.00
9999	Carriage of materials	L.S.	4.50	1.49	6.70
	Cement concrete 1:5:10 (1 cement: 5 fine sand : 10 graded stone aggregate 40 mm nominal size) 0.68x0.68x0.10 m = 0.046 cum Concrete around trap 0.30x0.30x0.675 m = 0.061 cum Total =0.107 cum Deduct: 0.345/3x[0.09+0.01+(0.09x0.01)/2] = 0.015 cum 3.14/4x$(0.124)^2$x0.47 = 0.006 cum Total = 0.021 cum Net quantity = 0.107 cum (-) 0.021 cum = 0.086 cum say 0.09 cum				
4.1.11	Rate as per Item Number 4.1.11 of SH: Concrete work Brick work with sewer bricks conforming to IS:4885 in cement mortar 1:4(1 cement: 4 coarse sand) 1.66x0.115x0.675 m = 0.129 cum say 0.13 cum	cum	0.09	3,087.45	277.87 (A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
6.36.1	Rate as per Item Number 6.36.1 of SH: Brick work Cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) 1.66x0.115x0.04 m = 0.008 cum	cum	0.13	3,794.80	493.32 (A)
4.2.3	Rate as per Item Number 4.2.3 of SH: Concrete work 12 mm cement plaster 1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement: [1/2x0.358x(l.20+0.40)] = 0.286 sqm say 0.29 sqm	cum	0.008	5,272.40	42.18 (A)
13.9.1	Rate as per Item Number 13.9.1 of SH: Finishing	sqm	0.29	173.10	50.20 (A)
	TOTAL				1,235.27
	Add Water Charges @ 1% except on A i.e on (1,235.27 - 863.57 =) 371.70				3.72
	TOTAL				1,238.99
	Add CPOH @ 15% except on A i.e on (1,238.99 - 863.57 =) 375.42				56.31
	Cost of each				1,295.30
	Say				1,295.30

19.4.2 150 x 100 mm size P type

19.4.2.1 With common burnt clay F.P.S.(non modular) bricks of class designation 7.5

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one gully trap				
1902	S.W. gully trap P type 150x100 mm	each	1.00	104.00	104.00
1366	C.I. grating 150x150 mm	each	1.00	25.00	25.00
1352	C.I. cover and frame 300x300 mm inside	each	1.00	280.00	280.00
9999	Carriage of materials	L.S.	4.50	1.49	6.70
	Cement concrete 1:5:10 (1 cement: 5 fine sand : 10 graded stone aggregate 40 mm nominal size) 0.68x0.68x0.10 m = 0.046 cum Concrete around trap 0.30x0.30x0.675 m = 0.061 cum Total =0.107 cum Deduct: 0.322/3x[0.09+0.023+(0.09x0.023)1/2] = 0.017 cum 3.14/4x$(0.124)^2$x0.485 = 0.006 cum Total = 0.023 cum Net quantity = 0.107 cum (-) 0.023 cum = 0.084 cum say 0.08 cum				
4.1.11	Rate as per Item Number 4.1.11 of SH: Concrete work Brick work with 75 class designation brick in cement mortar 1:4(1 cement: 4 coarse sand) 1.66x0.115x0.675 m = 0.129 cum say 0.13 cum	cum	0.08	3,087.45	247.00 (A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
6.1.1	Rate as per Item Number 6.1.1 of SH: Brick work Cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) 1.66x0.115x0.04 m = 0.008 cum	cum	0.13	3,508.25	456.07 (A)
4.2.3	Rate as per Item Number 4.2.3 of SH: Concrete work 12 mm cement plaster 1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement: [1/2x0.337x(l.20+0.60)] = 0.303 sqm say 0.30 sqm	cum	0.008	5,272.40	42.18 (A)
13.9.1	Rate as per Item Number 13.9.1 of SH: Finishing	sqm	0.30	173.10	51.93 (A)
	TOTAL				1,212.88
	Add Water Charges @ 1% except on A i.e on (1,212.88 - 797.18 =) 415.70				4.16
	TOTAL				1,217.04
	Add CPOH @ 15% except on A i.e on (1,217.04 - 797.18 =) 419.86				62.98
	Cost of each				1,280.02
	Say				1,280.00

19.4.2.2 With sewer bricks conforming to IS : 4885

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one gully trap				
1902	S.W. gully trap P type 150x100 mm	each	1.00	104.00	104.00
1366	C.I. grating 150x150 mm	each	1.00	25.00	25.00
1352	C.I. cover and frame 300x300 mm inside	each	1.00	280.00	280.00
9999	Carriage of materials	L.S.	4.50	1.49	6.70
	Cement concrete 1:5:10 (1 cement: 5 fine sand : 10 graded stone aggregate 40 mm nominal size) 0.68x0.68x0.10 m = 0.046 cum Concrete around trap 0.30x0.30x0.675 m = 0.061 cum Total =0.107 cum Deduct: 0.322/3x[0.09+0.023+(0.09x0.023)1/2] = 0.017 cum 3.14/4x$(0.124)^2$x0.485 = 0.006 cum Total = 0.023 cum Net quantity = 0.107 cum (-) 0.023 cum = 0.084 cum say 0.08 cum				
4.1.11	Rate as per Item Number 4.1.11 of SH: Concrete work Brick work with sewer bricks conforming to IS: 4885 in cement mortar 1:4(1 cement: 4 coarse sand) 1.66x0.115x0.675 m = 0.129 cum say 0.13 cum	cum	0.08	3,087.45	247.00 (A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
6.36.1	Rate as per Item Number 6.36.1 of SH: Brick work Cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) 1.66x0.115x0.04 m = 0.008 cum	cum	0.13	3,794.80	493.32 (A)
4.2.3	Rate as per Item Number 4.2.3 of SH: Concrete work 12 mm cement plaster 1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement: [1/2x0.337x(l.20+0.60)] = 0.303 sqm say 0.30 sqm	cum	0.008	5,272.40	42.18 (A)
13.9.1	Rate as per Item Number 13.9.1 of SH: Finishing	sqm	0.30	173.10	51.93 (A)
	TOTAL				1,250.13
	Add Water Charges @ 1% except on A i.e on (1,250.13 - 834.43 =) 415.70				4.16
	TOTAL				1,254.29
	Add CPOH @ 15% except on A i.e on (1,254.29 - 834.43 =) 419.86				62.98
	Cost of each				1,317.27
	Say				1,317.25

19.4.3 180x150 mm size P type

19.4.3.1 With common burnt clay F.P.S.(non modular) bricks of class designation 7.5

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one gully trap				
1904	S.W. gully trap P type 180x150 mm	each	1.00	195.00	195.00
1367	C.I. grating 180x180 mm	each	1.00	30.00	30.00
1352	C.I. cover and frame 300x300 mm inside	each	1.00	280.00	280.00
9999	Carriage of materials	L.S.	4.50	1.49	6.70
	Cement concrete 1:5:10 (1 cement: 5 fine sand : 10 graded stone aggregate 40 mm nominal size) 0.68x0.68x0.10 m = 0.046 cum Concrete around trap 0.30x0.30x0.675 m = 0.061 cum Total =0.107 cum Deduct: 0.55/3x[0.09+0.032+(0.09x0.032)/2] = 0.008 cum 3.14/4x$(0.182)^2$x0.70 = 0.018 cum Total = 0.026 cum Net quantity = 0.107 cum (-) 0.026 cum = 0.081 cum say 0.08 cum				
4.1.11	Rate as per Item Number 4.1.11 of SH: Concrete work Brick work with 75 class designation brick in cement mortar 1:4(1 cement: 4 coarse sand) 1.66x0.115x0.675 m = 0.129 cum say 0.13 cum	cum	0.08	3,087.45	247.00 (A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
6.1.1	Rate as per Item Number 6.1.1 of SH: Brick work Cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) 1.66x0.115x0.04 m = 0.008 cum	cum	0.13	3,508.25	456.07 (A)
4.2.3	Rate as per Item Number 4.2.3 of SH: Concrete work 12 mm cement plaster 1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement: [1/2x0.166x(l.20+0.72)] = 0.159 sqm say 0.16 sqm	cum	0.008	5,272.40	42.18 (A)
13.9.1	Rate as per Item Number 13.9.1 of SH: Finishing	sqm	0.16	173.10	27.70 (A)
	TOTAL				1,284.65
	Add Water Charges @ 1% except on A i.e on (1,284.65 - 772.95 =) 511.70				5.12
	TOTAL				1,289.77
	Add CPOH @ 15% except on A i.e on (1,289.77 - 772.95 =) 516.82				77.52
	Cost of each				1,367.29
	Say				1,367.30

19.4.3.2 With sewer bricks conforming to IS : 4885

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one gully trap				
1904	S.W. gully trap P type 180x150 mm	each	1.00	195.00	195.00
1367	C.I. grating 180x180 mm	each	1.00	30.00	30.00
1352	C.I. cover and frame 300x300 mm inside	each	1.00	280.00	280.00
9999	Carriage of materials	L.S.	4.50	1.49	6.70
	Cement concrete 1:5:10 (1 cement: 5 fine sand : 10 graded stone aggregate 40 mm nominal size) 0.68x0.68x0.10 m = 0.046 cum Concrete around trap 0.30x0.30x0.675 m = 0.061 cum Total =0.107 cum Deduct: 0.55/3x[0.09+0.032+(0.09x0.032)/2] = 0.008 cum 3.14/4x$(0.182)^2$x0.70 = 0.018 cum Total = 0.026 cum Net quantity = 0.107 cum (-) 0.026 cum = 0.081 cum say 0.08 cum				
4.1.11	Rate as per Item Number 4.1.11 of SH: Concrete work Brick work with sewer bricks conforming to IS: 4885. in cement mortar 1:4(1 cement: 4 coarse sand) 1.66x0.115x0.675 m = 0.129 cum say 0.13 cum	cum	0.08	3,087.45	247.00 (A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
6.36.1	Rate as per Item Number 6.36.1 of SH: Brick work Cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) 1.66x0.115x0.04 m = 0.008 cum	cum	0.13	3,794.80	493.32 (A)
4.2.3	Rate as per Item Number 4.2.3 of SH: Concrete work 12 mm cement plaster 1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement: [1/2x0.166x(l.20+0.072)] = 0.159 sqm say 0.16 sqm	cum	0.008	5,272.40	42.18 (A)
13.9.1	Rate as per Item Number 13.9.1 of SH: Finishing	sqm	0.16	173.10	27.70 (A)
	TOTAL				1,321.90
	Add Water Charges @ 1% except on A i.e on (1,321.90 - 810.20 =) 511.70				5.12
	TOTAL				1,327.02
	Add CPOH @ 15% except on A i.e on (1,327.02 - 810.20 =) 516.82				77.52
	Cost of each				1,404.54
	Say				1,404.55

19.5 Dismantling of old S.W. pipes including breaking of joints and bed concrete stacking of useful materials near the site within 50 m lead and disposal of unserviceable materials into municipal dumps:

19.5.1 100 mm diameter

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	LABOUR:				
0114	Beldar	day	0.49	247.00	121.03
0115	Coolie	day	0.36	247.00	88.92
	TOTAL				209.95
	Add Water Charges @ 1%				2.10
	TOTAL				212.05
	Add CPOH @ 15%				31.81
	Cost of 10 metre				243.86
	Cost of 1 metre				24.39
	Say				24.40

19.5.2 150 mm diameter

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	LABOUR:				
0114	Beldar	day	0.49	247.00	121.03
0115	Coolie	day	0.45	247.00	111.15
	TOTAL				232.18
	Add Water Charges @ 1%				2.32
	TOTAL				234.50
	Add CPOH @ 15%				35.17
	Cost of 10 metre				269.67
	Cost of 1 metre				26.97
	Say				26.95

19.5.3 200 mm diameter

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	LABOUR:				
0114	Beldar	day	0.49	247.00	121.03
0115	Coolie	day	0.51	247.00	125.97
	TOTAL				247.00
	Add Water Charges @ 1%				2.47
	TOTAL				249.47
	Add CPOH @ 15%				37.42
	Cost of 10 metre				286.89
	Cost of 1 metre				28.69
	Say				28.70

19.5.4 250 mm diameter

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	LABOUR:				
0114	Beldar	day	0.49	247.00	121.03
0115	Coolie	day	0.57	247.00	140.79
	TOTAL				261.82
	Add Water Charges @ 1%				2.62
	TOTAL				264.44
	Add CPOH @ 15%				39.67
	Cost of 10 metre				304.11
	Cost of 1 metre				30.41
	Say				30.40

19.5.5 300 mm diameter

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	LABOUR:				
0114	Beldar	day	0.49	247.00	121.03
0115	Coolie	day	0.63	247.00	155.61
	TOTAL				276.64
	Add Water Charges @ 1%				2.77
	TOTAL				279.41
	Add CPOH @ 15%				41.91
	Cost of 10 metre				321.32
	Cost of 1 metre				32.13
	Say				32.15

19.5.6 350 mm diameter

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	LABOUR:				
0114	Beldar	day	0.60	247.00	148.20

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0115	Coolie	day	0.69	247.00	170.43
	TOTAL				318.63
	Add Water Charges @ 1%				3.19
	TOTAL				321.82
	Add CPOH @ 15%				48.27
	Cost of 10 metre				370.09
	Cost of 1 metre				37.01
	Say				37.00

19.5.7 400 mm diameter

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	LABOUR:				
0114	Beldar	day	0.66	247.00	163.02
0115	Coolie	day	0.75	247.00	185.25
	TOTAL				348.27
	Add Water Charges @ 1%				3.48
	TOTAL				351.75
	Add CPOH @ 15%				52.76
	Cost of 10 metre				404.51
	Cost of 1 metre				40.45
	Say				40.45

19.5.8 450 mm diameter

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	LABOUR:				
0114	Beldar	day	0.66	247.00	163.02
0115	Coolie	day	0.81	247.00	200.07
	TOTAL				363.09
	Add Water Charges @ 1%				3.63
	TOTAL				366.72
	Add CPOH @ 15%				55.01
	Cost of 10 metre				421.73
	Cost of 1 metre				42.17
	Say				42.15

19.6 Providing and laying non-pressure NP2 class (light duty) R.C.C. pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement : 2 fine sand) including testing of joints etc. complete:

19.6.1 100 mm dia R.C.C. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
1700	R.C.C. pipes NP2 class 100 mm dia (in 2 m. length = 5 Nos.)	metre	10.00	135.00	1,350.00
1714	R.C.C. collars NP2 class 100 mm dia 5 Nos.	each	5.00	20.00	100.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
2275	Carriage of R.C.C. pipes 100 mm dia Cement of 5 joints = 5x0.00065 = 0.00325 cum = 0.0048 t say 0.005 tonne	100 metre	10.00	191.48	19.15
0367	Portland Cement	tonne	0.005	5,000.00	25.00
2209	Carriage of cement	tonne	0.005	77.87	0.39
	Fine sand for 5 joint = 0.0013x5 = 0.0065 cum = 0.006 cum				
0983	Fine sand (zone IV)	cum	0.006	640.00	3.84
2261	Carriage of fine sand (1 part badarpur sand: 2 parts jamuna sand)	cum	0.006	87.60	0.53
	LABOUR:				
0123	Mason (brick layer) 1 st class	day	0.32	301.00	96.32
0124	Mason (brick layer) 2nd class	day	0.32	273.00	87.36
0114	Beldar	day	0.63	247.00	155.61
0101	Bhisti	day	0.16	260.00	41.60
	TOTAL				1,879.80
	Add Water Charges @ 1%				18.80
	TOTAL				1,898.60
	Add CPOH @ 15%				284.79
	Cost of 10 metre				2,183.39
	Cost of 1 metre				218.34
	Say				218.35

19.6.2 150 mm dia R.C.C. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
1701	R.C.C. pipes NP2 class 150 mm dia (in 2 m. length = 5 Nos.)	metre	10.00	154.00	1,540.00
1715	R.C.C. collars NP2 class 150 mm dia 5 Nos.	each	5.00	25.00	125.00
2281	Carriage of R.C.C. pipes 150 mm dia Cement of 5 joints = 5x0.0008 = 0.004 cum = 0.006 tonne	100 metre	10.00	319.12	31.91
0367	Portland Cement	tonne	0.006	5,000.00	30.00
2209	Carriage of cement	tonne	0.006	77.87	0.47
	Fine sand for 5 joint = 0.0016x5 = 0.008 cum				
0983	Fine sand (zone IV)	cum	0.008	640.00	5.12
2261	Carriage of fine sand (1 part badarpur sand: 2 parts jamuna sand)	cum	0.008	87.60	0.70
	LABOUR:				
0123	Mason (brick layer) 1 st class	day	0.39	301.00	117.39
0124	Mason (brick layer) 2nd class	day	0.39	273.00	106.47
0114	Beldar	day	0.78	247.00	192.66

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0101	Bhisti	day	0.16	260.00	41.60
	TOTAL				2,191.32
	Add Water Charges @ 1%				21.91
	TOTAL				2,213.23
	Add CPOH @ 15%				331.98
	Cost of 10 metre				2,545.21
	Cost of 1 metre				254.52
	Say				254.5

19.6.3 250 mm dia R.C.C. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
1702	R.C.C. pipes NP2 class 250 mm dia (in 2 m. length = 5 Nos.)	metre	10.00	188.00	1,880.00
1716	R.C.C. collars NP2 class 250 mm dia 5 Nos.	each	5.00	40.00	200.00
2287	Carriage of R.C.C. pipes 250 mm dia Cement of 5 joints = 5x0.0012 = 0.006 cum = 0.009 tonne	100 metre	10.00	737.68	73.77
0367	Portland Cement	tonne	0.009	5,000.00	45.00
2209	Carriage of cement	tonne	0.009	77.87	0.70
	Fine sand for 5 joint = 0.0024x5 = 0.012 cum				
0983	Fine sand (zone IV)	cum	0.012	640.00	7.68
2261	Carriage of fine sand (1 part badarpur sand: 2 parts jamuna sand)	cum	0.012	87.60	1.05
	LABOUR:				
0123	Mason (brick layer) 1 st class	day	0.54	301.00	162.54
0124	Mason (brick layer) 2nd class	day	0.54	273.00	147.42
0114	Beldar	day	1.50	247.00	370.50
0101	Bhisti	day	0.23	260.00	59.80
	TOTAL				2,948.46
	Add Water Charges @ 1%				29.48
	TOTAL				2,977.94
	Add CPOH @ 15%				446.69
	Cost of 10 metre				3,424.63
	Cost of 1 metre				342.46
	Say				342.45

19.6.4 300 mm dia R.C.C. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
1703	R.C.C. pipes NP2 class 300 mm dia (in 2.5 m. length = 4 Nos.)	metre	10.00	261.00	2,610.00
1717	R.C.C. collars NP2 class 300 mm dia 4 Nos.	each	4.00	49.00	196.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
2290	Carriage of R.C.C. pipes 300 mm dia Cement of 4 joints = 4x0.00185 = 0.0074 cum = 0.011 tonne	100 metre	10.00	911.78	91.18
0367	Portland Cement	tonne	0.011	5,000.00	55.00
2209	Carriage of cement	tonne	0.011	77.87	0.86
	Fine sand for 4 joint = 0.0037x4 = 0.0148 say 0.015cum = 0.006 cum				
0983	Fine sand (zone IV)	cum	0.015	640.00	9.60
2261	Carriage of fine sand (1 part badarpur sand: 2 parts jamuna sand)	cum	0.015	87.60	1.31
	LABOUR:				
0123	Mason (brick layer) 1 st class	day	0.59	301.00	177.59
0124	Mason (brick layer) 2nd class	day	0.59	273.00	161.07
0114	Beldar	day	1.16	247.00	286.52
0101	Bhisti	day	0.20	260.00	52.00
	TOTAL				3,641.13
	Add Water Charges @ 1%				36.41
	TOTAL				3,677.54
	Add CPOH @ 15%				551.63
	Cost of 10 metre				4,229.17
	Cost of 1 metre				422.92
	Say				422.90

19.6.5 450 mm dia R.C.C. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre MATERIAL:				
1704	R.C.C. pipes NP2 class 450 mm dia (in 2.5 m. length = 4 Nos.)	metre	10.00	380.00	3,800.00
1718	R.C.C. collars NP2 class 450 mm dia 4 Nos.	each	4.00	75.00	300.00
2299	Carriage of R.C.C. pipes 450 & 500 mm dia Cement of 4 joints = 4x0.0041 = 0.0164 cum = 0.024 tonne	100 metre	10.00	2,127.50	212.75
0367	Portland Cement	tonne	0.024	5,000.00	120.00
2209	Carriage of cement	tonne	0.024	77.87	1.87
	Fine sand for 4 joint = 0.0082x4 = 0.033 cum				
0983	Fine sand (zone IV)	cum	0.033	640.00	21.12
2261	Carriage of fine sand (1 part badarpur sand: 2 parts jamuna sand)	cum	0.033	87.60	2.89
	LABOUR:				
0123	Mason (brick layer) 1 st class	day	0.75	301.00	225.75
0124	Mason (brick layer) 2nd class	day	0.75	273.00	204.75
0114	Beldar	day	1.50	247.00	370.50

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0101	Bhisti	day	0.33	260.00	85.80
	TOTAL				5,345.43
	Add Water Charges @ 1%				53.45
	TOTAL				5,398.88
	Add CPOH @ 15%				809.83
	Cost of 10 metre				6,208.71
	Cost of 1 metre				620.87
	Say				620.85

19.6.6 500 mm dia R.C.C. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
1705	R.C.C. pipes NP2 class 500 mm dia (in 2.5 m. length = 4 Nos.)	metre	10.00	454.00	4,540.00
1719	R.C.C. collars NP2 class 500 mm dia 4 Nos.	each	4.00	89.00	356.00
2299	Carriage of R.C.C. pipes 450 & 500 mm dia Cement of 4 joints = 4x0.0045 = 0.018 cum = 0.026 tonne	100 metre	10.00	2,127.50	212.75
0367	Portland Cement	tonne	0.026	5,000.00	130.00
2209	Carriage of cement	tonne	0.026	77.87	2.02
	Fine sand for 4 joints = 0.0089x4 = 0.0356 cum = 0.036 cum				
0983	Fine sand (zone IV)	cum	0.036	640.00	23.04
2261	Carriage of fine sand (1 part badarpur sand: 2 parts jamuna sand)	cum	0.036	87.60	3.15
	LABOUR:				
0123	Mason (brick layer) 1 st class	day	0.81	301.00	243.81
0124	Mason (brick layer) 2nd class	day	0.81	273.00	221.13
0114	Beldar	day	1.62	247.00	400.14
0101	Bhisti	day	0.33	260.00	85.80
	TOTAL				6,217.84
	Add Water Charges @ 1%				62.18
	TOTAL				6,280.02
	Add CPOH @ 15%				942.00
	Cost of 10 metre				7,222.02
	Cost of 1 metre				722.20
	Say				722.20

19.6.7 600 mm dia R.C.C. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
1706	R.C.C. pipes NP2 class 600 mm dia (in 2.5 m. length = 4 Nos.)	metre	10.00	732.00	7,320.00
1720	R.C.C. collars NP2 class 600 mm dia 4 Nos.	each	4.00	109.00	436.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
2303	Carriage of R.C.C. pipes 600,700,750 & 800 mm dia	100 metre	10.00	3,191.25	319.12
	Cement of 4 joints = 4x0.0054 = 0.0216 cum = 0.032 tonne				
0367	Portland Cement	tonne	0.032	5,000.00	160.00
2209	Carriage of cement	tonne	0.032	77.87	2.49
	Fine sand for 4 joints = 0.0108x4 = 0.043 cum				
0983	Fine sand (zone IV)	cum	0.043	640.00	27.52
2261	Carriage of fine sand (1 part badarpur sand: 2 parts jamuna sand)	cum	0.043	87.60	3.77
	LABOUR:				
0123	Mason (brick layer) 1 st class	day	0.92	301.00	276.92
0124	Mason (brick layer) 2nd class	day	0.92	273.00	251.16
0114	Beldar	day	1.83	247.00	452.01
0101	Bhisti	day	0.33	260.00	85.80
	TOTAL				9,334.79
	Add Water Charges @ 1%				93.35
	TOTAL				9,428.14
	Add CPOH @ 15%				1,414.22
	Cost of 10 metre				10,842.36
	Cost of 1 metre				1,084.24
	Say				1,084.25

19.6.8 700 mm dia R.C.C. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
1707	R.C.C. pipes NP2 class 700 mm dia (in 2.5 m. length = 4 Nos.)	metre	10.00	850.00	8,500.00
1721	R.C.C. collars NP2 class 700 mm dia 4 Nos.	each	4.00	121.00	484.00
2303	Carriage of R.C.C. pipes 600,700,750 & 800 mm dia	100 metre	10.00	3,191.25	319.12
	Cement of 4 joints = 4x0.0062 = 0.0248 cum = 0.037 tonne				
0367	Portland Cement	tonne	0.037	5,000.00	185.00
2209	Carriage of cement	tonne	0.037	77.87	2.88
	Fine sand for 4 joints = 0.0124x4 = 0.0496 cum = 0.05 cum				
0983	Fine sand (zone IV)	cum	0.05	640.00	32.00
2261	Carriage of fine sand (1 part badarpur sand: 2 parts jamuna sand)	cum	0.05	87.60	4.38
	LABOUR:				
0123	Mason (brick layer) 1 st class	day	1.03	301.00	310.03
0124	Mason (brick layer) 2nd class	day	1.03	273.00	281.19
0114	Beldar	day	2.06	247.00	508.82
0101	Bhisti	day	0.42	260.00	109.20
	TOTAL				10,736.62
	Add Water Charges @ 1%				107.37
	TOTAL				10,843.99
	Add CPOH @ 15%				1,626.60
	Cost of 10 metre				12,470.59
	Cost of 1 metre				1,247.06
	Say				1,247.05

19.6.9 800 mm dia R.C.C. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metres				
	MATERIAL:				
1709	R.C.C. pipes NP2 class 800 mm dia (in 2.5 m. length = 4 Nos.)	metre	10.00	960.00	9,600.00
1723	R.C.C. collars NP2 class 800 mm dia 4 Nos.	each	4.00	172.00	688.00
2303	Carriage of R.C.C. pipes 600,700,750 & 800 mm dia	100 metre	10.00	3,191.25	319.12
	Cement of 4 joints = 4x0.0072 = 0.0288 cum = 0.042 tonne				
0367	Portland Cement	tonne	0.042	5,000.00	210.00
2209	Carriage of cement	tonne	0.042	77.87	3.27
	Fine sand for 4 joints = 0.0143x4 = 0.0572 cum = 0.057 cum				
0983	Fine sand (zone IV)	cum	0.057	640.00	36.48
2261	Carriage of fine sand (1 part badarpur sand: 2 parts jamuna sand)	cum	0.057	87.60	4.99
	LABOUR:				
0123	Mason (brick layer) 1 st class	day	1.14	301.00	343.14
0124	Mason (brick layer) 2nd class	day	1.14	273.00	311.22
0114	Beldar	day	2.28	247.00	563.16
0101	Bhisti	day	0.42	260.00	109.20
	TOTAL				12,188.58
	Add Water Charges @ 1%				121.89
	TOTAL				12,310.47
	Add CPOH @ 15%				1,846.57
	Cost of 10 metre				14,157.04
	Cost of 1 metre				1,415.70
	Say				1,415.70

19.6.10 900 mm dia R.C.C. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
1710	R.C.C. pipes NP2 class 900 mm dia (in 2.5 m. length = 4 Nos.)	metre	10.00	1,125.00	11,250.00
1724	R.C.C. collars NP2 class 900 mm dia 4 Nos.	each	4.00	210.00	840.00
2331	Carriage of R.C.C. pipes 900 mm dia	100 metre	10.00	4,786.87	478.69
	Cement of 4 joints = 4x0.0082 = 0.0328 cum = 0.0488 t Say 0.049 tonne				
0367	Portland Cement	tonne	0.049	5,000.00	245.00
2209	Carriage of cement	tonne	0.049	77.87	3.82
	Fine sand for 4 joints = 0.0164x4 = 0.066 cum				
0983	Fine sand (zone IV)	cum	0.066	640.00	42.24
2261	Carriage of fine sand (1 part badarpur sand: 2 parts jamuna sand)	cum	0.066	87.60	5.78

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	LABOUR:				
0123	Mason (brick layer) 1 st class	day	1.25	301.00	376.25
0124	Mason (brick layer) 2nd class	day	1.25	273.00	341.25
0114	Beldar	day	3.00	247.00	741.00
0101	Bhisti	day	0.50	260.00	130.00
	TOTAL				14,454.03
	Add Water Charges @ 1%				144.54
	TOTAL				14,598.57
	Add CPOH @ 15%				2,189.79
	Cost of 10 metre				16,788.36
	Cost of 1 metre				1,678.84
	Say				1,678.85

19.6.11 1000 mm dia R.C.C. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
1711	R.C.C. pipes NP2 class 1000 mm dia (in 2.5 m. length = 4 Nos.)	metre	10.00	1,420.00	14,200.00
1725	R.C.C. collars NP2 class 1000 mm dia 4 Nos.	each	4.00	256.00	1,024.00
2332	Carriage of R.C.C. pipes 1000 mm dia	100 metre	10.00	6,382.50	638.25
	Cement of 4 joints = 4x0.0092 = 0.0368 cum = 0.055 tonne				
0367	Portland Cement	tonne	0.055	5,000.00	275.00
2209	Carriage of cement	tonne	0.055	77.87	4.28
	Fine sand for 4 joints = 0.0185x4 = 0.074 cum				
0983	Fine sand (zone IV)	cum	0.074	640.00	47.36
2261	Carriage of fine sand (1 part badarpur sand: 2 parts jamuna sand)	cum	0.074	87.60	6.48
	LABOUR:				
0123	Mason (brick layer) 1 st class	day	1.36	301.00	409.36
0124	Mason (brick layer) 2nd class	day	1.36	273.00	371.28
0114	Beldar	day	4.33	247.00	1,069.51
0101	Bhisti	day	0.50	260.00	130.00
	TOTAL				18,175.52
	Add Water Charges @ 1%				181.76
	TOTAL				18,357.28
	Add CPOH @ 15%				2,753.59
	Cost of 10 metre				21,110.87
	Cost of 1 metre				2,111.09
	Say				2,111.10

19.6.12 1100 mm dia R.C.C. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
1712	R.C.C. pipes NP2 class 1100 mm dia (in 2.5 m. length = 4 Nos.)	metre	10.00	1,730.00	17,300.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1726	R.C.C. collars NP2 class 1100 mm dia 4 Nos.	each	4.00	283.00	1,132.00
2333	Carriage of R. C. C. pipes 1100 mm dia Cement of 4 joints = 4x0.0103 =0.0412 cum = 0.061 tonne	100 metre	10.00	6,382.50	638.25
0367	Portland Cement	tonne	0.061	5,000.00	305.00
2209	Carriage of cement	tonne	0.061	77.87	4.75
	Fine sand for 4 joints = 0.0206x4 = 0.0824 cum = 0.082 cum				
0983	Fine sand (zone IV)	cum	0.082	640.00	52.48
2261	Carriage of fine sand (1 part badarpur sand: 2 parts jamuna sand)	cum	0.082	87.60	7.18
	LABOUR:				
0123	Mason (brick layer) 1 st class	day	1.47	301.00	442.47
0124	Mason (brick layer) 2nd class	day	1.47	273.00	401.31
0114	Beldar	day	6.30	247.00	1,556.10
0101	Bhisti	day	0.60	260.00	156.00
	TOTAL				21,995.54
	Add Water Charges @ 1%				219.96
	TOTAL				22,215.50
	Add CPOH @ 15%				3,332.32
	Cost of 10 metre				25,547.82
	Cost of 1 metre				2,554.78
	Say				2,554.80

19.6.13 1200 mm dia R.C.C. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL:				
1713	R.C.C. pipes NP2 class 1200 mm dia (in 2.5 m. length = 4 Nos.)	metre	10.00	1,760.00	17,600.00
1727	R.C.C. collars NP2 class 1200 mm dia 4 Nos.	each	4.00	330.00	1,320.00
2334	Carriage of R.C.C. pipes 1200 mm dia Cement of 4 joints = 4x0.0114 = 0.0456 cum = 0.068 tonne	100 metre	10.00	6,382.50	638.25
0367	Portland Cement	tonne	0.068	5,000.00	340.00
2209	Carriage of cement	tonne	0.068	77.87	5.30
	Fine sand for 4 joints = 0.0229x4 = 0.0916 cum = 0.092 cum				
0983	Fine sand (zone IV)	cum	0.092	640.00	58.88
2261	Carriage of fine sand (1 part badarpur sand: 2 parts jamuna sand)	cum	0.092	87.60	8.06
	LABOUR:				
0123	Mason (brick layer) 1 st class	day	1.59	301.00	478.59
0124	Mason (brick layer) 2nd class	day	1.59	273.00	434.07
0114	Beldar	day	8.67	247.00	2,141.49
0101	Bhisti	day	0.67	260.00	174.20
	TOTAL				23,198.84
	Add Water Charges @ 1%				231.99
	TOTAL				23,430.83
	Add CPOH @ 15%				3,514.62
	Cost of 10 metre				26,945.45
	Cost of 1 metre				2,694.55
	Say				2,694.55

19.7 Constructing brick masonry manhole in cement mortar 1:4 (1 cement : 4 coarse sand) with 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 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement and making channels in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) finished with a floating coat of neat cement complete as per standard design:

19.7.1 Inside size 90x80 cm and 45 cm deep including C.I. cover with frame (light duty) 455x610 mm internal dimensions, total weight of cover and frame to be not less than 38 kg (weight of cover 23 kg and weight of frame 15 kg):

19.7.1.1 With common burnt clay F.P.S.(non modular) bricks of class designation 7.5

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one manhole MATERIAL: Cement concrete 1:4:8 (1 cement: 4 coarse sand : 8 graded stone aggregate 40 mm nominal size) 1.51x1.41x0.20=0.426 cum Say 0.43 cum				
4.1.8	Rate as per Item Number 4.1.8 of SH: Concrete work Brick work with bricks of class designation 75 in foundation & plinth in cement mortar 1:4 (1 cement: 4 coarse sand) 4.32x0.23x0.35 m = 0.348 cum Less for pipe 2x3.14/4x(0.15m)² x0.23m = (-) 0.008 cum Total = 0.340 cum	cum	0.43	3,593.30	1,545.12 (A)
6.1.1	Rate as per Item Number 6.1.1 of SH: Brick work Cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) for benching 2x0.90x(0.80/2) x (0.30+0.20)/2 = 0.18 cum Less for pipe 1x0.90x3.14/4x(0.15 m)² = (-) 0.02 cum = 0.16 cum	cum	0.34	3,508.25	1,192.80 (A)
4.1.3	Rate as per Item Number 4.1.3 of SH: Concrete work 12 mm cement plaster 1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement 3.40mx0.05m = 0.17 sqm 2x1/2x0.80x0.10m = 0.08 sqm Total = 0.25 sqm	cum	0.16	4,514.05	722.25 (A)
13.9.1	Rate as per Item Number 13.9.1 of SH: Finishing Reinforced cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) For slab: 1.36x1.26x0.15m = 0.257 cum Less for cover 0.61x0.455x0.15m = (-) 0.042cum = 0.215 cum Say 0.22 cum	sqm	0.25	173.10	43.28 (A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
5.3	Rate as per Item Number 5.3 of SH: Reinforced cement concrete work Less labour for not lifting the materilas upto floor five level	cum	0.22	5,494.55	1,208.80 (A)
0115	Coolie Mild steel reinforcement for slab : 0.22 cum @ 48.06 kg/cum = 10.57 kg	day	-0.41	247.00	-101.27
5.22.1	Rate as per Item Number 5.22.1 of SH: Reinforced cement concrete work Form work = 0.90x0.80= 0.72 sqm Less cover = 0.61x0.45m = (-) 0.278 sqm =0.42 sqm. say 0.44 sqm	kilogram	10.57	56.75	599.85 (A)
5.9.3	Rate as per Item Number 5.9.3 of SH: Reinforced cement concrete work LABOUR: Extra labour for making channel:	sqm	0.44	311.20	136.93 (A)
0123	Mason (brick layer) 1 st class	day	0.06	301.00	18.06
0124	Mason (brick layer) 2nd class	day	0.06	273.00	16.38
1354	Rectangular cover 455x610 mm with frame (low duty) (inside)	each	1.00	1,415.00	1,415.00
9999	Carriage of C.I. cover & frame	L.S.	6.76	1.49	10.07
9999	Painting of C.I. cover & frame with coal tar	L.S.	6.76	1.49	10.07
9999	Sundries	L.S.	13.52	1.49	20.14
	TOTAL				6,837.48
	Add Water Charges @ 1% except on A i.e on (6,837.48 - 5,449.03 =) 1,388.45				13.88
	TOTAL				6,851.36
	Add CPOH @ 15% except on A i.e on (6,851.36 - 5,449.03 =) 1,402.33				210.35
	Cost of each				7,061.71
	Say				7,061.70

19.7.1.2 With Sewer bricks conforming to IS : 4885

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one manhole MATERIAL: Cement concrete 1:4:8 (1 cement: 4 coarse sand : 8 graded stone aggregate 40 mm nominal size) 1.51x1.41x0.20m=0.426 cum Say 0.43 cum				
4.1.8	Rate as per Item Number 4.1.8 of SH: Concrete work Brick work with sewer bricks conforming to IS: 4885. in foundation & plinth in cement mortar 1:4 (1 cement: 4 coarse sand) 4.32x0.23x0.35 m = 0.348 cum Less for pipe 2x3.14/4x(0.15m)^{2}x0.23m = (-) 0.008 cum Total = 0.340 cum	cum	0.43	3,593.30	1,545.12 (A)
6.36.1	Rate as per Item Number 6.36.1 of SH: Brick work	cum	0.34	3,794.80	1,290.23 (A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) for benching 2x0.90x(0.80/2) x (0.30+0.20)/2 = 0.18 cum Less for pipe 1x0.90x3.14/4x(0.15)² = (-) 0.02 cum Total = 0.16 cum				
4.1.3	Rate as per Item Number 4.1.3 of SH: Concrete work	cum	0.16	4,514.05	722.25 (A)
	12 mm cement plaster 1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement 3.40mx0.05m = 0.17 sqm 2x ½ x0.80x0.10m = 0.08 sqm Total = 0.25 sqm				
13.9.1	Rate as per Item Number 13.9.1 of SH: Finishing	sqm	0.25	173.10	43.28 (A)
	Reinforced cement concrete 1:2:4 (1 cement:2 coarse sand : 4 graded stone aggregate 20 mm nominal size) For slab: 1.36x1.26x0.15m = 0.257 cum Less for cover 0.61x0.455x0.15m = (-) 0.042 cum = 0.215 cum Say 0.22 cum				
5.3	Rate as per Item Number 5.3 of SH: Reinforced cement concrete work	cum	0.22	5,494.55	1,208.80 (A)
	Less labour for not lifting the materilas upto floor five level				
0115	Coolie	day	-0.41	247.00	-101.27
	Mild steel reinforcement for slab : 0.22 cum @ 48.06 kg/cum = 10.57 kg				
5.22.1	Rate as per Item Number 5.22.1 of SH: Reinforced cement concrete work	kilogram	10.57	56.75	599.85 (A)
	Form work = 0.90x0.80= 0.72 sqm =0.442 sqm say 0.44 sqm Less cover = 0.61x0.455m = (-) 0.278 sqm				
5.9.3	Rate as per Item Number 5.9.3 of SH: Reinforced cement concrete work	sqm	0.44	311.20	136.93 (A)
	LABOUR: Extra labour for making channel:				
0123	Mason (brick layer) 1 st class	day	0.06	301.00	18.06
0124	Mason (brick layer) 2nd class	day	0.06	273.00	16.38
1354	Rectangular cover 455x610 mm with frame (low duty) (inside)	each	1.00	1,415.00	1,415.00
9999	Carriage of C.I. cover & frame	L.S.	6.76	1.49	10.07
9999	Painting of C.I. cover & frame with coal tar	L.S.	6.76	1.49	10.07
9999	Sundries	L.S.	13.52	1.49	20.14
	TOTAL				6,934.91
	Add Water Charges @ 1% except on A i.e on (6,934.91 - 5,546.46 =) 1,388.45				13.88
	TOTAL				6,948.79
	Add CPOH @ 15% except on A i.e on (6,948.79 - 5,546.46 =) 1,402.33				210.35
	Cost of each				7,159.14
	Say				7,159.15

19.7.2 Inside size 120x90 cm and 90 cm deep including C.I. cover with frame (medium duty) 500 mm internal diameter, total weight of cover and frame to be not less than 116 kg (weight of cover 58 kg and weight of frame 58 kg) :

19.7.2.1 With common burnt clay F.P.S.(non modular) bricks of class designation 7.5

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one manhole MATERIAL: Cement concrete 1:4:8 (1 cement: 4 coarse sand : 8 graded stone aggregate 40 mm nominal size) 1.81x1.51x0.20m=0.547 cum Say 0.55 cum				
4.1.8	Rate as per Item Number 4.1.8 of SH: Concrete work Brick work with bricks of class designation 75 in foundation & plinth in cement mortar 1:4 (1 cement: 4 coarse sand) 5.12x0.23x0.80 m = 0.942 cum Less for pipe 2x3.14/4x(0.15m)² x0.23m = (-) 0.008 cum Total = 0.934 cum say 0.93 cum	cum	0.55	3,593.30	1,976.32 (A)
6.1.1	Rate as per Item Number 6.1.1 of SH: Brick work Cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) for benching 2x1.20x(0.90/2) x (0.30+0.20)/2 = 0.270 cum Less for pipe 1.20x3.14/4x(0.15 m)² = (-) 0.021 cum Total = 0.249 cum say 0.25 cum	cum	0.93	3,508.25	3,262.67 (A)
4.1.3	Rate as per Item Number 4.1.3 of SH: Concrete work 12 mm cement plaster 1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement 4.20mx0.50m = 2.10 sqm 2x1/2x0.90x0.10m = 0.08 sqm Total = 2.19 sqm	cum	0.25	4,514.05	1,128.51 (A)
13.9.1	Rate as per Item Number 13.9.1 of SH: Finishing Reinforced cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) For slab: 1.66x1.36x0.15m = 0.339 cum Less for cover 0.7854x(0.50)²x0.15m = (-) 0.029 cum = 0.31cum	sqm	2.19	173.10	379.09 (A)
5.3	Rate as per Item Number 5.3 of SH: Reinforced cement concrete work Less labour for not lifting the materilas upto floor five level	cum	0.31	5,494.55	1,703.31 (A)
0115	Coolie Mild steel reinforcement for slab : 0.31 cum @ 80.09 kg/cum = 24.83 kg	day	-0.58	247.00	-143.26
5.22.1	Rate as per Item Number 5.22.1 of SH: Reinforced cement concrete work	kilogram	24.83	56.75	1,409.10 (A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Form work = 1.20x0.90= 1.08 sqm Less cover = 3.14/4x(0.50)²=(-) 0.196 sqm = 0.884 sqm Say 0.88 sqm				
5.9.3	Rate as per Item Number 5.9.3 of SH: Reinforced cement concrete work	sqm	0.88	311.20	273.86 (A)
	LABOUR:				
	Extra labour for making channel:				
0123	Mason (brick layer) 1 st class	day	0.08	301.00	24.08
0124	Mason (brick layer) 2nd class	day	0.08	273.00	21.84
1356	500 mm dia cover with frame (medium duty)	each	1.00	4,435.00	4,435.00
9999	Carriage of C.I. cover & frame	L.S.	6.76	1.49	10.07
9999	Painting of C.I. cover & frame with coal tar	L.S.	6.76	1.49	10.07
9999	Sundries	L.S.	16.64	1.49	24.79
	TOTAL				14,515.45
	Add Water Charges @ 1% except on A i.e on (14,515.45 - 10,132.86 =) 4,382.59				43.83
	TOTAL				14,559.28
	Add CPOH @ 15% except on A i.e on (14,559.28 - 10,132.86 =) 4,426.42				663.96
	Cost of each				15,223.24
	Say				15,223.25

19.7.2.2 With Sewer bricks conforming to IS : 4885

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one manhole MATERIAL: Cement concrete 1:4:8 (1 cement: 4 coarse sand : 8 graded stone aggregate 40 mm nominal size) 1.81x1.51x0.20m=0.547 cum Say 0.55 cum				
4.1.8	Rate as per Item Number 4.1.8 of SH: Concrete work	cum	0.55	3,593.30	1,976.32 (A)
	Brick work with sewer bricks conforming to IS: 4885. in foundation & plinth in cement mortar 1:4 (1 cement: 4 coarse sand) 5.12x0.23x0.80 m = 0.942 cum Less for pipe 2x3.14/4x(0.15m)² x0.23m = (-) 0.008 cum = 0.934 cum say 0.93 cum				
6.36.1	Rate as per Item Number 6.36.1 of SH: Brick work	cum	0.93	3,794.80	3,529.16 (A)
	Cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) for benching 2x1.20x(0.90/2) x (0.30+0.20)/2 = 0.270 cum Less for pipe 1.20x3.14/4x(0.15 m)² = (-) 0.021 cum = 0.249 cum say 0.25 cum				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
4.1.3	Rate as per Item Number 4.1.3 of SH: Concrete work 12 mm cement plaster 1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement 4.20mx0.50m = 2.10 sqm 2x½x0.90x0.10m = 0.08 sqm Total = 2.19 sqm	cum	0.25	4,514.05	1,128.51 (A)
13.9.1	Rate as per Item Number 13.9.1 of SH: Finishing Reinforced cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20mm nominal size) For slab: 1.66x1.36x0.15m = 0.339 cum Less for cover $0.7854x(0.50)^2x0.15m$ = (-) 0.029 cum = 0.31cum	sqm	2.19	173.10	379.09 (A)
5.3	Rate as per Item Number 5.3 of SH: Reinforced cement concrete work Less labour for not lifting the materilas upto floor five level	cum	0.31	5,494.55	1,703.31 (A)
0115	Coolie Mild steel reinforcement for slab : 0.31 cum @ 80.09 kg/cum = 24.83 kg	day	-0.58	247.00	-143.26
5.22.1	Rate as per Item Number 5.22.1 of SH: Reinforced cement concrete work Form work = 1.20x0.90= 1.08 sqm Less cover = $3.14/4x(0.50)^2$=(-) 0.196 sqm = 0.884 sqm Say 0.88 sqm	kilogram	24.83	56.75	1,409.10 (A)
5.9.3	Rate as per Item Number 5.9.3 of SH: Reinforced cement concrete work LABOUR: Extra labour for making channel:	sqm	0.88	311.20	273.86 (A)
0123	Mason (brick layer) 1 st class	day	0.08	301.00	24.08
0124	Mason (brick layer) 2nd class	day	0.08	273.00	21.84
1356	500 mm dia cover with frame (medium duty)	each	1.00	4,435.00	4,435.00
9999	Carriage of C.I. cover & frame	L.S.	6.76	1.49	10.07
9999	Painting of C.I. cover & frame with coal tar	L.S.	6.76	1.49	10.07
9999	Sundries	L.S.	16.64	1.49	24.79
	TOTAL				14,781.94
	Add Water Charges @ 1% except on A i.e on (14,781.94 - 10,399.35 =) 4,382.59				43.83
	TOTAL				14,825.77
	Add CPOH @ 15% except on A i.e on (14,825.77 - 10,399.35 =) 4,426.42				663.96
	Cost of each				15,489.73
	Say				15,489.75

19.7.3 Inside size 120x90 cm and 90 cm deep including C.I. cover with frame (heavy duty) 560 mm internal diameter, total weight of cover and frame to be not less than 208 kg (weight of cover 108 kg and weight of frame 100 kg)

19.7.3.1 With common burnt clay F.P.S.(non modular) bricks of class designation 7.5

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one manhole MATERIAL: Cement concrete 1:4:8 (1 cement: 4 coarse sand : 8 graded stone aggregate 40 mm nominal size) 1.81x1.51x0.20m=0.547 cum Say 0.55 cum				
4.1.8	Rate as per Item Number 4.1.8 of SH: Concrete work	cum	0.55	3,593.30	1,976.32 (A)
	Brick work with bricks of class designation 75 in foundation & plinth in cement mortar 1:4 (1 cement: 4 coarse sand) 5.12x0.23x0.65 m = 0.765 cum 1x0.56x0.23x0.15 m =0.019 cum 1x0.79x0.23x0.15 = 0.027 cum Total =0.811 Less for pipe $2x3.14/4x(0.15m)^2x0.23m$ = (-) 0.008 cum = 0.803 cum say 0.80 cum				
6.1.1	Rate as per Item Number 6.1.1 of SH: Brick work	cum	0.80	3,508.25	2,806.60 (A)
	Cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) for benching 2x1.20x(0.90/2)x(0.30+0.20)/2 = 0.270 cum Less for pipe $1.20x3.14/4x(0.15\ m)^2$ = (-) 0.021 cum = 0.249 cum say 0.25 cum				
4.1.3	Rate as per Item Number 4.1.3 of SH: Concrete work	cum	0.25	4,514.05	1,128.51 (A)
	12 mm cement plaster 1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement 4.20mx0.35m = 1.47 sqm 2x0.56x0.15m = 0.17 sqm 2x1/2x0.90x0.10m = 0.09 sqm For fixing cover 0.96x0.96 m =0.922 sqm Total = 2.652 sqm Less cover $3.14/4x(0.56)^2$=(-) 0.246 sqm =2.406 sqm Say 2.41 sqm				
13.9.1	Rate as per Item Number 13.9.1 of SH: Finishing	sqm	2.41	173.10	417.17 (A)
	Reinforced cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) For slab: 1.66x1.36x0.15m = 0.339 cum Add extra concreting 1x(0.56+0.79)x0.15x0.15 m=0.03 cum Total =0.369 cum				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Less for cover 0.7854x(0.50)2x0.15m = (-) 0.037 cum = 0.332 cum Say 0.33 cum				
5.3	Rate as per Item Number 5.3 of SH: Reinforced cement concrete work Less labour for not lifting the materilas upto floor five level	cum	0.33	5,494.55	1,813.20 (A)
0115	Coolie	day	-0.62	247.00	-153.14
	Steel reinforcement for slab @ 80.09 kg/cum For 0.33 cum = 26.43 kg.				
5.22.1	Rate as per Item Number 5.22.1 of SH: Reinforced cement concrete work Form work inside area of man-hole 1.20x0.90 =1.08 Less cover = 3.14/4x(0.56)²=(-) 0.246 sqm = 0.834 sqm Say 0.83 sqm	kilogram	26.43	56.75	1,499.90 (A)
5.9.3	Rate as per Item Number 5.9.3 of SH: Reinforced cement concrete work LABOUR: Extra labour for making channel:	sqm	0.83	311.20	258.30 (A)
0123	Mason (brick layer) 1 st class	day	0.08	301.00	24.08
0124	Mason (brick layer) 2nd class	day	0.08	273.00	21.84
3860	560 mm dia cover with frame (Heavy duty)	each	1.00	8,460.00	8,460.00
9999	Carriage of C.I. cover & frame	L.S.	13.52	1.49	20.14
9999	Painting of C.I. cover & frame with coal tar	L.S.	6.76	1.49	10.07
9999	Sundries	L.S.	20.28	1.49	30.22
	TOTAL				18,313.21
	Add Water Charges @ 1% except on A i.e on (18,313.21 - 9,900.00 =) 8,413.21				84.13
	TOTAL				18,397.34
	Add CPOH @ 15% except on A i.e on (18,397.34 - 9,900.00 =) 8,497.34				1,274.60
	Cost of each				19,671.94
	Say				19,671.95

19.7.3.2 With Sewer bricks conforming to IS : 4885

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one manhole MATERIAL: Cement concrete 1:4:8 (1 cement: 4 coarse sand : 8 graded stone aggregate 40 mm nominal size) 1.81x1.51x0.20m=0.547 cum Say 0.55 cum				
4.1.8	Rate as per Item Number 4.1.8 of SH: Concrete work Sewer Brick conforming to IS: 4885. in foundation & plinth in cement mortar 1:4 (1 cement: 4 coarse sand) 5.12x0.23x0.65 m = 0.765 cum 1x0.56x0.23x0.15 m =0.019 cum 1x0.79x0.23x0.15 = 0.027 cum Total =0.811	cum	0.55	3,593.30	1,976.32 (A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Less for pipe 2x3.14/4x(0.15m)²x0.23m = (-)0.008 cum = 0.803 cum say 0.80 cum				
6.36.1	Rate as per Item Number 6.36.1 of SH: Brick work Cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) for benching 2x1.20x(0.90/2)x(0.30+0.20)/2 = 0.270 cum Less for pipe 1.20x3.14/4x(0.15 m)² = (-) 0.021 cum = 0.249 cum say 0.25 cum	cum	0.80	3,794.80	3,035.84 (A)
4.1.3	Rate as per Item Number 4.1.3 of SH: Concrete work 12 mm cement plaster 1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement 4.20mx0.35m = 1.47 sqm 2x0.56x0.15m = 0.17 sqm 2x1/2x0.90x0.10m = 0.09 sqm For fixing cover 0.96x0.96 m =0.922 sqm Total = 2.652 sqm Less cover 3.14/4x(0.56)²=(-) 0.246 sqm =2.406 sqm Say 2.41 sqm	cum	0.25	4,514.05	1,128.51 (A)
13.9.1	Rate as per Item Number 13.9.1 of SH: Finishing Reinforced cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) For slab: 1.66x1.36x0.15m = 0.339 cum Add extra concreting 1x(0.56+0.79)x0.15x0.15 m=0.03 cum Total =0.369 cum Less for cover 0.7854x(0.50)²x0.15m = (-) 0.037 cum = 0.332 cum Say 0.33 cum	sqm	2.41	173.10	417.17 (A)
5.3	Rate as per Item Number 5.3 of SH: Reinforced cement concrete work Less labour for not lifting the materilas upto floor five level	cum	0.33	5,494.55	1,813.20 (A)
0115	Coolie Steel reinforcement for slab @ 80.09 kg/cum For 0.33 cum = 26.43 kg	day	-0.62	247.00	-153.14
5.22.1	Rate as per Item Number 5.22.1 of SH: Reinforced cement concrete work Form work inside area of man-hole 1.20x0.90 =1.08 Less cover = 3.14/4x(0.56)²=(-) 0.246 sqm = 0.834 sqm Say 0.83 sqm	kilogram	26.43	56.75	1,499.90 (A)
5.9.3	Rate as per Item Number 5.9.3 of SH: Reinforced cement concrete work	sqm	0.83	311.20	258.30 (A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	LABOUR:				
	Extra labour for making channel:				
0123	Mason (brick layer) 1 st class	day	0.08	301.00	24.08
0124	Mason (brick layer) 2nd class	day	0.08	273.00	21.84
3860	560 mm dia cover with frame (Heavy duty)	each	1.00	8,460.00	8,460.00
9999	Carriage of C.I. cover & frame	L.S.	13.52	1.49	20.14
9999	Painting of C.I. cover & frame with coal tar	L.S.	6.76	1.49	10.07
9999	Sundries	L.S.	20.28	1.49	30.22
	TOTAL				18,542.45
	Add Water Charges @ 1% except on A i.e on (18,542.45 - 10,129.24 =) 8,413.21				84.13
	TOTAL				18,626.58
	Add CPOH @ 15% except on A i.e on (18,626.58 - 10,129.24 =) 8,497.34				1,274.60
	Cost of each				19,901.18
	Say				19,901.20

19.8 Extra for depth for manholes

19.8.1 Size 90x80 cm

19.8.1.1 With common burnt clay F.P.S.(non modular) bricks of class designation 7.5

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one metre				
	MATERIAL:				
	Brick work with bricks of class designation 75 in cement mortar 1:4(1 cement : 4 coarse sand)				
	4.32x0.23x1.00 = 0.994 cum				
	Say 0.99 cum				
6.1.1	Rate as per Item Number 6.1.1 of SH: Brick work	cum	0.99	3,508.25	3,473.17 (A)
	12 mm cement plaster 1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement				
	3.40x1 m = 3.40 sqm				
13.9.1	Rate as per Item Number 13.9.1 of SH: Finishing	sqm	3.40	173.10	588.54 (A)
	TOTAL				4,061.71
	Cost of 1 metre				4,061.71
	Say				4,061.70

19.8.1.2 With Sewer bricks conforming to IS : 4885

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one metre				
	MATERIAL:				
	Brick work with modular extruded burnt fire clay sewer bricks in cement mortar 1:4(1 cement : 4 coarse sand)				
	1x4.32x0.23x1.0 = 0.994 say 0.99 cum				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
6.36.1	Rate as per Item Number 6.36.1 of SH: Brick work 12 mm cement plaster 1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement 3.40x1 m = 3.40 sqm	cum	0.99	3,794.80	3,756.85 (A)
13.9.1	Rate as per Item Number 13.9.1 of SH: Finishing	sqm	3.40	173.10	588.54 (A)
	TOTAL				4,345.39
	Cost of 1 metre				4,345.39
	Say				4,345.40

19.8.2 Size 120x90 cm

19.8.2.1 With common burnt clay F.P.S.(non modular) bricks of class designation 7.5

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one metre MATERIAL: Brick work with modular extruded burnt fire clay sewer bricks in cement mortar 1:4(1 cement : 4 coarse sand) 5.12x0.23x1.0 = 1.178 say 1.18 cum				
6.1.1	Rate as per Item Number 6.1.1 of SH: Brick work 12 mm cement plaster 1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement 4.20x1 m = 4.20 sqm	cum	1.18	3,508.25	4,139.73 (A)
13.9.1	Rate as per Item Number 13.9.1 of SH: Finishing	sqm	4.20	173.10	727.02 (A)
	TOTAL				4,866.75
	Cost of 1 metre				4,866.75
	Say				4,866.75

19.8.2.2 With Sewer bricks conforming to IS : 4885

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one metre MATERIAL: Brick work with modular extruded burnt fire clay sewer bricks in cement mortar 1:4 (1 cement : 4 coarse sand) 5.12x0.23x1.00=1.178 say 1.18 cum				
6.36.1	Rate as per Item Number 6.36.1 of SH: Brick work 12 mm cement plaster 1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement 4.20x1 m = 4.20sqm	cum	1.18 3,	794.80	4,477.86 (A)
13.9.1	Rate as per Item Number 13.9.1 of SH: Finishing	sqm	4.20	173.10	727.02 (A)
	TOTAL				5,204.88
	Cost of 1 metre				5,204.88
	Say				5,204.90

19.9 Constructing brick masonry circular type manhole 0.91m internal dia at bottom and 0.56 m dia at top in cement mortar 1:4 (1 cement :4 coarse sand), in side cement plaster 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement, foundation concrete 1:3:6 mix (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size), and making necessary channel in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) finished with a floating coat of neat cement, all complete as per standard design :

19.9.1 0.91m deep with S.F.R.C. cover and frame (heavy duty, HD-20 grade designation) 560 mm internal diameter conforming to IS:12592, total weight of cover and frame to be not less than 182 kg, fixed in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) including centering, shuttering all complete. (Excavation, foot rests and 12 mm thick cement centering, shuttering all complete. (Excavation, foot rests and 12 mm thick cement plaster at the external surface shall be paid for separately) :

19.9.1.1 With common burnt clay F.P.S.(non modular) bricks of class designation 7.5

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one manhole MATERIAL: Cement concrete 1:3:6 (1 cement: 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) 1.67x1.67x0.225 = 0.63cum.				
4.1.6	Rate as per Item Number 4.1.6 of SH: Concrete work Brick work with bricks of class designation 75 in cement mortar 1:4 (1 cement: 4 coarse sand) Curved on plan 3.14x1.14x0.074x0.23=0.061 3.14x(1.14+0.79)²x0.711x0.23 = 0.496 Total = 0.557 Duduct arch ring and portion of pipe 2x½x3.14x0.25x0.230x0.10 m = 0.018 cum 2x3.14/4x(0.15)²x0.230 = 0.008 cum Total = 0.026 cum Net quantity 0.557-0.026 = 0.531 Say 0.53 cum	cum	0.63	3,888.20	2,449.57 (A)
6.1.1	Rate as per Item Number 6.1.1 of SH: Brick work Brick work in foundation with 75 class designation brick in cement mortar 1:4 (1 cement: 4 coarse sand) 2x½x3.14x0.25 m x0.230x0.10 m = 0.018 cum Say 0.02 cum	cum	0.53	3,508.25	1,859.37 (A)
6.9	Rate as per Item Number 6.9 of SH: Brick work Cement concrete 1:2:4(1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) For benching: 3.14/4x(0.91+0.82)2x0.20 = 0.118 cum [(2x8.133)/360]x(4/3)x3.14x(0.45)³ =0.017 cum	cum	0.02	6,384.10	127.68 (A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Total = 0.135 cum Less pipe : 0.91x3.14/4x(0.15)² = (-) 0.016 cum = 0.119 cum Say 0.12 cum				
4.1.3	Rate as per Item Number 4.1.3 of SH: Concrete work Cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) For fixing cover : 3.14/4 x d²x thickness 0.7854x1.020² x 0.15 =0.123 cum Less cover 3.14/4x(0.28)² x 0.15 = (-) 0.037 cum Total = 0.086 cum Say 0.09 cum	cum	0.12	4,514.05	541.69 (A)
4.2.3	Rate as per Item Number 4.2.3 of SH: Concrete work 12 mm cement plaster 1:3(1 cement: 3 coarse sand) finished with floating coat of neat cement 3.14x(0.80+0.56)/2x0.49 = 1.05 sqm 3.14x0.56x0.075 = 0.13 sqm Benching 3.14x(0.80)²/4-0.80x0.15+0.80x½x3.14x0.15= 0.57 sqm Total = 1.75 sqm	cum	0.09	5,272.40	474.52 (A)
13.9.1	Rate as per Item Number 13.9.1 of SH: Finishing	sqm	1.75	173.10	302.92 (A)
	LABOUR: Extra labour for making channel:				
0123	Mason (brick layer) 1 st class	day	0.06	301.00	18.06
0124	Mason (brick layer) 2nd class	day	0.06	273.00	16.38
	S.F.R.C cover				
7135	Circular shape 560 mm dia precast R.C.C. manhole cover with frame - H.D. - 20	each	1.00	1,030.00	1,030.00
9999	Carriage	L.S.	6.89	1.49	10.27
9999	Sundries	L.S.	16.90	1.49	25.18
	TOTAL				6,855.64
	Add Water Charges @ 1% except on A i.e on (6,855.64 - 5,755.75 =) 1,099.89				11.00
	TOTAL				6,866.64
	Add CPOH @ 15% except on A i.e on (6,866.64 - 5,755.75 =) 1,110.89				166.63
	Cost of each				7,033.27
	Say				7,033.25

19.9.1.2 With Sewer bricks conforming to IS : 4885

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one manhole MATERIAL: Cement concrete 1:3:6 (1 cement: 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) 1.67x1.67x0.225 = 0.63cum.				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
4.1.6	Rate as per Item Number 4.1.6 of SH: Concrete work Brick work with moduler extruded burnt fire clay sewer bricks in cement mortar 1:4(1 cement: 4 coarse sand) Curved on plan 3.14x1.14x0.074x0.23 =0.061 3.14x(1.14+0.79)/2x0.711x0.23 = 0.496 = 0.557 Duduct arch ring and portion of pipe 2x½x3.14x0.25mx0.230x0.10 m = 0.018 cum 2x3.14/4x(0.15)2x0.230 = 0.008 cum Total = 0.026 cum Net quantity 0.557-0.026 = 0.531 Say 0.53 cum	cum	0.63	3,888.20	2,449.57 (A)
6.36.1	Rate as per Item Number 6.36.1 of SH: Brick work Brick work moduler extruded burnt fire clay sewer bricks in arches brick in cement mortar 1:3 (1 cement: 3 coarse sand) 2x½x3.14x0.25m x0.230x0.10 m = 0.018 cum Say 0.02 cum	cum	0.53	3,794.80	2,011.24 (A)
6.37	Rate as per Item Number 6.37 of SH: Brick work Cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) For benching: $3.14/4x(0.91+0.82)^2x0.20$ = 0.118 cum $[(2x8.133)/360]x(4/3)x3.14x(0.45)^3$ =0.017 cum Total = 0.135 cum Less pipe : $0.91x3.14/4x(0.15)^2$= (-) 0.016 cum Total = 0.119 cum Say 0.12 cum	cum	0.02	6,221.65	124.43 (A)
4.1.3	Rate as per Item Number 4.1.3 of SH: Concrete work Cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) For fixing cover : 3.14/4 x d^2x thickness $0.7854x1.020^2$ x 0.15 m =0.123 cum Less cover $3.14/4x(0.28)^2$ x 0.15 m = (-)0.037 cum Total = 0.086 cum Say 0.09 cum	cum	0.12	4,514.05	541.69 (A)
4.2.3	Rate as per Item Number 4.2.3 of SH: Concrete work 12 mm cement plaster 1:3(1 cement: 3 coarse sand) finished with floating coat of neat cement 3.14x(0.80+0.56)/2x0.49 = 1.05 sqm 3.14x0.56x0.075 = 0.13 sqm Benching $3.14x(0.80)^2/4$-0.80x0.15+0.80x½x3.14x0.15 = 0.57 sqm Total = 1.75 sqm	cum	0.09	5,272.40	474.52 (A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
13.9.1	Rate as per Item Number 13.9.1 of SH: Finishing	sqm	1.75	173.10	302.92 (A)
	LABOUR:				
	Extra labour for making channel:				
0123	Mason (brick layer) 1 st class	day	0.06	301.00	18.06
0124	Mason (brick layer) 2nd class	day	0.06	273.00	16.38
	S.F.R.C cover				
7135	Circular shape 560 mm dia precast R.C.C. manhole cover with frame - H.D. - 20	each	1.00	1,030.00	1,030.00
9999	Carriage	L.S.	6.89	1.49	10.27
9999	Sundries	L.S.	16.90	1.49	25.18
	TOTAL				7,004.26
	Add Water Charges @ 1% except on A i.e on (7,004.26 - 5,904.37 =) 1,099.89				11.00
	TOTAL				7,015.26
	Add CPOH @ 15% except on A i.e on (7,015.26 - 5,904.37 =) 1,110.89				166.63
	Cost of each				7,181.89
	Say				7,181.90

19.10 Extra depth for circular type manhole 0.91 m internal dia (at bottom) beyond 0.91 m to 1.67 m

19.10.1 With common burnt clay F.P.S.(non modular) bricks of class designation 7.5

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 0.76m depth.				
	MATERIAL:				
	Brick work in foundation with 75 class designation bricks in cement montar 1:4 (1 cement : 4 coarse sand)				
6.1.1	Rate as per Item Number 6.1.1 of SH: Brick work	cum	0.63	3,508.25	2,210.20 (A)
	cement concrete 1:2:4(1 cement :2 coarse sand :4 graded stone aggregate 20mm nominal size)				
4.1.3	Rate as per Item Number 4.1.3 of SH: Concrete work	cum	0.01	4,514.05	45.14 (A)
	12mm cement plaster 1:3 (1 cement : 3 coarse sand) finished with neat cement.				
13.9.1	Rate as per Item Number 13.9.1 of SH: Finishing	sqm	2.33	173.10	403.32 (A)
	TOTAL				2,658.66
	Cost of 0.76 metre				2,658.66
	Cost of 1 metre				3,498.24
	Say				3,498.25

19.10.2 With Sewer bricks conforming IS : 4885

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 0.76m extra depth				
	Brick work with modular exturded burnt fire clay bricks in cement montar 1:4 (1 cement : 4 coarse sand)				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
6.36.1	Rate as per Item Number 6.36.1 of SH: Brick work Cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	cum	0.63	3,794.80	2,390.72 (A)
4.1.3	Rate as per Item Number 4.1.3 of SH: Concrete work 12mm cement plaster 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement.	cum	0.01	4,514.05	45.14 (A)
13.9.1	Rate as per Item Number 13.9.1 of SH: Finishing	sqm	2.33	173.10	403.32 (A)
	TOTAL				2,839.18
	Cost of 0.76 metre				2,839.18
	Cost of 1 metre				3,735.76
	Say				3,735.75

19.11 Constructing brick masonry circular manhole 1.22 m internal dia at bottom and 0.56 m dia at top in cement mortar 1:4 (1 cement :4 coarse sand) inside cement plaster 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement foundation concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) and making necessary channel in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) finished with a floating coat of neat cement, all complete as per standard design :

19.11.1 1.68 m deep with SFRC cover and frame (heavy duty HD-20 grade designation) 560 mm internal diameter conforming to IS:12592, total weight of cover and frame to be not less than 182 kg fixed in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) including centering, shuttering all complete. (Excavation, foot rests and 12 mm thick cement plaster at the external surface shall be paid for separately) :

19.11.1.1 With common burnt clay F.P.S.(non modular) bricks of class designation 7.5

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one manhole MATERIAL: Cement concrete 1:3:6 (1 cement: 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) 1.98x1.98x0.30 = 1.178 say 1.18 cum				
4.1.6	Rate as per Item Number 4.1.6 of SH: Concrete work Brick work with bricks of class designation 75 in cement mortar 1:4(1 cement: 4 coarse sand) Curved on plan 3.14x1.45x0.24x0.23 = 0.251 3.14x(1.45+0.79)/2x 1.32x0.23= 1.069 Total = 1.320 Duduct arch ring and portion of pipe 2x½x3.14x0.25x0.230x0.10 m = 0.018 cum 2x3.14/4x$(0.15)^2$x0.230 = 0.008 cum	cum	1.18	3,888.20	4,588.08 (A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Total = 0.026 cum Net quantity 1.320-0.026 = 1.294 Say 1.29 cum				
6.1.1	Rate as per Item Number 6.1.1 of SH: Brick work Brick work in arches with 75 class designation brick in cement mortar 1:3(1 cement: 3 coarse sand) 2x½x3.14x0.25 m x0.230x0.10 m = 0.018cum Say 0.02 cum	cum	1.29	3,508.25	4,525.64 (A)
6.9	Rate as per Item Number 6.9 of SH: Brick work Cement concrete 1:2:4(1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) For benching: $3.14/4x(1.22)^2x0.20$ = 0.234 cum $[(2x8.133)/360]x(4/3)x3.14x(0.61)^3$ =0.043 cum Total = 0.277 cum Less pipe : $1.22x3.14/4x(0.15)^2$=(-)0.0216 cum Total = 0.2554 cum Say 0.26 cum	cum	0.02	6,384.10	127.68 (A)
4.1.3	Rate as per Item Number 4.1.3 of SH: Concrete work Cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) For fixing cover : 3.14/4 x d^2 x thickness $0.7854x1.020^2$ x0.15 m =0.123 cum Less cover $3.14/4x(0.28)^2$ x 0.15 = (-) 0.037 cum Total = 0.086 cum Say 0.09 cum	cum	0.26	4,514.05	1,173.65 (A)
4.2.3	Rate as per Item Number 4.2.3 of SH: Concrete work 12 mm cement plaster 1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement 3.14x(1.136+0.56)/2x1.216 = 3.241 sqm 3.14x0.56x0.075 = 0.13 sqm $3.14x(1.136)^2/4$-1.136x1/2x3.14x0.15= 1.112 sqm Total = 4.483 sqm Say 4.48 sqm	cum	0.09	5,272.40	474.52 (A)
13.9.1	Rate as per Item Number 13.9.1 of SH: Finishing	sqm	4.48	173.10	775.49 (A)
	LABOUR: Extra labour for making channel:				
0123	Mason (brick layer) 1 st class	day	0.10	301.00	30.10
0124	Mason (brick layer) 2nd class	day	0.10	273.00	27.30
	S.F.R.C manhole cover				
7135	Circular shape 560 mm dia precast R.C.C. manhole cover with frame - H.D. - 20	each	1.00	1,030.00	1,030.00
9999	Carriage	L.S.	6.89	1.49	10.27

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries	L.S.	16.90	1.49	25.18
	TOTAL				12,787.91
	Add Water Charges @ 1% except on A i.e on (12,787.91 - 11,665.06 =) 1,122.85				11.23
	TOTAL				12,799.14
	Add CPOH @ 15% except on A i.e on (12,799.14 - 11,665.06 =) 1,134.08				170.11
	Cost of each				12,969.25
	Say				12,969.25

19.11.1.2 With Sewer bricks conforming IS : 4885

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one manhole MATERIAL: Cement concrete 1:3:6 (1 cement: 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) 1.98x1.98x0.30 = 1.178 say 1.18 cum.				
4.1.6	Rate as per Item Number 4.1.6 of SH: Concrete work Brick work modular exturded burnt fire ash clay in cement mortar 1:4(1 cement: 4 coarse sand) Curved on plan 3.14x1.45x0.24x0.23 = 0.251 3.14x(1.45+0.79)/2x1.32x0.23 = 1.069 Total = 1.320 cum Duduct arch ring and portion of pipe 2x½x3.14x0.25x0.230x0.10 = 0.018 cum 2x3.14/4x$(0.15)^2$ x0.230 = 0.008 cum Total = 0.026 cum Net quantity = 1.320-0.026 = 1.294 Say 1.29 cum	cum	1.18	3,888.20	4,588.08 (A)
6.36.1	Rate as per Item Number 6.36.1 of SH: Brick work Brick work with modular exturded burnt ash clay brick in arches cement mortar 1:3(1 cement: 3 coarse sand) 2x1/2x3.14x0.25 m x0.230x0.10 m = 0.018 cum Say 0.02 cum	cum	1.29	3,794.80	4,895.29 (A)
6.37	Rate as per Item Number 6.37 of SH: Brick work Cement concrete 1:2:4(1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) For benching: 3.14/4x$(1.22)^2$x0.20 = 0.234 cum [(2x8.133)/360]x(4/3)x3.14x$(0.61)^3$ =0.043 cum Total = 0.277 cum Less pipe : 1.22x3.14/4x$(0.15)^2$= (-) 0.0216 cum Total = 0.2554 cum Say 0.26 cum	cum	0.02	6,221.65	124.43 (A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
4.1.3	Rate as per Item Number 4.1.3 of SH: Concrete work Cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) For fixing cover : 3.14/4xd²x thickness 0.7854x1.020² x 0.15 m =0.123 cum Less cover 3.14/4x(0.28)² x 0.15 = (-)0.037 cum Total = 0.086 cum Say 0.09 cum	cum	0.26	4,514.05	1,173.65 (A)
4.2.3	Rate as per Item Number 4.2.3 of SH: Concrete work 12 mm cement plaster 1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement 3.14x(1.136+0.56)/2x1.216 = 3.241 sqm 3.14x0.56x0.075 = 0.13 sqm 3.14x(l.136)²/4-1.136x1/2x3.14x0.15 = 1.112 sqm Total = 4.483 sqm Say 4.48 sqm	cum	0.09	5,272.40	474.52 (A)
13.9.1	Rate as per Item Number 13.9.1 of SH: Finishing LABOUR: Extra labour for making channel:	sqm	4.48	173.10	775.49 (A)
0123	Mason (brick layer) 1 st class	day	0.10	301.00	30.10
0124	Mason (brick layer) 2nd class	day	0.10	273.00	27.30
	S.F.R.C manhole cover and frame				
7135	Circular shape 560 mm dia precast R.C.C. manhole cover with frame - H.D. - 20	each	1.00	1,030.00	1,030.00
9999	Carriage	L.S.	6.89	1.49	10.27
9999	Sundries	L.S.	16.90	1.49	25.18
	TOTAL				13,154.31
	Add Water Charges @ 1% except on A i.e on (13,154.31 - 12,031.46 =) 1,122.85				11.23
	TOTAL				13,165.54
	Add CPOH @ 15% except on A i.e on (13,165.54 - 12,031.46 =) 1,134.08				170.11
	Cost of each				13,335.65
	Say				13,335.65

19.12 Extra depth for circular type manhole 1.22 m internal dia (at bottom) beyond 1.68 m to 2.29 m :

19.12.1 With common burnt clay F.P.S.(non modular) bricks of class designation 7.5

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 0.61 m extra depth Brick work with bricks of class designation 75 in cement mortar 1:4 (1 cement : 4 coarse sand)				
6.1.1	Rate as per Item Number 6.1.1 of SH: Brick work 12mm cement plaster 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement.	cum	0.66	3,508.25	2,315.45 (A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
13.9.1	Rate as per Item Number 13.9.1 of SH: Finishing	sqm	2.56	173.10	443.14 (A)
	TOTAL				2,758.59
	Cost of 0.61 metre				2,758.59
	Cost of 1 metre				4,522.28
	Say				4,522.30

19.12.2 With Sewer bricks conforming IS : 4885

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 0.61 m extra depth				
	MATERIAL:				
	Brick work with modular exturded burnt fire clay bricks in cement montar 1:4 (1 cement : 4 coarse sand)				
6.36.1	Rate as per Item Number 6.36.1 of SH: Brick work	cum	0.66	3,794.80	2,504.57 (A)
	12mm cement plaster 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement.				
13.9.1	Rate as per Item Number 13.9.1 of SH: Finishing	sqm	2.56	173.10	443.14 (A)
	TOTAL				2,947.71
	Cost of 0.61 metre				2,947.71
	Cost of 1 metre				4,832.31
	Say				4,832.30

19.13 Constructing brick masonry circular manhole 1.52 m internal dia at bottom and 0.56 m dia at top in cement mortar 1:4 (1 cement : 4 coarse sand) inside cement plaster 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement, foundation concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) and making necessary channel in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) finished with a floating coat of neat cement, all complete as per standard design:

19.13.1 2.30 m deep with SFRC cover and frame (heavy duty HD- 20 grade designation) 560 mm internal diameter conforming to IS:12592, total weight of cover and frame to be not less than 182 kg fixed in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) including centering, shuttering all complete. (Excavation, foot rests and 12 mm thick cement plaster at the external surface shall be paid for separately) :

19.13.1.1 With common burnt clay F.P.S.(non modular) bricks of class designation 7.5

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one manhole				
	MATERIAL:				
	Cement concrete 1:3:6 (1 cement: 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) 2.74x2.74x0.30=2.25cum				
4.1.6	Rate as per Item Number 4.1.6 of SH: Concrete work	cum	2.25	3,888.20	8,748.45 (A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Brick work with bricks of class designation 75 in cement mortar 1:4(1 cement: 4 coarse sand) Curved on plan 3.14x1.98x0.25x0.46 = 0.716 cum 3.14x(1.98+0.905)/2x0.345xl.93 = 3.019 cum Total = 3.735 cum Duduct arch ring and portion of pipe 2x½x3.14x0.25mx0.46x0.10 m = 0.036 cum 2x3.14/4x0.15²x0.460 = 0.016 cum Total = 0.052 cum Net quantity = 3.735-0.052 = 3.683 cum Say 3.68 cum				
6.1.1	Rate as per Item Number 6.1.1 of SH: Brick work	cum	3.68	3,508.25	12,910.36 (A)
	Brick work in arches with 75 class designation brick in cement mortar 1:3(1 cement: 3 fine sand) 2x1/2x3.14x0.25 m x0.460x0.10 m = 0.036 cum Say 0.04 cum				
6.9	Rate as per Item Number 6.9 of SH: Brick work	cum	0.04	6,384.10	255.36 (A)
	Cement concrete 1:2:4(1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) For benching: 3.14/4x(l.52)2x0.20 = 0.363 cum [(2x8.133)/360]x(4/3)x3.14x 0.76³=0.083 cum Total = 0.446 cum Less pipe : 1.52x3.14/4x0.15²=(-) 0.027 cum Total = 0.419 cum Say 0.42 cum				
4.1.3	Rate as per Item Number 4.1.3 of SH: Concrete work	cum	0.42	4,514.05	1,895.90 (A)
	Cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) For fixing cover : 3.14/4 x d² x thickness 0.7854x1.020² x 0.15 m =0.123 cum Less cover 3.14/4x 0.28² x 0.15 = (-) 0.037 cum Total = 0.086 cum Say 0.09 cum				
4.2.3	Rate as per Item Number 4.2.3 of SH: Concrete work	cum	0.09	5,272.40	474.52 (A)
	12 mm cement plaster 1:3(1 cement: 3 coarse sand) finished with floating coat of neat cement 3.14x(1.454+0.56)/2x1.799 = 5.694 sqm 3.14x0.56x0.075 = 0.13 sqm Benching 3.14x(1.454)² 4-1.454x0.15+1.454x1/2x3.14x 0.15 =1.786 sqm Total = 7.61 sqm				
13.9.1	Rate as per Item Number 13.9.1 of SH: Finishing	sqm	7.61	173.10	1,317.29 (A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	LABOUR:				
	Extra labour for making channel:				
0123	Mason (brick layer) 1 st class	day	0.10	301.00	30.10
0124	Mason (brick layer) 2nd class	day	0.10	273.00	27.30
	S.F.R.C cover				
7135	Circular shape 560 mm dia precast R.C.C. manhole cover with frame - H.D. - 20	each	1.00	1,030.00	1,030.00
9999	Carriage	L.S.	6.89	1.49	10.27
9999	Sundries	L.S.	16.90	1.49	25.18
	TOTAL				26,724.73
	Add Water Charges @ 1% except on A i.e on (26,724.73 - 25,601.88 =) 1,122.85				11.23
	TOTAL				26,735.96
	Add CPOH @ 15% except on A i.e on (26,735.96 - 25,601.88 =) 1,134.08				170.11
	Cost of each				26,906.07
	Say				26,906.05

19.13.1.2 With Sewer bricks conforming IS : 4885

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one manhole				
	MATERIAL:				
	Cement concrete 1:3:6 (1 cement: 3 coarse sand : 6 graded stone aggregate 40 mm nominal size)				
	2.74x2.74x0.30=2.25cum				
4.1.6	Rate as per Item Number 4.1.6 of SH: Concrete work	cum	2.25	3,888.20	8,748.45 (A)
	Brick work with modular exturded burnt fly ash clay bricks in arches in cement mortar 1:4 (1 cement: 4 coarse sand)				
	Curved on plan				
	3.14x1.98x0.25x0.46 = 0.716 cum				
	3.14x(1.98+0.905)/2x0.345x1.93 = 3.019 cum				
	Total = 3.735 cum				
	Duduct arch ring and portion of pipe				
	2x½x3.14x0.25mx0.46x0.10 m = 0.036 cum				
	2x3.14/4x$(0.15)^2$x0.460 = 0.016 cum				
	Total = 0.052 cum				
	Net quantity = 3.735-0.052 = 3.683 cum				
	Say 3.68 cum				
6.36.1	Rate as per Item Number 6.36.1 of SH: Brick work	cum	3.68	3,794.80	13,964.86 (A)
	Brick work with modular exturded burnt fly ash clay bricks in arches in cement mortar 1:3 (1 cement: 3 sand)				
	2x½x3.14x0.25 m x0.460x0.10 m = 0.036 cum				
	Say 0.04 cum				
6.37	Rate as per Item Number 6.37 of SH: Brick work	cum	0.04	6,221.65	248.87 (A)
	Cement concrete 1:2:4(1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	For benching: 3.14/4x(1.52)²x0.20 = 0.363 cum [(2x8.133)/360]x(4/3)x3.14x(0.76)³ =0.083 cum Total = 0.446 cum Less pipe : 1.52x3.14/4x(0.15)²= (-)0.027 cum Net Quantity = 0.419 cum Say 0.42 cum				
4.1.3	Rate as per Item Number 4.1.3 of SH: Concrete work Cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) For fixing cover : 3.14/4 x d² x thickness 0.7854x1.020² x 0.15 m =0.123 cum Less cover 3.14/4x(0.28)²x 0.15 m = (-) 0.037 cum Net quantity = 0.086 cum Say 0.09 cum	cum	0.42	4,514.05	1,895.90 (A)
4.2.3	Rate as per Item Number 4.2.3 of SH: Concrete work 12 mm cement plaster 1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement 3.14x(1.454+0.56)/2x1.799 = 5.694 sqm 3.14x0.56x0.075 = 0.13 sqm Benching 3.14x(1.454)² - 1.454x0.15+1.454x1/2x3.14x 0.15 =1.786 sqm Total = 7.61 sqm	cum	0.09	5,272.40	474.52 (A)
13.9.1	Rate as per Item Number 13.9.1 of SH: Finishing	sqm	7.61	173.10	1,317.29 (A)
	LABOUR: Extra labour for making channel :				
0123	Mason (brick layer) 1 st class	day	0.10	301.00	30.10
0124	Mason (brick layer) 2nd class	day	0.10	273.00	27.30
	S.F.R.C cover				
7135	Circular shape 560 mm dia precast R.C.C. manhole cover with frame - H.D. - 20	each	1.00	1,030.00	1,030.00
9999	Carriage	L.S.	6.89	1.49	10.27
9999	Sundries	L.S.	16.90	1.49	25.18
	TOTAL				27,772.74
	Add Water Charges @ 1% except on A i.e on (27,772.74 - 26,649.89 =) 1,122.85				11.23
	TOTAL				27,783.97
	Add CPOH @ 15% except on A i.e on (27,783.97 - 26,649.89 =) 1,134.08				170.11
	Cost of each				27,954.08
	Say				27,954.10

19.14 Extra depth for circular type manhole 1.52 m internal dia (at bottom) beyond 2.30 m :

19.14.1 With common burnt clay F.P.S.(non modular) bricks of class designation 7.5

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1.88m extra depth MATERIAL: Brick work with bricks of class designation 75 in cement mortar 1:4 (1 cement: 4 coarse sand)				
6.1.1	Rate as per Item Number 6.1.1 of SH: Brick work	cum	5.26	3,508.25	18,453.40(A)
	12 mm cement plaster 1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement				
13.9.1	Rate as per Item Number 13.9.1 of SH: Finishing	sqm	8.99	173.10	1,556.17(A)
	TOTAL				20,009.57
	Cost of 1.88 metre				20,009.57
	Cost of 1 metre				10,643.39
	Say				10,643.40

19.14.2 With Sewer bricks conforming IS : 4885

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1.88m extra depth MATERIAL: Brick work with modular exturded burnt fly ash bricks in cement mortar 1:4 (1 cement: 4 coarse sand)				
6.36.1	Rate as per Item Number 6.36.1 of SH: Brick work	cum	5.26	3,794.80	19,960.65 (A)
	12 mm cement plaster 1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement				
13.9.1	Rate as per Item Number 13.9.1 of SH: Finishing	sqm	8.99	173.10	1,556.17 (A)
	TOTAL				21,516.82
	Cost of 1.88 metre				21,516.82
	Cost of 1 metre				11,445.12
	Say				11,445.10

19.15 Providing M.S. foot rests including fixing in manholes with 20x20x10 cm cement concrete blocks 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) as per standard design.

19.15.1 With 20x20 mm square bar

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one M.S foot rest MATERIAL: M.S. 20 mm square bar 0.75 m @ 3.137 kg/m				
1006	Mild steel square bars	quintal	0.024	4,250.00	102.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Carriage, paintng and other sundries	L.S.	1.82	1.49	2.71
	Labour for fabrication				
0103	Blacksmith 2nd class	day	0.10	273.00	27.30
0114	Beldar	day	0.10	247.00	24.70
	Cement concrete 1:3:6 (1 cement: 3 coarse sand : 6 graded stone aggregate 20 mm nominal size)				
	0.20x0.20x0.10 m = 0.004 cum				
4.2.5	Rate as per Item Number 4.2.5 of SH: Concrete work	cum	0.004	4,782.35	19.13 (A)
	Labour for fixing MS foot rests				
0123	Mason (brick layer) 1 st class	day	0.02	301.00	6.02
0124	Mason (brick layer) 2nd class	day	0.02	273.00	5.46
0114	Beldar	day	0.05	247.00	12.35
	TOTAL				199.67
	Add Water Charges @ 1% except on A i.e on (199.67 - 19.13 =) 180.54				1.81
	TOTAL				201.48
	Add CPOH @ 15% except on A i.e on (201.48 - 19.13 =) 182.35				27.35
	Cost of each				228.83
	Say				228.85

19.15.2 With 20 mm diameter round bar

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one M.S foot rest				
	MATERIAL:				
	M.S. round brass20 mm dia 0.75 m @ 2.47kg 1 m = 0.018 q				
1003	Mild steel round bar above 12 mm dia	quintal	0.018	4,000.00	72.00
9999	Carriage	L.S.	1.82	1.49	2.71
	Labour for fabrication				
0103	Blacksmith 2nd class	day	0.10	273.00	27.30
0114	Beldar	day	0.10	247.00	24.70
	Cement concrete 1:3:6 (1 cement: 3 coarse sand : 6 graded stone aggregate 20 mm nominal size)				
	0.20x0.20x0.10 m = 0.004 cum				
4.2.5	Rate as per Item Number 4.2.5 of SH: Concrete work	cum	0.004	4,782.35	19.13 (A)
	LABOUR:				
0123	Mason (brick layer) 1 st class	day	0.02	301.00	6.02
0124	Mason (brick layer) 2nd class	day	0.02	273.00	5.46

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Beldar	day	0.05	247.00	12.35
	TOTAL				169.67
	Add Water Charges @ 1% except on A i.e on (169.67 - 19.13 =) 150.54				1.51
	TOTAL				171.18
	Add CPOH @ 15% except on A i.e on (171.18 - 19.13 =) 152.05				22.81
	Cost of each				193.99
	Say				194.00

19.16 Providing orange colour safety foot rest of minimum 6 mm thick plastic encapsulated as per IS : 10910 on 12 mm dia steel bar conforming to IS : 1786, having minimum cross section as 23 mm x 25 mm and over all minimum length 263 mm and width as 165 mm with minimum 112 mm space between protruded legs having 2 mm tread on top surface by ribbing or chequering besides necessary and adequate anchoring projections on tail length on 138 mm as per standard drawing and suitable to with stand the bend test and chemical resistance test as per specifications and having manufacture's permanent identification mark to be visible even after fixing, including fixing in manholes with 30x20x15 cm cement concrete block 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) complete as per design.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7354	Plastic encapsulated M.S. foot rest 30x20x15 cm	each	1.00	110.00	110.00
9999	Carriage and other sundries	L.S.	1.82	1.49	2.71
	Cement concrete 1:3:6 (0.30x0.20x15 = 0.009 cum)				
4.2.5	Rate as per Item Number 4.2.5 of SH: Concrete work	cum	0.009	4,782.35	43.04 (A)
	LABOUR:				
0123	Mason (brick layer) 1 st class	day	0.02	301.00	6.02
0124	Mason (brick layer) 2nd class	day	0.20	273.00	54.60
0114	Beldar	day	0.05	247.00	12.35
	TOTAL				228.72
	Add Water Charges @ 1% except on A i.e on (228.72 - 43.04 =) 185.68				1.86
	TOTAL				230.58
	Add CPOH @ 15% except on A i.e on (230.58 - 43.04 =) 187.54				28.13
	Cost of each				258.71
	Say				258.70

19.17 Replacement of M.S. foot rests in manholes including dismantling concrete blocks and fixing with 20x20x10 cm cement concrete blocks 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) :

19.17.1 With 20x20 mm square bar

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one M.S foot rest				
	MATERIAL:				
	M.S. 20 mm square bar 0.75 m @ 3.137 kg/m =0.024 q				
1006	Mild steel square bars	quintal	0.024	4,250.00	102.00
9999	Carriage, paintng and other sundries	L.S.	1.82	1.49	2.71
	Labour for fabrication				
0103	Blacksmith 2nd class	day	0.10	273.00	27.30
0114	Beldar	day	0.10	247.00	24.70
	Cement concrete 1:3:6 (1 cement: 3 coarse sand : 6 graded stone aggregate 20 mm nominal size)				
	0.20x0.20x0.10 m = 0.004 cum				
4.2.5	Rate as per Item Number 4.2.5 of SH: Concrete work	cum	0.004	4,782.35	19.13 (A)
	LABOUR:				
	for dismantling old fort rest cutting holes and fixing new M.S. foot rests				
0123	Mason (brick layer) 1 st class	day	0.05	301.00	15.05
0124	Mason (brick layer) 2nd class	day	0.05	273.00	13.65
0114	Beldar	day	0.10	247.00	24.70
	TOTAL				229.24
	Add Water Charges @ 1% except on A i.e on (229.24 - 19.13 =) 210.11				2.10
	TOTAL				231.34
	Add CPOH @ 15% except on A i.e on (231.34 - 19.13 =) 212.21				31.83
	Cost of each				263.17
	Say				263.15

19.17.2 With 20 mm diameter round bar

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one M.S foot rest				
	MATERIAL:				
	M.S. roumd bars 20 mm dia 0.75 m @ 2.47 kg/m =0.018 q				
1003	Mild steel round bar above 12 mm dia	quintal	0.018	4,000.00	72.00
9999	Carriage, paintng and other sundries	L.S.	1.82	1.49	2.71
	Labour for fabrication				
0103	Blacksmith 2nd class	day	0.10	273.00	27.30
0114	Beldar	day	0.10	247.00	24.70
	Cement concrete 1:3:6 (1 cement: 3 coarse sand : 6 graded stone aggregate 20 mm nominal size)				
	0.20x0.20x0.10 m = 0.004 cum				
4.2.5	Rate as per Item Number 4.2.5 of SH: Concrete work	cum	0.004	4,782.35	19.13 (A)
	LABOUR:				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	for dismantling old fort rest cutting holes and fixing new M.S. foot rests				
0123	Mason (brick layer) 1 st class	day	0.05	301.00	15.05
0124	Mason (brick layer) 2nd class	day	0.05	273.00	13.65
0114	Beldar	day	0.10	247.00	24.70
	TOTAL				199.24
	Add Water Charges @ 1% except on A i.e on (199.24 - 19.13 =) 180.11				1.80
	TOTAL				201.04
	Add CPOH @ 15% except on A i.e on (201.04 - 19.13 =) 181.91				27.29
	Cost of each				228.33
	Say				228.35

19.18 Supplying and fixing C.I. cover without frame for manholes:

19.18.1 455x610 mm rectangular C.I. cover (light duty) the weight of the cover to be not less than 23 kg

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one cover				
	MATERIAL:				
1355	Rectangular cover 455x610 mm without frame (low duty)	each	1.00	980.00	980.00
9999	Carriage of C.I. manhole cover	L.S.	7.15	1.49	10.65
	LABOUR:				
0114	Beldar	day	0.12	247.00	29.64
	TOTAL				1,020.29
	Add Water Charges @ 1%				10.20
	TOTAL				1,030.49
	Add CPOH @ 15%				154.57
	Cost of each				1,185.06
	Say				1,185.05

19.18.2 500 mm diameter C.I. cover (medium duty) the weight of the cover to be not less than 58 kg

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one cover				
	MATERIAL:				
1357	500 mm dia cover without frame (medium duty)	each	1.00	2,210.00	2,210.00
9999	Carriage of C.I. cover	L.S.	13.47	1.49	20.07
	LABOUR:				
0114	Beldar	day	0.12	247.00	29.64
	TOTAL				2,259.71
	Add Water Charges @ 1%				22.60
	TOTAL				2,282.31
	Add CPOH @ 15%				342.35
	Cost of each				2,624.66
	Say				2,624.65

19.18.3 560 mm diameter C.I. cover (heavy duty) the weight of the cover to be not less than 108 kg

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one cover				
	MATERIAL:				
3861	560 mm dia cover without frame (Heavy duty)	each	1.00	4,500.00	4,500.00
9999	Carriage of C.I. cover	L.S.	16.12	1.49	24.02
	LABOUR:				
0114	Beldar	day	0.12	247.00	29.64
	TOTAL				4,553.66
	Add Water Charges @ 1%				45.54
	TOTAL				4,599.20
	Add CPOH @ 15%				689.88
	Cost of each				5,289.08
	Say				5,289.10

19.19 Providing and fixing in position pre-cast R.C.C. manhole cover and frame of required shape and approved quality.

19.19.1 L D - 2.5

19.19.1.1 Rectangular shape 600x450 mm internal dimensions

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7130	Rectangular shape 600x450 mm precast R.C.C. manhole cover with frame - L.D. - 25 Cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 grade stone aggregate 20 mm nominal size) 1.00x0.85x0.15 = 0.1275 cum Less cover with frame 0.85x0.70x0.15 = (-) 0.0893 cum = 0.0382 cum Say 0.04 cum	each	1.00	690.00	690.00
4.1.3	Rate as per Item Number 4.1.3 of SH: Concrete work	cum	0.04	4,514.05	180.56 (A)
9999	Carriage of R.C.C cover with frame	L.S.	6.76	1.49	10.07
9999	Sundries	L.S.	13.52	1.49	20.14
	TOTAL				900.77
	Add Water Charges @ 1% except on A i.e on (900.77 - 180.56 =) 720.21				7.20
	TOTAL				907.97
	Add CPOH @ 15% except on A i.e on (907.97 - 180.56 =) 727.41				109.11
	Cost of each				1,017.08
	Say				1,017.10

19.19.1.2 Square shape 450 mm internal dimensions

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7131	Square shape 450x450 mm precast R.C.C. manhole cover with frame - L.D. - 25	each	1.00	600.00	600.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Carriage of manhole cover Cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 grade stone aggregate 20 mm nominal size) 0.725x0.725x0.15 = 0.0788 cum Less cover with frame 0.575x0.575x0.15 = (-) 0.0496 cum = 0.0292 cum Say 0.03 cum	L.S.	6.76	1.49	10.07
4.1.3	Rate as per Item Number 4.1.3 of SH: Concrete work	cum	0.03	4,514.05	135.42 (A)
9999	Sundries	L.S.	13.52	1.49	20.14
	TOTAL				765.63
	Add Water Charges @ 1% except on A i.e on (765.63 - 135.42 =) 630.21				6.30
	TOTAL				771.93
	Add CPOH @ 15% except on A i.e on (771.93 - 135.42 =) 636.51				95.48
	Cost of each				867.41
	Say				867.40

19.19.1.3 Circular shape 450 mm internal diameter

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no. MATERIAL:				
7132	Circular shape 450 mm dia precast R.C.C. manhole cover with frame - L.D. - 25	each	1.00	560.00	560.00
9999	Carriage of manhole cover Cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 grade stone aggregate 20 mm nominal size) 3.14/4x(0.775)²x0.15 = 0.0708 cum Less cover with frame 3.14/4x(0.625)²x0.15 = (-) 0.0460 cum = 0.0248 cum Say 0.03 cum	L.S.	6.76	1.49	10.07
4.1.3	Rate as per Item Number 4.1.3 of SH: Concrete work	cum	0.03	4,514.05	135.42 (A)
9999	Sundries	L.S.	13.52	1.49	20.14
	TOTAL				725.63
	Add Water Charges @ 1% except on A i.e on (725.63 - 135.42 =) 590.21				5.90
	TOTAL				731.53
	Add CPOH @ 15% except on A i.e on (731.53 - 135.42 =) 596.11				89.42
	Cost of each				820.95
	Say				820.95

19.19.2 M D -10

19.19.2.1 Square shape 450 mm internal dimension

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no. MATERIAL:				
7133	Rectangular shape 500x500 mm precast R.C.C. manhole cover with frame - M.D. - 10	each	1.00	660.00	660.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Carriage of manhole cover Cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 grade stone aggregate 20 mm nominal size) 0.95x0.95x0.15 =0.1354 cum Less cover with frame 0.80x0.80x0.15 = (-) 0.096 cum = 0.0394 cum Say 0.04 cum	L.S.	6.76	1.49	10.07
4.1.3	Rate as per Item Number 4.1.3 of SH: Concrete work	cum	0.04	4,514.05	180.56 (A)
9999	Sundries	L.S.	16.64	1.49	24.79
	TOTAL				875.42
	Add Water Charges @ 1% except on A i.e on (875.42 - 180.56 =) 694.86				6.95
	TOTAL				882.37
	Add CPOH @ 15% except on A i.e on (882.37 - 180.56 =) 701.81				105.27
	Cost of each				987.64
	Say				987.65

19.19.2.2 Circular shape 500 mm internal diameter

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no. MATERIAL:				
7134	Circular shape 500 mm dia precast R.C.C. manhole cover with frame -M.D.-10	each	1.00	630.00	630.00
9999	Carriage of manhole cover Cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 grade stone aggregate 20 mm nominal size) 3.14/4x(0.95)²x0.15 = 0.1064 cum Less cover wjth frame 3.14/4x(0.8)²x0.15 = (-) 0.0754 cum = 0.031 cum Say 0.03 cum	L.S.	6.76	1.49	10.07
4.1.3	Rate as per Item Number 4.1.3 of SH: Concrete work	cum	0.03	4,514.05	135.42 (A)
9999	Sundries	L.S.	16.64	1.49	24.79
	TOTAL				800.28
	Add Water Charges @ 1% except on A i.e 6.65 on (800.28 - 135.42 =) 664.86				
	TOTAL				806.93
	Add CPOH @ 15% except on A i.e on (806.93 - 135.42 =) 671.51				100.73
	Cost of each				907.66
	Say				907.65

19.19.3.1 Circular shape 560 mm internal diameter

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no. MATERIAL:				
7135	Circular shape 560 mm dia precast R.C.C. manhole cover with frame - H.D. - 20	each	1.00	1,030.00	1,030.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Carriage of manhole cover Cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 grade stone aggregate 20 mm nominal size) 3.14/4x(1.05)²x0.15 = 0.1299 cum Less cover with frame 3.14/4x(0.9)²x0.15 = (-) 0.0955 cum = 0.0344 cum Say 0.03 cum	L.S.	13.52	1.49	20.14
4.1.3	Rate as per Item Number 4.1.3 of SH: Concrete work	cum	0.03	4,514.05	135.42 (A)
9999	Sundries	L.S.	20.28	1.49	30.22
	TOTAL				1,215.78
	Add Water Charges @ 1% except on A i.e on (1,215.78 - 135.42 =) 1,080.36				10.80
	TOTAL				1,226.58
	Add CPOH @ 15% except on A i.e on (1,226.58 - 135.42 =) 1,091.16				163.67
	Cost of each				1,390.25
	Say				1,390.25

19.19.4 EHD - 35

19.19.4.1 Circular shape 560 mm internal dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no. MATERIAL:				
7136	Circular shape 560 mm dia precast R.C.C. manhole cover with frame - E.H.D. - 35	each	1.00	1,150.00	1,150.00
9999	Carriage of manhole cover Cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 grade stone aggregate 20 mm nominal size) 3.14/4x(1.05)²x0.15 = 0.1299 cum Less cover with frame 3.14/4x(0.9)²x0.15 = (-) 0.0955 cum = 0.0344 cum Say 0.03 cum	L.S.	13.52	1.49	20.14
4.1.3	Rate as per Item Number 4.1.3 of SH: Concrete work	cum	0.03	4,514.05	135.42 (A)
9999	Sundries	L.S.	20.28	1.49	30.22
	TOTAL				1,335.78
	Add Water Charges @ 1% except on A i.e on (1,335.78 - 135.42 =) 1,200.36				12.00
	TOTAL				1,347.78
	Add CPOH @ 15% except on A i.e on (1,347.78 - 135.42 =) 1,212.36				181.85
	Cost of each				1,529.63
	Say				1,529.65

119.20 Supplying and fixing C.I. cover 300x300 mm without frame for gully trap (standard pattern) the weight of cover to be not less than 4.5 kg

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cover MATERIAL:				
1353	C.I.cover without frame 300x300 mm inside i/c cover of 4.50 kg	each	1.00	200.00	200.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Carriage of cover	L.S.	2.70	1.49	4.02
	LABOUR:				
0114	Beldar	day	0.03	247.00	7.41
	TOTAL				211.43
	Add Water Charges @ 1%				2.11
	TOTAL				213.54
	Add CPOH @ 15%				32.03
	Cost of each				245.57
	Say				245.55

19.21 Making connection of drain or sewer line with existing manhole including breaking into and making good the walls, floors with cement concrete 1:2:4 mix (1cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) cement plastered on both sides with cement mortar 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement and making necessary channels for the drain etc. complete:

19.21.1 For pipes 100 to 250 mm diameter

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one connection MATERIAL: coarse sand : 4 grade stone aggregate 20 mm nominal size) = 0.30x0.30x0.23 m = 0.0207 cum Less pipe: 1/2x3.14x0.23x0.23x0.23 = 0.0096 cum = 0.0111 cum Say 0.01 cum				
4.1.3	Rate as per Item Number 4.1.3 of SH: Concrete work 12 mm cement plaster 1:3 (1 cement: 3 coarse sand) finished with a floating coat of neat cement 2x0.35x0.35=0.25 sqm	cum	0.01	4,514.05	45.14 (A)
13.9.1	Rate as per Item Number 13.9.1 of SH: Finishing	sqm	0.25	173.10	43.28 (A)
	LABOUR: (For cutting holes average size 30x30 cm in 23 cm thick wall and making channel etc.)				
0123	Mason (brick layer) 1 st class	day	0.12	301.00	36.12
0124	Mason (brick layer) 2nd class	day	0.12	273.00	32.76
0114	Beldar	day	0.25	247.00	61.75
9999	Add for delay sundries etc	L.S.	20.15	1.49	30.02
	TOTAL				249.07
	Add Water Charges @ 1% except on A i.e on (249.07 - 88.42 =) 160.65				1.61
	TOTAL				250.68
	Add CPOH @ 15% except on A i.e on (250.68 - 88.42 =) 162.26				24.34
	Cost of each				275.02
	Say				275.00

19.21.2 For pipes 250 to 300 mm diameter

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one connection MATERIAL: Cement concrete 1:2:4 mix (1 cement: 2 coarse sand : 4 grade stone aggregate 20 mm nominal size) = 0.35x0.35x0.30 m = 0.037 cum Less pipe: 1/2x3.14x0.30x0.30x0.30 = 0.021 cum = 0.016 cum Say 0.02 cum				
4.1.3	Rate as per Item Number 4.1.3 of SH: Concrete work 12 mm cement plater 1:3(1 cement: 3 coarse sand) finished with a floating coat of neat cement 2x0.40x0.40 =0.32 sqm	cum	0.02	4,514.05	90.28 (A)
13.9.1	Rate as per Item Number 13.9.1 of SH: Finishing LABOUR: (For cutting holes average size 30x30 cm in 23 cm thick wall and making channel etc.)	sqm	0.32	173.10	55.39 (A)
0123	Mason (brick layer) 1 st class	day	0.12	301.00	36.12
0124	Mason (brick layer) 2nd class	day	0.12	273.00	32.76
0114	Beldar	day	0.25	247.00	61.75
9999	Add for delay sundries etc	L.S.	20.67	1.49	30.80
	TOTAL				307.10
	Add Water Charges @ 1% except on A i.e on (307.10 - 145.67 =) 161.43				1.61
	TOTAL				308.71
	Add CPOH @ 15% except on A i.e on (308.71 - 145.67 =) 163.04				24.46
	Cost of each				333.17
	Say				333.15

19.21.3 For pipes 350 to 450 mm diameter

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one connection MATERIAL: Cement concrete 1:2:4 mix (1 cement: 2 coarse sand : 4 grade stone aggregate 20 mm nominal size) = 0.50x0.50x0.30 m = 0.075 cum Less pipe: 1/2x3.14x0.45x0.45x0.30 = 0.048 cum = 0.027 cum Say 0.03 cum				
4.1.3	Rate as per Item Number 4.1.3 of SH: Concrete work 12 mm cement plater 1:3(1 cement: 3 coarse sand) finished with a floating coat of neat cement 2x0.55x0.55 =0.605 sqm Say 0.60 sqm	cum	0.03	4,514.05	135.42 (A)
13.9.1	Rate as per Item Number 13.9.1 of SH: Finishing	sqm	0.60	173.10	103.86 (A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	LABOUR:				
	(For cutting holes average size 30x30 cm in 23 cm thick wall and making channel etc.)				
0123	Mason (brick layer) 1 st class	day	0.16	301.00	48.16
0124	Mason (brick layer) 2nd class	day	0.16	273.00	43.68
0114	Beldar	day	0.33	247.00	81.51
9999	Add for delay sundries etc	L.S.	26.91	1.49	40.10
	TOTAL				452.73
	Add Water Charges @ 1% except on A i.e on (452.73 - 239.28 =) 213.45				2.13
	TOTAL				454.86
	Add CPOH @ 15% except on A i.e on (454.86 - 239.28 =) 215.58				32.34
	Cost of each				487.20
	Say				487.20

19.22 Providing sand cast iron drop connection externally for 60 cm drop from branch sewer line to main sewer manhole including inspection and cleaning eye with chain and lid, sand cast iron drop pipe and bend encased all-round with cement concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) with all centering and shuttering required, cutting holes in walls and making good with brick work in cement mortar 1:4 (1 cement : 4 coarse sand) plastered with cement mortar 1:3 (1 cement : 3 coarse sand) on inside of the manhole wall, lead caulked joints between sand cast iron pipes and fittings, stiff cement mortar 1:1 (1 cement : 1 fine sand) joints between sand cast iron tee and S.W. pipe, making required channels complete as per standard design and specifications:

19.22.1 100 mm dia sand cast iron drop connection

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one drop connection				
	MATERIAL:				
1617	S.C. I. soil, waste and vent single socketed pipe 1.80 metres long: 100 mm dia = 38+30+33 =101 cm say 1 metre 1 / 1.80 = 0.55556 Nos. Length of pipe = 1m. Hence, Qty = 1 / 1.8 = 0.55556	each	0.55556	990.00	550.00
9999	Carriage of pipe	L.S.	1.43	1.49	2.13
	Cutting charges				
18.83.2	Rate as per Item Number 18.83.2 of SH: Water supply	each cut	3.00	55.65	166.95 (A)
1336	Clearing eye with chain and lid 100 mm dia	each	1.00	44.00	44.00
1621	S.C.I. plain bend 100 mm dia	each	1.00	210.00	210.00
1628	S.C.I. plain single equal junctions 100x100x100 mm dia	each	1.00	310.00	310.00
	Brick work in cement mortar 1:4(1 cement: 4 coarse sand) 0.20x0.20x0.23 = 0.009 cum Less pipe: 1/2x3.14x0.10x0.10x0.23 = 0.002 cum Net Qty = 0.007 cum				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
6.1.1	Rate as per Item Number 6.1.1 of SH: Brick work Cement concrete 1:5:10 (1 cement: 5 fine sand : 10 graded stone aggregate 40 mm nominal size) 0.40x0.45x1.05 m = 0.189 cum 0.40x0.25x0.40 = 0.040 cum Total = 0.229 cum Less pipe portion 1/2x3.14x0.10x0.10x1.50 = 0.012 cum Toothing portion 2x0.40x0.05x0.10 m = 0.004 cum = 0.016 cum Net Qty = 0.229-0.016 = 0.213 cum Say 0.21 cum	cum	0.007	3,508.25	24.56 (A)
4.1.11	Rate as per Item Number 4.1.11 of SH: Concrete work 12 mm cement plaster 1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement 1x0.25x0.25 m = 0.0625-S.ay 0.06 sqm	cum	0.21	3,087.45	648.36 (A)
13.9.1	Rate as per Item Number 13.9.1 of SH: Finishing Providing lead caulked joints to 100 mm diameter pipe and special	sqm	0.06	173.10	10.39 (A)
12.39.1	Rate as per Item Number 12.39.1 of SH: Roofing	each	4.00	207.85	831.40 (A)
9999	Providing joint to S.W. pipe with cement mortar 1:1 Form work 1.30x1.05 m= 1.36 sqm	L.S.	26.91	1.49	40.10
5.9.2	Rate as per Item Number 5.9.2 of SH: Reinforced cement concrete work	sqm	1.36	285.15	387.80 (A)
9999	Sundries includingcarriage of bends etc LABOUR: For cutting holes 5 cm deep in alternate course of brick work benching and channel	L.S.	26.91	1.49	40.10
0123	Mason (brick layer) 1 st class	day	0.70	301.00	210.70
0124	Mason (brick layer) 2nd class	day	0.70	273.00	191.10
0114	Beldar	day	2.70	247.00	666.90
	TOTAL				4,334.49
	Add Water Charges @ 1% except on A i.e on (4,334.49 - 2,069.46 =) 2,265.03				22.65
	TOTAL				4,357.14
	Add CPOH @ 15% except on A i.e on (4,357.14 - 2,069.46 =) 2,287.68				343.15
	Cost of each				4,700.29
	Say				4,700.30

19.22.2 150 mm dia sand cast iron drop connection

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one drop connection MATERIAL:				
1618	S.C.I. soil, waste and vent single socketed pipe1.80 metres long: 150 mm dia = 34.5+30+37 =101.5cm say 1.00m Length of pipe = 1m. Hence, Qty = 1 / 1.8 = 0.55556	each	0.55556	1,630.00	905.56
9999	Carriage of pipe	L.S.	1.82	1.49	2.71
	Cutting charges				
18.83.4	Rate as per Item Number 18.83.4 of SH: Water supply	each cut	3.00	104.70	314.10 (A)
1337	Clearing eye with chain and lid 150 mm dia	each	1.00	50.00	50.00
1622	S.C.I. plain bend 150 mm dia	each	1.00	470.00	470.00
7087	S.C.I. Tee 150 mm	each	1.00	505.00	505.00
	Brick work in cement mortar 1:4(1 cement: 4 coarse sand) 0.20x0.20x0.23 = 0.009 cum Less pipe: 1/2x3.14x0.15x0.15x0.23 = 0.004 cum Net Qty = 0.005 cum				
6.1.1	Rate as per Item Number 6.1.1 of SH: Brick work	cum	0.005	3,508.25	17.54 (A)
	Cement concrete 1:5:10 (1 cement: 5 fine sand : 10 graded stone aggregate 40 mm nominal size) 0.45x0.50x1.15 m = 0.259 cum 0.45x0.25x0.45 = 0.0510 cum = 0.310 cum Less pipe portion 1/4x3.14x0.15x0.15x1.50 = 0.027 cum Toothing portion 3x0.45x0.05x0.10 m = 0.004 cum = 0.031 cum Net Qty = 0.310-0.031 = 0.279 cum Say 0.28 cum				
4.1.11	Rate as per Item Number 4.1.11 of SH: Concrete work	cum	0.28	3,087.45	864.49 (A)
	12 mm cement plaster 1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement 1x0.25x0.25m = 0.0625 Say 0.06 sqm				
13.9.1	Rate as per Item Number 13.9.1 of SH: Finishing	sqm	0.06	173.10	10.39 (A)
	Providing lead caulked joints to 150 mm diameter pipe and special				
12.39.2	Rate as per Item Number 12.39.2 of SH: Roofing	each	4.00	287.10	1,148.40 (A)
9999	Providing joint to S.W. pipe with cement mortar 1:1 (1 cement: 1 fine sand) Form work 1.450x1.15 m= 1.67 sqm	L.S.	39.91	1.49	59.47
5.9.2	Rate as per Item Number 5.9.2 of SH: Reinforced cement concrete work	sqm	1.67	285.15	476.20 (A)
9999	Sundries includingcarriage of bends etc LABOUR: For cutting holes 45 holes 5 cm deep	L.S.	34.06	1.49	50.75

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	toothing in alternate course of brick work benching and making channel				
0123	Mason (brick layer) 1 st class	day	0.85	301.00	255.85
0124	Mason (brick layer) 2nd class	day	0.85	273.00	232.05
0114	Beldar	day	3.50	247.00	864.50
	TOTAL				6,227.01
	Add Water Charges @ 1% except on A i.e on (6,227.01 - 2,831.12 =) 3,395.89				33.96
	TOTAL				6,260.97
	Add CPOH @ 15% except on A i.e on (6,260.97 - 2,831.12 =) 3,429.85				514.48
	Cost of each				6,775.45
	Say				6,775.45

19.23 Extra for depths beyond 60 cm of sand cast iron drop connection complete:

19.23.1 For 100 mm dia sand cast iron drop connection

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one metre				
	MATERIAL:				
1617	S.C. I. soil, waste and vent single socketed pipe 1.80 metres long: 100 mm dia Length of pipe = 1m. Hence, Qty = 1 / 1.8 = 0.55556	each	0.55556	990.00	550.00
9999	Carriage of materials and fixing charges	L.S.	13.39	1.49	19.95
	Cement concrete 1:5:10 (1 cement: 5 fine sand : 10 graded stone aggregate 40 mm nominal size) 0.40x0.45x1.00 mm = 0.18 cum Less pipe portion 1/2x3.14x0.10x0.10x1.00 = 0.008 cum Toothing portion 5x0.40x0.05x0.10 m = 0.010 cum Total = 0.018 cum Net qty = 0.18-0.018 = 0.162 cum Say 0.16 cum				
4.1.11	Rate as per Item Number 4.1.11 of SH: Concrete work Form work 1.30x1.00 m= 1.30 sqm	cum	0.16	3,087.45	493.99 (A)
5.9.2	Rate as per Item Number 5.9.2 of SH: Reinforced cement concrete work	sqm	1.30	285.15	370.70 (A)
9999	Sundries	L.S.	7.15	1.49	10.65
	LABOUR: For cutting holes 5 cm deep in alternate course of brick work				
0123	Mason (brick layer) 1 st class	day	0.04	301.00	12.04
0124	Mason (brick layer) 2nd class	day	0.04	273.00	10.92
0114	Beldar	day	0.04	247.00	9.88
	TOTAL				1,478.13
	Add Water Charges @ 1% except on A i.e on (1,478.13 - 864.69 =) 613.44				6.13
	TOTAL				1,484.26
	Add CPOH @ 15% except on A i.e on (1,484.26 - 864.69 =) 619.57				92.94
	Cost of 1 metre				1,577.20
	Say				1,577.20

19.23.2 For 150 mm dia sand cast iron drop connection

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one metre MATERIAL:				
1618	S.C.I. soil, waste and vent single socketed pipe1.80 metres long: 150 mm dia Length of pipe = 1m. Hence, Qty = 1 / 1.8 = 0.55556	each	0.55556	1,630.00	905.56
9999	Carriage of materials and fixing charges	L.S.	13.39	1.49	19.95
	Cement concrete 1:5:10 (1 cement: 5 fine sand : 10 graded stone aggregate 40 mm nominal size) 0.45x0.50x1.00 mm = 0.225 cum Less pipe portion 1/2x3.14x0.15x0.15x1.00 = 0.018 cum Toothing portion 5x0.45x0.05x0.10 m = 0.011 cum = 0.029 cum Net 0.225-0.029 = 0.196 cum Say 0.20 cum				
4.1.11	Rate as per Item Number 4.1.11 of SH: Concrete work	cum	0.20	3,087.45	617.49 (A)
	Form work 1.45x1.00 m= 1.45 sqm				
5.9.2	Rate as per Item Number 5.9.2 of SH: Reinforced cement concrete work	sqm	1.45	285.15	413.47 (A)
9999	Sundries	L.S.	8.09	1.49	12.05
	LABOUR: For cutting 5 cm deep in alternate course of brick work				
0123	Mason (brick layer) 1 st class	day	0.05	301.00	15.05
0124	Mason (brick layer) 2nd class	day	0.05	273.00	13.65
0114	Beldar	day	0.05	247.00	12.35
	TOTAL				2,009.57
	Add Water Charges @ 1% except on A i.e on (2,009.57 - 1,030.96 =) 978.61				9.79
	TOTAL				2,019.36
	Add CPOH @ 15% except on A i.e on (2,019.36 - 1,030.96 =) 988.40				148.26
	Cost of 1 metre				2,167.62
	Say				2,167.60

19.24 Dismantling of manhole including R.C.C. top slab, C.I. cover with frame, including stacking of useful materials near the site and disposal of unserviceable materials into municipal dumps within 50 m lead:

19.24.1 Rectangular manhole 90x80 cm and 45 cm deep

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for a manhole 90x80cm and 45cm deep Dismantling of cement concrete 1:4:8 (1 cement: 4 coarse sand 8 : aggregate stone 40 mm nominal size) 1.51x1.41x0.20 m = 0.426 cum Say 0.43 cum				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
15.2.2	Rate as per Item Number 15.2.2 of SH: Dismantling and demolishing Dismantling of second class brick work in Cement mortar 1:4 (1cement : 4 coarse sand) 4.32x0.23x0.35 m =0.348 cum Less for pipe 2x3.14x(0.15m)² x0.23m = (-) 0.008 cum Net qty = 0.340 cum	cum	0.43	413.65	177.87 (A)
15.7.4	Rate as per Item Number 15.7.4 of SH: Dismantling and demolishing Dismantling cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) For benching 2x0.90x(0.80/2) x (0.30+0.20)/2 = 0.18 cum Less for pipe 1x0.90x3.14/4x(0.15m)² = (-)0.02 cum Net qty = 0.16 cum	cum	0.34	566.60	192.64 (A)
15.2.1	Rate as per Item Number 15.2.1 of SH: Dismantling and demolishing Dismantling of R.C.C slab of 1:2:4 (1 cement: 2 coarse sand : 4 grade stone aggregate 20 mm nominal size) For slab : 1.36x1.26x0.15m = 0.257 cum Less for cover 0.61x0.455x0.15m = (-) 0.042 cum Net qty = 0.215 cum Say 0.22 cum	cum	0.16	671.05	107.37 (A)
15.3	Rate as per Item Number 15.3 of SH: Dismantling and demolishing	cum	0.22	978.95	215.37 (A)
9999	Removal of C.I. cover with frame	L.S.	7.15	1.49	10.65
	TOTAL				703.90
	Add Water Charges @ 1% except on A i.e on (703.90 - 693.25 =) 10.65				0.11
	TOTAL				704.01
	Add CPOH @ 15% except on A i.e on (704.01 - 693.25 =) 10.76				1.61
	Cost of each				705.62
	Say				705.60

19.24.2 Rectangular manhole 120x90 cm and 90 cm deep

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for a manhole 120x90cm and 90cm deep Dismantling of cement concrete 1:4:8 (1 cement: 4 coarse sand 8 : aggregate stone 40 mm nominal size) 1.81x1.51x0 20 m = 0.547 cum Say 0.55 cum				
15.2.2	Rate as per Item Number 15.2.2 of SH: Dismantling and demolishing	cum	0.55	413.65	227.51 (A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Dismantling of second class brick work in cement mortar 1 :4 (1 cement : 4 coarse sand) 5.12x0.23x0.30m = 0.942 cum Less for pipe 2x3.14x(0.15m)²x0.23 m = (-) 0.008 cum Net qty = 0.934 cum Say 0.93 cum				
15.7.4	Rate as per Item Number 15.7.4 of SH: Dismantling and demolishing Dismantling cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) 2x1.20x0.90x(0.80/2) x (0.30+0.20)/2 = 0.270 cum Less for pipe 1.20x3.14/4x(0.15m)² = (-) 0.021 cum Net qty = 0.249 say 0.25 cum	cum	0.93	566.60	526.94 (A)
15.2.1	Rate as per Item Number 15.2.1 of SH: Dismantling and demolishing Dismantling of R.C.C slab of 1:2:4 (1 cement: 2 coarse sand : 4 grade stone aggregate 20 mm nominal size) For slab : 1.66x 1.36x0.15m = 0.339 cum Less for cover 0.7854x(0.50)²(0.15m) = (-) 0.029 cum Net qty = 0.31 cum	cum	0.25	671.05	167.76 (A)
15.3	Rate as per Item Number 15.3 of SH: Dismantling and demolishing	cum	0.31	978.95	303.47 (A)
9999	Removal of C.I. cover with frame	L.S.	7.15	1.49	10.65
	TOTAL				1,236.33
	Add Water Charges @ 1% except on A i.e on (1,236.33 - 1,225.68 =) 10.65				0.11
	TOTAL				1,236.44
	Add CPOH @ 15% except on A i.e on (1,236.44 - 1,225.68 =) 10.76				1.61
	Cost of each				1,238.05
	Say				1,238.05

19.24.3 Rectangular arch type manhole 140x90 cm and 2.45 m deep

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for a manhole 140x90cm and 2.45m deep Dismantling of cement concrete 1:4:8 (1 cement: 4 coarse sand 8 : aggregate stone 40 mm nominal size) 2.16m x1.66m x 0.20m = 0.72 cum				
15.2.2	Rate as per Item Number 15.2.2 of SH: Dismantling and demolishing Dismantling of second class brick work in cement mortar 1:4 (1 cement: 4 coarse sand) Brick work in item	cum	0.72	413.65	297.83 (A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	5.52mx0.23mx1.20m = 1.524 cum 3.92mx0.23mx1.15m= 1.037 cum = 2.561 cum Deduct arch ring and portion of pipe 2x½x3.14x0.25mx0.23x0.1m = 0.018 cum 2x3.14/4(0.15)²x0.23m = 0.008 cum = (-) 0.026 cum Net qty = 2.561 - 0.026 = 2.535 cum Say 2.54 cum Brick work in arch ½x3.14x1.13x0.80x0.23m = 0.327 cum 2x½x3.14x0.25mx0.23x0.1m = 0.018 cum = 0.345 cum Say 0.35 cum Net qty = 2.54+0.35 = 2.89 cum				
15.7.4	Rate as per Item Number 15.7.4 of SH: Dismantling and demolishing Dismantling cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) 2x1.4x0.90/2x(0.20+0.30)/2 = 0.315 cum Less pipe 1.4x3.14/4x(0.15)² = (-) 0.025 cum Net qty = 0.290 cum	cum	2.89	566.60	1,637.47 (A)
15.2.1	Rate as per Item Number 15.2.1 of SH: Dismantling and demolishing Dismantling and demolishing Dismantling of R.C.C slab of 1:2:4 (1 cement: 2 coarse sand : 4 grade stone aggregate 20 mm nominal size) 1.36mx1.06mx0.15 = 0.216 cum Less cover 3.14x(0.25)²x0.15 = (-) 0.029 cum = 0.187 cum Say 0.19 cum	cum	0.29	671.05	194.60 (A)
15.3	Rate as per Item Number 15.3 of SH: Dismantling and demolishing	cum	0.19	978.95	186.00 (A)
9999	Removal of C.I. cover with frame	L.S.	7.15	1.49	10.65
9999	Removal of M.S.foot rest	L.S.	8.06	1.49	12.01
	TOTAL				2,338.56
	Add Water Charges @ 1% except on A i.e on (2,338.56 - 2,315.90 =) 22.66				0.23
	TOTAL				2,338.79
	Add CPOH @ 15% except on A i.e on (2,338.79 - 2,315.90 =) 22.89				3.43
	Cost of each				2,342.22
	Say				2,342.20

19.24.4 Circular manhole 122 cm diameter and 1.68 m deep

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for a manhole 1.22m in internal diameter and 1.68m deep Dismantling of cement concrete 1:3:6 (1 cement: 3 coarse sand : 6 aggregate stone 40 mm nominal size) 1.98mx1.98mx0.30m=1.178cum say 1.18cum				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
15.2.1	Rate as per Item Number 15.2.1 of SH: Dismantling and demolishing Dismantling of second class brick work in cement mortar 1:4 (1 cement: 4 coarse sand) Curved on plan 3.14x1.45x0.24x0.23= 0.251 3.14x(1.45+0.79)/2x1.32x0.23 = 1.069 = 1.320 Deduct arch ring and portion of pipe 2x½x3.14x0.25mx0.23x0.10m = 0.018 cum 2x3.14/4(0.15)²x0.23m = 0.008 cum = 0.026 cum Net quantity 1.320 - 0.026 = 1.294 Say 1.29 cum Brick work in arches 2x½x3.14x0.25mx0.230x0.10m = 0.018 cum say 0.02 cum Total = 1.294+0.02 = 1.314 cum say 1.131 cum	cum	1.18	671.05	791.84 (A)
15.7.4	Rate as per Item Number 15.7.4 of SH: Dismantling and demolishing Dismantling cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) For benching 3.14/4x(1.22)²x0.20 = 0.234 cum [(2x8.133)/360]x(4/3)x3.14x(0.61)³ = 0.043 cum = 0.277 cum Less pipe:1.22x3.14/4x(0.15)²= (-)0.0216cum = 0.2554 cum say 0.26 cum In cover fixing 0.7854x1.020x1.020x0.15m = 0.123 cum Less cover 3.14/4x(0.28)²x0.15m = (-)0.037 cum = 0.086 cum say 0.09 cum Total = 0.26 + 0.09 = 0.35 cum	cum	1.31	566.60	742.25 (A)
15.2.1	Rate as per Item Number 15.2.1 of SH: Dismantling and demolishing	cum	0.35	671.05	234.87 (A)
9999	Removal of S.F.R.C cover with frame size 560mm diameter (medium duty)	L.S.	7.15	1.49	10.65
9999	Removal of M.S.foot rests	L.S.	8.06	1.49	12.01
	TOTAL				1,791.62
	Add Water Charges @ 1% except on A i.e on (1,791.62 - 1,768.96 =) 22.66				0.23
	TOTAL				1,791.85
	Add CPOH @ 15% except on A i.e on (1,791.85 - 1,768.96 =) 22.89				3.43
	Cost of each				1,795.28
	Say				1,795.30

19.25 Extra for depth of manholes dismantled:

19.25.1 Rectangular manhole 90x80 cm and beyond 45 cm depth

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one metre Dismantling of second class brick work in cement mortar 1:5 (1 Cement: 5 fine sand) 4.32x0.23x1.0m = 0.994 cum Say 0.99 cum				
15.7.4	Rate as per Item Number 15.7.4 of SH: Dismantling and demolishing	cum	0.99	566.60	560.93 (A)
9999	Removing of M.S foot rests	L.S.	1.82	1.49	2.71
	TOTAL				563.64
	Add Water Charges @ 1% except on A i.e on (563.64 - 560.93 =) 2.71				0.03
	TOTAL				563.67
	Add CPOH @ 15% except on A i.e on (563.67 - 560.93 =) 2.74				0.41
	Cost of 1 metre				564.08
	Say				564.10

19.25.2 Rectangular manhole 120x 90 cm and beyond 90 cm depth

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one metre Dismantling of second class brick work in cement mortar 1:5 (1 Cement: 5 fine sand) 5.12x0.23x1.0m = 1.178 cum Say 1.18 cum				
15.7.4	Rate as per Item Number 15.7.4 of SH: Dismantling and demolishing	cum	1.18	566.60	668.59 (A)
9999	Removing of M.S. foot rests	L.S.	1.82	1.49	2.71
	TOTAL				671.30
	Add Water Charges @ 1% except on A i.e on (671.30 - 668.59 =) 2.71				0.03
	TOTAL				671.33
	Add CPOH @ 15% except on A i.e on (671.33 - 668.59 =) 2.74				0.41
	Cost of 1 metre				671.74
	Say				671.75

19.25.3 Rectangular arch type manhole 140x 90 cm and beyond 2.45 m depth (up to 4.25 m depth)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for dismantling one manhole 4.25m deep Dismantling IInd class brick work in cement mortar 1:4(1 Cement: 4 Coarse sand) for 2.45 depth Qty for 2.45m depth 5.52x0.23x1.20=1.524cum 3.92mx0.23mxl.l5m= 1.037 cum Total= 2.561 cum				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Deduct arch ring and portion of pipe 2x½ x3.14x0.25mx0.23x0.1 m = 0.018 cum 2x3.14/4(0.15)²x0.23m = 0.008 cum Total deduction= (-) 0.026 cum Net 2.561 - 0.026 = 2.535 cum Say 2.54 cum Qty in arch ½ x3.14xl.l3x0.80x0.23m = 0.327 cum 2x½ x3.14x0.25mx0.23x0.1m = 0.018 cum Total= 0.345 cum Say 0.35 cum Total for 2.45 m depth 2.54 + 0.35 = 2.89 cum Qty for 4.25m depth 5.52mx0.23mx1.20m= 1.524 cum 3.92mx0.23mx2.95m = 2.660 cum Total= 4.184 cum Deduct arch ring and portion of pipe 2x1/2x3.14x0.70mx0.23x0.1m = 0.051 cum 2x3.14/4x(0.60)² x 0.230 = 0.130 cum Total deduction= (-) 0.181 cum Net 4.184 - 0.181 = 4.003 cum Say 4.00 cum Qty in arch ½ x3.14x1.13x0.80x0.23m = 0.327 cum 2x1/2x3.14x0.70mx0.23x0.1m = 0.051 cum Total= 0.378 cum Say 0.38 cum Total for 4.25 m depth =4.38 cum Net difference = 4.38 - 2.89 = 1.49 cum				
15.7.4	Rate as per Item Number 15.7.4 of SH: Dismantling and demolishing Dismantling cement concrete 1:2:4 (1 Cement : 2 coarse sand : 4 graded stone aggregate 40mm nominal size) Qty for 4.25m depth 2x1.4x(0.90/2)x(0.65+0.75)/2 = 0.882 cum Less pipe :1.4x3.14/4x(0.60)² = (-) 0.396 cum = 0.486 cum Say 0.49 cum Qty for 2.45m depth 2x1.4x(0.90/2)x(0.20+0.30)/2 = 0.315 cum Less pipe : 1.4x3.14/4x(0.15)² =(-) 0.025 cum = 0.290 cum Say 0.29 cum Net difference = 0.49 - 0.29 = 0.20 cum	cum	1.49	566.60	844.23 (A)
15.2.1	Rate as per Item Number 15.2.1 of SH: Dismantling and demolishing	cum	0.20	671.05	134.21 (A)
	TOTAL				978.44
	Cost of 1.8 metre				978.44
	Cost of 1 metre				543.58
	Say				543.60

19.25.4 Circular manhole 122 cm diameter and beyond 1.68 m depth (up to 2.29 m depth)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for dismantling one manhole 2.29m deep Dismantling cement concrete 1:3:6(1 Cement : 3 coarse sand : 6 graded stone aggregate 40mm nominal size) 1.98x1.98x0.30 = 1.178 cum. Say 1.18 cum				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
15.2.1	Rate as per Item Number 15.2.1 of SH: Dismantling and demolishing Dismantling IInd class brick work in cement mortar 1:4 (1 Cement: 4 Coarse sand) Curved on plan 3.14x1.45x0.85x0.23=0.891 3.14x(1.45+0.79)/2x 1.32x0.23 = 1.069 = 1.96 Duduct arch ring and portion of pipe 2x1/2x3.14x0.25mx0.230x0.10 m = 0.018 cum 2x3.14/4x(0.15)²x0.230 = 0.008 cum Total deduction = 0.026 cum , Net quantity 1.96-0.026 = 1.934 Say 1.93 cum Qty in arch 2x1/2x3.14x0.25 m x0.230x0.10 m = 0.018 cum Say 0.02 cum Total =1.93+ 0.02= 1.97 cum	cum	1.18 67	1.05	791.84 (A)
15.7.4	Rate as per Item Number 15.7.4 of SH: Dismantling and demolishing Dismantling cemnet concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominl size) For benching: 3.14/4x(1.22)²x0.20 = 0.234 cum [(2x8.133)/360]x(4/3)x3.14x(0.61)³ =0.043 cum = 0.277 cum Less pipe : 1.22x3.14/4x(0.15)2(-) = 0.0216 cum Net qty= 0.2554 cum Say 0.26 cum For fixing cover : 3.14/4 xd² x thickness 0.7854x1.020² x 0.15 m =0.123 cum Less cover 3.14/4x(0.28)²x 0.15 m : (-) = 0.037 cum Net qty = 0.086 cum Say 0.09 cum Total = 0.26 + 0.09 = 0.35 cum	cum	1.97	566.60	1,116.20 (A)
15.2.1	Rate as per Item Number 15.2.1 of SH: Dismantling and demolishing	cum	0.35	671.05	234.87 (A)
9999	Removal of SFRC cover	L.S.	7.15	1.49	10.65
9999	Removal of M.S. foot rests	L.S.	8.09	1.49	12.05
	Deduct cost of dismantling manhole 1.68m deep				
19.24.4	Rate as per Item Number 19.24.4 of SH: Drainage	each	-1.00	1,795.30	-1,795.30(A)
	TOTAL				370.31
	Add Water Charges @ 1% except on A i.e on (370.31 - 347.61 =) 22.70				0.23
	TOTAL				370.54
	Add CPOH @ 15% except on A i.e on (370.54 - 347.61 =) 22.93				3.44
	Cost of 0.61 metre				373.98
	Cost of 1 metre				613.08
	Say				613.10

19.26 Raising manhole cover and frame slab to required level including dismantling existing slab and making good the damage as required (Raising depth of manhole to be paid separately) :

19.26.1 Rectangular manhole 90x80 cm with rectangular cover 600x450 mm of grade LD - 2.5

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one manhole Dismantling of R.C.C slab of 1:2:4 (1 cement: 2 coarse sand : 4 aggregate stone 20 mm nominal size) = 1.36x1.26x0.15 = 0.257 cum Less cover with frame portion 0.85x0.70x0.15 =(-)0.089cum Net qty = 0.168 cum say 0.17 cum				
15.3	Rate as per Item Number 15.3 of SH: Dismantling and demolishing	cum	0.17	978.95	166.42 (A)
9999	Removal of R.C.C cover and frame Removal of R.C.C cover and frame R.C.C work 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) For raised slab 1.36x1.26x0.15 = 0.257 cum Less portion cover with frame = 0.85x0.70x0.15 =(-) 0.089 cum Net qty= 0.168 cum Say 0.17 cum	L.S.	7.15	1.49	10.65
5.3	Rate as per Item Number 5.3 of SH: Reinforced cement concrete work Form work = 0.90x0.80 = 0.72 sqm Less cover: 0.60x0.45 =(-) 0.27 sqm Net qty= 0.45 sqm	cum	0.17	5,494.55	934.07 (A)
5.9.3	Rate as per Item Number 5.9.3 of SH: Reinforced cement concrete work	sqm	0.45	311.20	140.04 (A)
9999	Sundries	L.S.	13.52	1.49	20.14
	TOTAL				1,271.32
	Add Water Charges @ 1% except on A i.e on (1,271.32 - 1,240.53 =) 30.79				0.31
	TOTAL				1,271.63
	Add CPOH @ 15% except on A i.e on (1,271.63 - 1,240.53 =) 31.10				4.66
	Cost of each				1,276.29
	Say				1,276.30

19.26.2 Rectangular manhole 120x90 cm with circular cover 500 mm dia of grade MD - 10

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one manhole Dismantling of R.C.C slab of 1:2:4 (1 cement: 2 coarse sand : 4 aggregate stone 20mm nominal size) 1.66x1.16x0.15 =0.339 Less for RCC cover with frame 3.14/44x(0.80)2x0.15=(-)0.075 cum Net qty 0.264 cum Say 0.26 cum				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
15.3	Rate as per Item Number 15.3 of SH: Dismantling and demolishing	cum	0.26	978.95	254.53 (A)
9999	Removal of R.C.C cover and frame	L.S.	7.15	1.49	10.65
	R.C.C work 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)				
	1.66x1.36x0.15 = 0.339 cum				
	Less portion cover with frame				
	= 3.14/4x0.80x0.80x0.15 =(-) 0.075 cum				
	Net qty= 0.264 cum Say 0.26 cum				
5.3	Rate as per Item Number 5.3 of SH: Reinforced cement concrete work	cum	0.26	5,494.55	1,428.58 (A)
	Form work = 1.2x0.90 = 1.08 sqm				
	Less cover = $3.14/4x(0.50)^2$=(-) 0.196 sqm				
	Net qty = 0.884 sqm Say 0.88 sqm				
5.9.3	Rate as per Item Number 5.9.3 of SH: Reinforced cement concrete work	sqm	0.88	311.20	273.86 (A)
9999	Sundries	L.S.	16.64	1.49	24.79
	TOTAL				1,992.41
	Add Water Charges @ 1% except on A i.e on (1,992.41 - 1,956.97 =) 35.44				0.35
	TOTAL				1,992.76
	Add CPOH @ 15% except on A i.e on (1,992.76 - 1,956.97 =) 35.79				5.37
	Cost of each				1,998.13
	Say				1,998.15

19.26.3 Rectangular manhole 120x90 cm with circular cover 560 mm dia of grade HD - 20

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one manhole				
	Dismantling of R.C.C slab of 1:2:4 (1 cement: 2 coarse sand : 4 aggregate stone 20mm nominal size)				
	1.66x1.36x0.15 = 0.339 cum				
	Less for RCC cover with frame				
	$3.14/4x(0.90)^2$ x0.15 =(-) 0.095 cum				
	Net qty 0.244 cum Say 0.24 cum				
15.3	Rate as per Item Number 15.3 of SH: Dismantling and demolishing	cum	0.24	978.95	234.95 (A)
9999	Removal of R.C.C cover and frame	L.S.	7.15	1.49	10.65
	R.C.C work 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)				
	1.66x1.36x0.15 = 0.339 cum				
	Less portion cover with frame				
	= $3.14/4x0.90^2$ x0.15 =(-) 0.095 cum				
	Net qty = 0.244 cum Say 0.24 cum				
5.3	Rate as per Item Number 5.3 of SH: Reinforced cement concrete work	cum	0.24	5,494.55	1,318.69 (A)
	Form work				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	1.2x0.90 = 1.08 sqm Less cover = 3.14/4x(0.56)² =(-) 0.246 sqm Net qty = 0.834 sqm Say 0.83 sqm				
5.9.3	Rate as per Item Number 5.9.3 of SH: Reinforced cement concrete work	sqm	0.83	311.20	258.30 (A)
9999	Sundries	L.S.	20.28	1.49	30.22
	TOTAL				1,852.81
	Add Water Charges @ 1% except on A i.e on (1,852.81 - 1,811.94 =) 40.87				0.41
	TOTAL				1,853.22
	Add CPOH @ 15% except on A i.e on (1,853.22 - 1,811.94 =) 41.28				6.19
	Cost of each				1,859.41
	Say				1,859.40

19.26.4 Circular manhole 140 cm dia with circular cover 600 mm dia of grade EHD - 35

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one manhole Dismantling of C.C slab of 1:2:4 (1 cement: 2 coarse sand : 4 aggregate-stone 20 mm nominal size) = 3.14/4x(0.985)²x0.15 = 0.114 cum Less cover 3.14/4x(0.90)² x0.15 = (-) 0.095 cum Net qty = 0.019 cum Say 0.02 cum				
15.3	Rate as per Item Number 15.3 of SH: Dismantling and demolishing	cum	0.02	978.95	19.58 (A)
9999	Removal of R.C.C cover and frame	L.S.	8.06	1.49	12.01
	C.C work 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) 3.14/4x(.985)²x0.15 = 0.114cum Less portion cover with frame = 3.14/4x0.90² x 0.15 =(-) 0.095 cum Net qty = 0.019 cum Say 0.02 cum				
4.2.3	Rate as per Item Number 4.2.3 of SH: Concrete work	cum	0.02	5,272.40	105.45 (A)
9999	Sundries	L.S.	20.28	1.49	30.22
	TOTAL				167.26
	Add Water Charges @ 1% except on A i.e on (167.26 - 125.03 =) 42.23				0.42
	TOTAL				167.68
	Add CPOH @ 15% except on A i.e on (167.68 - 125.03 =) 42.65				6.40
	Cost of each				174.08
	Say				174.10

19.27 Constructing brick masonry road gully chamber 50x45x60 cm with bricks in cement mortar 1:4 (1 cement : 4 coarse sand) including 500x450 mm pre-cast R.C.C. horizontal grating with frame complete as per standard design :

19.27.1 With common burnt clay F.P.S.(non modular) bricks of class designation 7.5

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one chamber				
	MATERIAL:				
	Cement concrete 1:5:10 (1 cement: 5 fine sand : 10 graded stone aggregate 40 mm nominal size)				
	1.11x1.06x0.15=0.176 say 0.18cum				
4.1.11	Rate as per Item Number 4.1.11 of SH: Concrete work	cum	0.18	3,087.45	555.74 (A)
	Brick work in bricks of clas designation 75 in cement mortar 1:4(1 cement: 4 coarse sand)				
	2.82 m x 0.23m x0.45 m = 0.29 cum				
6.1.1	Rate as per Item Number 6.1.1 of SH: Brick work	cum	0.29	3,508.25	1,017.39 (A)
	12 mm cement plaster 1:3(1 cement: 3 coarse sand) finished with floating coat of neat cement				
	Wall: 1.90x0.45 m = 0.855 sqm				
	Bed : 0.45x0.50 m = 0.225 sqm				
	Total= 1.080 sqm				
13.9.1	Rate as per Item Number 13.9.1 of SH: Finishing	sqm	1.08	173.10	186.95 (A)
	Cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm				
	nominal size)				
	2.82x0.23x0.15 m = 0.097 cum Say 0.10 cum				
4.2.3	Rate as per Item Number 4.2.3 of SH: Concrete work	cum	0.10	5,272.40	527.24 (A)
	Form work				
	3.50x0.15 m = 0.525 sqm Say 0.53 sqm				
5.9.2	Rate as per Item Number 5.9.2 of SH: Reinforced cement concrete work	sqm	0.53	285.15	151.13 (A)
7380	Precast R.C.C. grating with frame 500x450 mm horizontal grating	each	1.00	650.00	650.00
9999	Carriage of R.C.C. grating	L.S.	7.15	1.49	10.65
9999	fixing of R.C.C. grating	L.S.	5.33	1.49	7.94
	TOTAL				3,107.04
	Add Water Charges @ 1% except on A i.e on (3,107.04 - 2,438.45 =) 668.59				6.69
	TOTAL				3,113.73
	Add CPOH @ 15% except on A i.e on (3,113.73 - 2,438.45 =) 675.28				101.29
	Cost of each				3,215.02
	Say				3,215.00

19.28 Constructing brick masonry road gully chamber 45x45x77.5 cm with bricks in cement mortar 1:4 (1 cement : 4 coarse sand) with pre-cast R.C.C. vertical grating complete as per standard design:

19.28.1 With common burnt clay F.P.S.(non modular) bricks of class designation 7.5

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one chamber MATERIAL: Cement concrete 1:5:10 (1 cement: 5 fine sand : 10 graded stone aggregate 40 mm nominal size) 1.06mxl.1.06mx0.15 m= 0.17 cum				
4.1.11	Rate as per Item Number 4.1.11 of SH: Concrete work Brick work in bricks of class designation 75 in cement mortar 1:4(1 cement: 4 coarse sand) 2.72 m x 0.23m x0.70 m = 0.438 cum Deduct opening 0.45x0.23x0.10 m = 0.01 cum Block 3x(0.075)3= 0.001 cum Total deduction= 0.011 cum Net qty = 0.438 (-) 0.011 = 0.427 cum Say 0.43 cum	cum	0.17	3,087.45	524.87 (A)
6.1.1	Rate as per Item Number 6.1.1 of SH: Brick work 12 mm cement plaster 1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement Wall: 1.80x0.70 m= 1.26 sqm Bed : 0.45x0.45 m = 0.202 sqm Top : 0.45x0.20 m = 0.09 sqm Sides: 2x0.20x0.10 m = 0.04 sqm Total= 1.592 sqm - Deduct opening 0.45x0.10 m = 0.045 sqm Net qty = 1.592 (-) 0.045 = 1.547 cum Say 1.55 cum	cum	0.43	3,508.25	1,508.55 (A)
13.9.1	Rate as per Item Number 13.9.1 of SH: Finishing Cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) Block = $3X(0.75)^3$= 0.001 cum	sqm	1.55	173.10	268.30 (A)
4.2.3	Rate as per Item Number 4.2.3 of SH: Concrete work R.C.C. 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size). 0.91x0.91x0.075 m = 0.062 cum Say 0.06 cum	cum	0.001	5,272.40	5.27 (A)
5.3	Rate as per Item Number 5.3 of SH: Reinforced cement concrete work Less labour for not lifting the materilas upto floor five level	cum	0.06	5,494.55	329.67 (A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0115	Coolie Form work 0.45x0.45 m = 0.202 sqm 0.45x0.20 m = 0.09 sqm outside slab : 3.40x0.075 m = 0.255 sqm Total= 0.547 sqm Say 0.55 sqm	day	-0.113	247.00	-27.91
5.9.2	Rate as per Item Number 5.9.2 of SH: Reinforced cement concrete work Mild steel reinforcement for R.C.C work 0.062 cum @ 80 kg/cum = 4.96 kg	sqm	0.55	285.15	156.83 (A)
5.22.1	Rate as per Item Number 5.22.1 of SH: Reinforced cement concrete work	kilogram	4.96	56.75	281.48 (A)
7381	Precast R.C.C. grating with frame 450x100 mm vertical grating	each	1.00	305.00	305.00
9999	Fixing and carriage of R.C.C. grating	L.S.	20.67	1.49	30.80
	TOTAL				3,382.86
	Add Water Charges @ 1% except on A i.e on (3,382.86 - 3,074.97 =) 307.89				3.08
	TOTAL				3,385.94
	Add CPOH @ 15% except on A i.e on (3,385.94 - 3,074.97 =) 310.97				46.65
	Cost of each				3,432.59
	Say				3,432.60

19.29 Constructing brick masonry road gully chamber 110x50x77.5 cm with bricks in cement mortar 1:4 (1 cement : 4 coarse sand) including 500x450 mm pre-cast R.C.C. horizontal grating with frame and vertical grating complete as per standard design:

19.29.1 With common burnt clay F.P.S.(non modular) bricks of class designation 7.5

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one chamber MATERIAL: Cement concrete 1:5:10 (1 cement: 5 fine sand : 10 graded stone aggregate 40 mm nominal size) 1.71mx1.71mx0.15m = 0.285 cum Say 0.29 cum				
4.1.11	Rate as per Item Number 4.1.11 of SH: Concrete work Brick work in bricks of clas designation 75 in cement mortar 1:4(1 cement: 4 coarse sand) 1.91 m x 0.23m x0.45 m = 0.199 cum 2.20mx0.23mx0.70 m = 0.354 cum Total= 0.553 cum Deduct lintel portion 2x0.23x0.20x0.20 m = (-) 0.018 cum Net qty= 0.0535 cum Say 0.54 cum	cum	0.29	3,087.45	895.36 (A)
6.1.1	Rate as per Item Number 6.1.1 of SH: Brick work 12 mm cement plaster 1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement	cum	0.54	3,508.25	1,894.46 (A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Wall: 1.80x0.70 m = 1.26 sqm Wall: 1.40x0.45 m = 0.63 sqm Bed: 1.10x0.50 m = 0.55 sqm Total= 2.44 sqm Deduct 2x0.20x0.20 m = (-) 0.08 sqm Net qty= 2.36 sqm				
13.9.1	Rate as per Item Number 13.9.1 of SH: Finishing Cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20mm nominal size) Block = 1.92x0.23x0.15 = 0.07 cum	sqm	2.36	173.10	408.52 (A)
4.2.3	Rate as per Item Number 4.2.3 of SH: Concrete work R.C.C. 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) 0.88x0.96x0.075 m = 0.063 cum Say 0.06 cum	cum	0.07	5,272.40	369.07 (A)
5.3	Rate as per Item Number 5.3 of SH: Reinforced cement concrete work Less labour for not lifting the materilas upto floor five level	cum	0.06	5,494.55	329.67 (A)
0115	Coolie R.C.C. 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) in lintels 1x0.96x0.20x0.20 m = 0.04 cum	day	-0.113	247.00	-27.91
5.13	Rate as per Item Number 5.13 of SH: Reinforced cement concrete work Form work Slab bottom 0.50x0.65 m = 0.325 sqm Outer periphery 3.50x0.075 m = 0.263 sqm 2.20x0.15 m = 0.330 sqm Total= 0.918 sqm Say 0.91 sqm	cum	0.04	7,245.55	289.82 (A)
5.9.2	Rate as per Item Number 5.9.2 of SH: Reinforced cement concrete work Mild steel reinforcement for R.C.C work (0.06+0.04) = 0.10 cum @ 80 kg/cum = 8.00kg	sqm	0.91	285.15	259.49 (A)
5.22.1	Rate as per Item Number 5.22.1 of SH: Reinforced cement concrete work	kilogram	8.00	56.75	454.00 (A)
7380	Precast R.C.C. grating with frame 500x450 mm horizontal grating	each	1.00	650.00	650.00
9999	Carriage of R.C.C. grating	L.S.	7.15	1.49	10.65
7381	Precast R.C.C. grating with frame 450x100 mm vertical grating	each	1.00	305.00	305.00
9999	Labour for fixing pre cast R.C.C. grating and frame	L.S.	34.06	1.49	50.75
	TOTAL				5,888.88
	Add Water Charges @ 1% except on A i.e on (5,888.88 - 4,900.39 =) 988.49				9.88
	TOTAL				5,898.76
	Add CPOH @ 15% except on A i.e on (5,898.76 - 4,900.39 =) 998.37				149.76
	Cost of each				6,048.52
	Say				6,048.50

19.30 Constructing brick masonry chamber for underground C.I. inspection chamber and bends with 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:

19.30.1 Inside dimensions 455x610 mm and 45 cm deep for single pipe line:

19.30.1.1 With common burnt clay F.P.S.(non modular) bricks of class designation 7.5

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one chamber MATERIAL: Cement concrete 1:5:10 (1 cement: 5 fine sand : 10 graded stone aggregate 40 mm nominal size) 1.22mx1.065mx0.15m=0.195 cum Say 0.20 cum				
4.1.11	Rate as per Item Number 4.1.11 of SH: Concrete work Brick work in bricks of clas designation 75 in cement mortar 1:4(1 cement: 4 coarse sand) 3.05 m x 0.23m x0.30 m = 0.210 cum Less pipe $2x3.14/4x(0.10)^2x0.23$ m = (-) 0.004 cum Net qty= 0.206 cum Say 0.21 cum	cum	0.20	3,087.45	617.49 (A)
6.1.1	Rate as per Item Number 6.1.1 of SH: Brick work 12 mm cement plaster 1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement Wall: 2.13x0.30 m = 0.639 sqm Bed : 0.61x0.455 m = 0.278 sqm Total= 0.917 sqm Less pipe $2x3.14/4x(0.10)^2$= (-) 0.016 sqm Net qty = 0.901 sqm Say 0.90 sqm	cum	0.21	3,508.25	736.73 (A)
13.9.1	Rate as per Item Number 13.9.1 of SH: Finishing Cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) 3.05x0.23x0.15 = 0.105 cum say 0.11 cum	sqm	0.90	173.10	155.79 (A)
4.2.3	Rate as per Item Number 4.2.3 of SH: Concrete work Form work Outer periphery 3.73x0.15 m = 0.56 sqm	cum	0.11	5,272.40	579.96 (A)
5.9.2	Rate as per Item Number 5.9.2 of SH: Reinforced cement concrete work	sqm	0.56	285.15	159.68 (A)
1354	Rectangular cover 455x610 mm with frame (low duty)	each	1.00	1,415.00	1,415.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Carriage of C.I. cover and frame	L.S.	7.15	1.49	10.65
9999	Painting of C.I.cover and frame with coal tar	L.S.	7.15	1.49	10.65
9999	Sundries	L.S.	13.52	1.49	20.14
	TOTAL				3,706.09
	Add Water Charges @ 1% except on A i.e on (3,706.09 - 2,249.65 =) 1,456.44				14.56
	TOTAL				3,720.65
	Add CPOH @ 15% except on A i.e on (3,720.65 - 2,249.65 =) 1,471.00				220.65
	Cost of each				3,941.30
	Say				3,941.30

19.30.2 Inside dimensions 500x700 mm and 45 cm deep for pipe line with one or two inlets:

19.30.2.1 With common burnt clay F.P.S.(non modular) bricks of class designation 7.5

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no. Cement concrete 1:5:10 (1 cement: 5 fine sand : 10 graded stone aggregate 40 mm nominal size) 1.31mx1.11mx0.15 m= 0.22 cum				
4.1.11	Rate as per Item Number 4.1.11 of SH: Concrete work	cum	0.22	3,087.45	679.24 (A)
	Brick work in bricks of class designation 75 in cement mortar 1:4(1 cement: 4 coarse sand) 3.32 m x 0.23m x0.30 m = 0.229 cum Less pipe 3x3.14x$(0.10)^2$x0.23 m = (-) 0.005 cum Net qty= 0.224 cum Say 0.22 cum				
6.1.1	Rate as per Item Number 6.1.1 of SH: Brick work	cum	0.22	3,508.25	771.82 (A)
	12 mm cement plaster 1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement Wall: 2.40x0.30 m = 0.72 sqm Bed : 0.70x0.50 m = 0.35 sqm = 1.07 sqm Less pipe 3x3.14/4x$(0.10)^2$= (-) 0.02 sqm Net qty= 1.05 sqm				
13.9.1	Rate as per Item Number 13.9.1 of SH: Finishing	sqm	1.05	173.10	181.76 (A)
	R.C.C 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) 1.16x0.96x0.15 = 0.167 cum Deduct cover 0.61x0.45x0.15 m = (-) 0.042 cum Net qty= 0.125 cum Say 0.13 cum				
5.3	Rate as per Item Number 5.3 of SH: Reinforced cement concrete work	cum	0.13	5,494.55	714.29 (A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Less labour for not lifting the materilas upto floor five level				
0115	Coolie	day	-0.24	247.00	-59.28
	Form work Inside area of chamber : 0.70x0.50 m = 0.35 sqm Outer periphery 4.00x0.15 m = 0.60 sqm = 0.95 sqm Deduct cover : 0.61x0.455 m = (-) 0.278 sqm = 0.672 sqm Say 0.67 sqm				
5.9.2	Rate as per Item Number 5.9.2 of SH: Reinforced cement concrete work	sqm	0.67	285.15	191.05 (A)
	M.S.reinforcement for slab 0.13 cum @ 48.06 kg/cum = 6.25 kg				
5.22.1	Rate as per Item Number 5.22.1 of SH: Reinforced cement concrete work	kilogram	6.25	56.75	354.69 (A)
1354	Rectangular cover 455x610 mm with frame (low duty)	each	1.00	1,415.00	1,415.00
9999	C.I. cover and frame	L.S.	7.15	1.49	10.65
9999	Painting of C.I.cover and frame with coal tar	L.S.	7.15	1.49	10.65
9999	Sundries	L.S.	13.52	1.49	20.14
	TOTAL				4,290.01
	Add Water Charges @ 1% except on A i.e on (4,290.01 - 2,892.85 =) 1,397.16				13.97
	TOTAL				4,303.98
	Add CPOH @ 15% except on A i.e on (4,303.98 - 2,892.85 =) 1,411.13				211.67
	Cost of each				4,515.65
	Say				4,515.65

19.30.3 Inside dimensions 600x 850 mm and 45 cm deep for pipe line with three or more inlets:

19.30.3.1 With common burnt clay F.P.S.(non modular) bricks of class designation 7.5

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one chamber Cement concrete 1:5:10 (1 cement: 5 fine sand : 10 graded stone aggregate 40 mm nominal size) 1.46rnxl.21mx0.15 m= 0.26 cum				
4.1.11	Rate as per Item Number 4.1.11 of SH: Concrete work	cum	0.26	3,087.45	802.74 (A)
	Brick work in bricks of class designation 75 in cement mortar 1:4(1 cement: 4 coarse sand) 3.82 m x 0.23m x0.30 m = 0.26 cum Less pipe 5x3.14/4x(0.10)²x0.23 m = (-) 0.009 cum Net qty= 0.251 cum Say 0.26 cum				
6.1.1	Rate as per Item Number 6.1.1 of SH: Brick work	cum	0.26	3,508.25	912.14 (A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	12 mm cement plaster 1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement Wall: 2.90x0.30 m = 0.87 sqm Bed : 0.85x0.60 m = 0.51 sqm Total = 1.38 sqm Less pipe 5x3.14/4x(0.10)²= (-) 0.04 sqm Net qty = 1.34 sqm				
13.9.1	Rate as per Item Number 13.9.1 of SH: Finishing	sqm	1.34	173.10	231.95 (A)
	R.C.C 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) 1.31x1.06x0.15 = 0.208 cum Deduct cover 0.61x0.455x0.15 m = (-) 0.042 cum Net qty= 0.166 cum Say 0.17 cum				
5.3	Rate as per Item Number 5.3 of SH: Reinforced cement concrete work	cum	0.17	5,494.55	934.07 (A)
	Less labour for not lifting the materilas upto floor five level				
0115	Coolie	day	-0.32	247.00	-79.04
	Form work Inside area of chamber : 0.85x0.60 m = 0.511 sqm Outer periphery 4.50x0.15 m = 0.675 sqm Total = 1.186 sqm Deduct cover : 0.61x0.455 m = (-) 0.278 sqm Net qty= 0.908 sqm Say 0.91 sqm				
5.9.2	Rate as per Item Number 5.9.2 of SH: Reinforced cement concrete work	sqm	0.91	285.15	259.49 (A)
	M.S.reinforcement for slab for 0.17 cum @ 48.06 kg/cum = 48.06x0.17cum = 8.17kg				
5.22.1	Rate as per Item Number 5.22.1 of SH: Reinforced cement concrete work	kilogram	8.17	56.75	463.65 (A)
1354	Rectangular cover 455x610 mm with frame (low duty)	each	1.00	1,415.00	1,415.00
9999	Carriage of C.I. cover and frame	L.S.	7.15	1.49	10.65
9999	Painting of C.I.cover and frame with coal tar	L.S.	7.15	1.49	10.65
9999	Sundries	L.S.	13.52	1.49	20.14
	TOTAL				4,981.44
	Add Water Charges @ 1% except on A i.e on (4,981.44 - 3,604.04 =) 1,377.40				13.77
	TOTAL				4,995.21
	Add CPOH @ 15% except on A i.e on (4,995.21 - 3,604.04 =) 1,391.17				208.68
	Cost of each				5,203.89
	Say				5,203.90

19.31 Extra for depth beyond 45 cm of brick masonry chamber:

19.31.1 For 455x610 mm size

19.31.1.1 With common burnt clay F.P.S.(non modular) bricks of class designation 7.5

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one metre Brick work in bricks of clas designation 75 in cement mortar 1:4(1 cement: 4 coarse sand) 3.05 x 0.23m x 1.00m = 0.70 cum				
6.1.1	Rate as per Item Number 6.1.1 of SH: Brick work	cum	0.70	3,508.25	2,455.77 (A)
	12mm cement plaster1:3 (1 cement: 3 coarse sand finished with floating coat of neat cement Wall: 2.13x1.00 m = 2.13 sqm				
13.9.1	Rate as per Item Number 13.9.1 of SH: Finishing	sqm	2.13	173.10	368.70 (A)
	TOTAL				2,824.47
	Cost of 1 metre				2,824.47
	Say				2,824.45

19.31.2 For 500x700 mm size

19.31.2.1 With common burnt clay F.P.S.(non modular) bricks of class designation 7.5

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one metre Brick work in bricks of clas designation 75 in cement mortar 1:4(1 cement: 4 coarse sand) 3.32 x 0.23m x 1.00m = 0.76 cum				
6.1.1	Rate as per Item Number 6.1.1 of SH: Brick work	cum	0.76	3,508.25	2,666.27 (A)
	12mm cernem plaster1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement Wall: 2.40x1.00 m = 2.40 sqm				
13.9.1	Rate as per Item Number 13.9.1 of SH: Finishing	sqm	2.40	173.10	415.44 (A)
	TOTAL				3,081.71
	Cost of 1 metre				3,081.71
	Say				3,081.70

19.31.3 For 600x850 mm size

19.31.3.1 With common burnt clay F.P.S.(non modular) bricks of class designation 7.5

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one metre Brick work in bricks of clas designation 75 in cement mortar 1:4 (1 cement: 4 coarse sand) 3.82 m x 0.23m xl.00 m = 0.88 cum				
6.1.1	Rate as per Item Number 6.1.1 of SH: Brick work	cum	0.88	3,508.25	3,087.26 (A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	12 mm cement plaster 1:3(1 cement: 3 coarse sand finished with floating coat of neat cement Wall : 2.90x1.00 m = 2.90 sqm				
13.9.1	Rate as per Item Number 13.9.1 of SH: Finishing	sqm	2.90	173.10	501.99 (A)
	TOTAL				3,589.25
	Cost of 1 metre				3,589.25
	Say				3,589.25

19.32 Making soak pit 2.5 m diameter 3.0 metre deep with 45 x 45 cm dry brick honey comb shaft with bricks and S.W. drain pipe 100 mm diameter, 1.8 m long complete as per standard design.

19.32.1 With common burnt clay F.P.S.(non modular) bricks of class designation 7.5

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one soak pit Earth work in excavation including disposal of surplus earth 3.14/4x(2.5)²x3m = 14.73 cum				
2.8.1	Rate as per Item Number 2.8.1 of SH: Earth work	cum	14.73	130.80	1,926.68 (A)
2.26.1	Rate as per Item Number 2.26.1 of SH: Earth work = 3.14/4x(2.5)2 x 1.5 m = 7.37 cum	cum	7.37	34.60	255.00 (A)
	2nd class bricks perimetre = 4x0.35 =1.40 m Area = 1.40x2.925 m = 4.1 sqm Number of brick = 4.1 x487x0.066 =131.78 Wastage 10%= 13.718 Total= 144.96 Say 145 numbers				
2602	Common burnt clay F.P.S. (non modular) bricks class designation 7.5 Brickbats = 3.14/4x(1.2)²x2.925m =3.33 cum Deduct = 0.45x0.45x2.925 m = 0.59 cum Net qty= 2.74 cum	1000 Nos	145.00	2,900.00	420.50
0362	Brick bats Brick aggregate 50 to 80 mm nominal size = 3.14x1.50x0.03x2.925 m = 4.13 cum	cum	2.74	325.00	890.50
0285	Brick Aggregate (Single size) : 63 mm nominal size Brick aggregate 40 mm nominal size = 3.14x2.15x0.35x2.925 m =6.91 cum	cum	4.13	475.00	1,961.75
0287	Brick Aggregate (Single size) : 40 mm nominal size	cum	6.91	500.00	3,455.00
1854	Stoneware pipes grade A (60 cm long) mm dia	100 each	3.00	36.00	108.00
2260	Carriage of brick aggregate (2.74+4.13+6.91) = 13.78 cum	cum	13.78	95.22	1,312.13
2201	Carriage of bricks	1000 Nos	145.00	233.60	33.87
9999	Single matting 2.5x2.5m = 6.25sqm Precast R.C.C.slabs 7.5 cm thick in cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) 0.45x0.45x0.075 m = 0.02 cum	L.S.	112.14	1.49	167.09

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
5.12	Rate as per Item Number 5.12 of SH: Reinforced cement concrete work Reinforcement @ 80 kg/cum = 0.02x80 =1.6 kg	cum	0.02	5,262.15	105.24 (A)
5.22.1	Rate as per Item Number 5.22.1 of SH: Reinforced cement concrete work 2nd class brick edging laid length wise with half brick depth. 3.14x2.6 m =8.17 m	kilogram	1.60	56.75	90.80 (A)
16.8.1	Rate as per Item Number 16.8.1 of SH: Road work	metre	8.17	23.80	194.45 (A)
	LABOUR:				
0123	Mason (brick layer) 1 st class	day	0.50	301.00	150.50
0124	Mason (brick layer) 2nd class	day	0.50	273.00	136.50
0114	Beldar	day	3.00	247.00	741.00
0115	Coolie	day	3.00	247.00	741.00
	TOTAL				12,690.01
	Add Water Charges @ 1% except on A i.e on (12,690.01 - 2,572.17 =) 10,117.84				101.18
	TOTAL				12,791.19
	Add CPOH @ 15% except on A i.e on (12,791.19 - 2,572.17 =) 10,219.02				1,532.85
	Cost of each				14,324.04
	Say				14,324.05

19.33 Constructing soak pit 1.20x1.20x1.20 m filled with brickbats including S.W. drain pipe 100 mm diameter and 1.20 m long complete as per standard design.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one soak pit Earth work in excavation including disposal of surplus earth 1.2x1.2x1.2m = 1.73 cum				
2.8.1	Rate as per Item Number 2.8.1 of SH: Earth work	cum	1.73	130.80	226.28 (A)
0362	Brick bats 1.2x1.2x1.2 = 1.73 cum	cum	1.73	325.00	562.25
2260	Carriage of brick aggregate	cum	1.73	95.22	164.73
16.8.1	Rate as per Item Number 16.8.1 of SH: Road work Second class brick edging laid length wise with half brick depth	metre	5.20	23.80	123.76 (A)
1854	Stoneware pipes grade A (60 cm long) mm dia	100 each	2.00	36.00	72.00
9999	Sundries	L.S.	25.84	1.49	38.50
	LABOUR: For filling brick bats				
0114	Beldar	day	0.50	247.00	123.50
9999	Sundries	L.S.	13.52	1.49	20.14
	TOTAL				1,331.16
	Add Water Charges @ 1% except on A i.e on (1,331.16 - 350.04 =) 981.12				9.81
	TOTAL				1,340.97
	Add CPOH @ 15% except on A i.e on (1,340.97 - 350.04 =) 990.93				148.64
	Cost of each				1,489.61
	Say				1,489.60

19.34 Providing and fixing S.W. intercepting trap in manholes with stiff mixture of cement mortar 1:1 (1 cement : 1 fine sand) including testing of joints etc. complete:

19.34.1 100 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7128	S.W. intercepting trap 100 mm dia	each	1.00	170.00	170.00
9999	Carriage of trap	L.S.	1.04	1.49	1.55
0367	Portland Cement for one joint	tonne	0.0013	5,000.00	6.50
2209	Carriage of cement	tonne	0.0013	77.87	0.10
0983	Fine sand (zone IV)	cum	0.001	640.00	0.64
2261	Carriage of fine sand (1 part badarpur sand: 2 parts jamuna sand)	cum	0.001	87.60	0.09
1881	Spun yarn or plain gaskin	kilogram	0.09	40.00	3.60
	LABOUR:				
0123	Mason (brick layer) 1 st class	day	0.02	301.00	6.02
0124	Mason (brick layer) 2nd class	day	0.02	273.00	5.46
0114	Beldar	day	0.06	247.00	14.82
0101	Bhisti	day	0.02	260.00	5.20
	TOTAL				213.98
	Add Water Charges @ 1%				2.14
	TOTAL				216.12
	Add CPOH @ 15%				32.42
	Cost of each				248.54
	Say				248.55

19.34.2 150 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL:				
7129	S.W. intercepting trap 150 mm dia	each	1.00	225.00	225.00
9999	Carriage of trap	L.S.	2.08	1.49	3.10
0367	Portland Cement for one joint	tonne	0.0019	5,000.00	9.50
2209	Carriage of cement	tonne	0.0019	77.87	0.15
0983	Fine sand (zone IV)	cum	0.0014	640.00	0.90
2261	Carriage of fine sand (1 part badarpur sand: 2 parts jamuna sand)	cum	0.0014	87.60	0.12
1881	Spun yarn or plain gaskin	kilogram	0.18	40.00	7.20
	LABOUR:				
0123	Mason (brick layer) 1 st class	day	0.03	301.00	9.03
0124	Mason (brick layer) 2nd class	day	0.03	273.00	8.19
0114	Beldar	day	0.08	247.00	19.76
0101	Bhisti	day	0.03	260.00	7.80
	TOTAL				290.75
	Add Water Charges @ 1%				2.91
	TOTAL				293.66
	Add CPOH @ 15%				44.05
	Cost of each				337.71
	Say				337.70

SUB HEAD : 20

PILE WORK

20.1 Providing, driving and installing driven cast-in-situ reinforced cement concrete piles of grade M-25 of specified diameter and length below the pile cap, to carry safe working load not less than specified, excluding the cost of steel reinforcement but including the cost of shoe and the length of pile to be embedded in the pile cap etc. all complete. (Length of pile for payment shall be measured from top of shoe to the bottom of pile cap) :

20.1.1 400 mm dia piles

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 20 metre length of pile				
	MATERIAL:				
	Concrete -3.14/4x0.40²x20 = 2.51 cum				
5.33.1	Rate as per Item Number 5.33.1 of SH: Reinforced cement concrete work	cum	2.51	5,242.15	13,157.80(A)
9999	Sundries	L.S.	521.08	1.49	776.41
7181	C.I. pile shoe @ 80 kg per pile	kilogram	80.00	46.00	3,680.00
7182	M.S. clamps for pile shoe @ 35 kg per pile	kilogram	35.00	42.00	1,470.00
	MACHINERY:				
0024	Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site	day	0.36	34,000.00	12,240.00
0025	Hire and running charges of light crane	day	0.06	2,200.00	132.00
	LABOUR:				
	Work supervisor				
0130	Mistry	day	0.08	301.00	24.08
0114	Beldar	day	2.00	247.00	494.00
	TOTAL				31,974.29
	Add Water Charges @ 1% except on A i.e on (31,974.29 - 13,157.80 =) 18,816.49				188.16
	TOTAL				32,162.45
	Add CPOH @ 15% except on A i.e on (32,162.45 - 13,157.80 =) 19,004.65				2,850.70
	Cost of 20 metre				35,013.15
	Cost of 1 metre				1,750.66
	Say				1,750.65

20.1.2 450 mm dia piles

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 20 m length of pile				
	MATERIAL:				
	Concrete -3.14/4x0.45²x20 = 3.18 cum				
5.33.1	Rate as per Item Number 5.33.1 of SH: Reinforced cement concrete work	cum	3.18	5,242.15	16,670.04(A)
9999	Sundries	L.S.	392.70	1.49	585.12
7181	C.I. pile shoe @ 80 kg per pile	kilogram	80.00	46.00	3,680.00
7182	M.S. clamps for pile shoe @ 35 kg per pile	kilogram	35.00	42.00	1,470.00
	MACHINERY:				
0024	Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site	day	0.48	34,000.00	16,320.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0025	Hire and running charges of light crane	day	0.06	2,200.00	132.00
	LABOUR:				
	Work supervisor				
0130	Mistry	day	0.08	301.00	24.08
0114	Beldar	day	2.00	247.00	494.00
	TOTAL				39,375.24
	Add Water Charges @ 1% except on A i.e on (39,375.24 - 16,670.04 =) 22,705.20				227.05
	TOTAL				39,602.29
	Add CPOH @ 15% except on A i.e on (39,602.29 - 16,670.04 =) 22,932.25				3,439.84
	Cost of 20 metre				43,042.13
	Cost of 1 metre				2,152.11
	Say				2,152.10

20.1.3 500 mm dia piles

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 20 m length of pile				
	MATERIAL:				
	Concrete 3.14/4x0.50²x20 = 3.925 cum				
5.33.1	Rate as per Item Number 5.33.1 of SH: Reinforced cement concrete work	cum	3.92	55,242.15	20,575.44(A)
9999	Sundries	L.S.	530.00	1.49	789.70
7181	C.I. pile shoe @ 80 kg per pile	kilogram	80.00	46.00	3,680.00
7182	M.S. clamps for pile shoe @ 35 kg per pile	kilogram	35.00	42.00	1,470.00
	MACHINERY:				
0024	Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site	day	0.60	34,000.00	20,400.00
0025	Hire and running charges of light crane	day	0.06	2,200.00	132.00
	LABOUR:				
	Work supervisor				
0130	Mistry	day	0.08	301.00	24.08
0114	Beldar	day	2.00	247.00	494.00
	TOTAL				47,565.22
	Add Water Charges @ 1% except on A i.e on (47,565.22 - 20,575.44 =) 26,989.78				269.90
	TOTAL				47,835.12
	Add CPOH @ 15% except on A i.e on (47,835.12 - 20,575.44 =) 27,259.68				4,088.95
	Cost of 20 metre				51,924.07
	Cost of 1 metre				2,596.20
	Say				2,596.20

20.1.4 550 mm dia piles

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 20 m length of pile				
	MATERIAL:				
	Concrete 3.14/4x0.55²x20 = 4.75 cum				
5.33.1	Rate as per Item Number 5.33.1 of SH: Reinforced cement concrete work	cum	4.75	5,242.15	24,900.21(A)
9999	Sundries @ 80 kg per pile	L.S.	371.88	1.49	554.10
7181	C.I. pile shoe	kilogram	80.00	46.00	3,680.00
7182	M.S. clamps for pile shoe @ 35 kg per pile	kilogram	35.00	42.00	1,470.00
	MACHINERY:				
0024	Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site	day	0.60	34,000.00	20,400.00
0025	Hire and running charges of light crane	day	0.06	2,200.00	132.00
	LABOUR:				
	Work supervisor				
0130	Mistry	day	0.08	301.00	24.08
0114	Beldar	day	2.00	247.00	494.00
	TOTAL				51,654.39
	Add Water Charges @ 1% except on A i.e on (51,654.39 - 24,900.21 =) 26,754.18				267.54
	TOTAL				51,921.93
	Add CPOH @ 15% except on A i.e on (51,921.93 - 24,900.21 =) 27,021.72				4,053.26
	Cost of 20 metre				55,975.19
	Cost of 1 metre				2,798.76
	Say				2,798.75

20.1.5 750 mm dia piles

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 15m length of pile				
	MATERIAL:				
	Concrete 3.14/4x0.75²x20 = 6.62 cum				
5.33.1	Rate as per Item Number 5.33.1 of SH: Reinforced cement concrete work	cum	6.62	5,242.15	34,703.03(A)
9999	Sundries	L.S.	573.57	1.49	854.62
7181	C.I. pile shoe @ 80 kg per pile	kilogram	80.00	46.00	3,680.00
7182	M.S. clamps for pile shoe @ 35 kg per pile	kilogram	35.00	42.00	1,470.00
	MACHINERY:				
0024	Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site	day	0.70	34,000.00	23,800.00
0025	Hire and running charges of light crane	day	0.06	2,200.00	132.00
	LABOUR:				
	Work supervisor				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0130	Mistry	day	0.14	301.00	42.14
0114	Beldar	day	3.50	247.00	864.50
	TOTAL				65,546.29
	Add Water Charges @ 1% except on A i.e on (65,546.29 - 34,703.03 =) 30,843.26				308.43
	TOTAL				65,854.72
	Add CPOH @ 15% except on A i.e on (65,854.72 - 34,703.03 =) 31,151.69				4,672.75
	Cost of 15 metre				70,527.47
	Cost of 1 metre				4,701.83
	Say				4,701.85

20.1.6 1000 mm dia piles

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10m length of pile				
	MATERIAL:				
	Concrete 3.14/4x1.00²x10 = 7.85 cum				
5.33.1	Rate as per Item Number 5.33.1 of SH: Reinforced cement concrete work	cum	7.85	5,242.15	41,150.88(A)
9999	Sundries	L.S.	897.89	1.49	1,337.86
7181	C.I. pile shoe @ 80 kg per pile	kilogram	80.00	46.00	3,680.00
7182	M.S. clamps for pile shoe @ 35 kg per pile	kilogram	35.00	42.00	1,470.00
	MACHINERY:				
0024	Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site	day	0.68	34,000.00	23,120.00
0025	Hire and running charges of light crane	day	0.06	2,200.00	132.00
	LABOUR:				
	Work supervisor				
0130	Mistry	day	0.16	301.00	48.16
0114	Beldar	day	4.00	247.00	988.00
	TOTAL				71,926.90
	Add Water Charges @ 1% except on A i.e on (71,926.90 - 41,150.88 =) 30,776.02				307.76
	TOTAL				72,234.66
	Add CPOH @ 15% except on A i.e on (72,234.66 - 41,150.88 =) 31,083.78				4,662.57
	Cost of 10 metre				76,897.23
	Cost of 1 metre				7,689.72
	Say				7,689.70

20.1.7 1200 mm dia piles

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 9 m length of pile				
	MATERIAL:				
	Concrete 3.14/4x1.2²x9 =10.17cum				
5.33.1	Rate as per Item Number 5.33.1 of SH: Reinforced cement concrete work	cum	10.17	5,24215	53,312.67(A)
9999	Sundries	L.S.	733.37	1.49	1,092.72

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7181	C.I. pile shoe @ 80 kg per pile	kilogram	80.00	46.00	3,680.00
7182	M.S. clamps for pile shoe @ 35 kg per pile	kilogram	35.00	42.00	1,470.00
	MACHINERY:				
0024	Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site	day	0.67	34,000.00	22,780.00
0025	Hire and running charges of light crane	day	0.06	2,200.00	132.00
	LABOUR:				
	Work supervisor				
0130	Mistry	day	0.18	301.00	54.18
0114	Beldar	day	4.50	247.00	1,111.50
	TOTAL				83,633.07
	Add Water Charges @ 1% except on A i.e on (83,633.07 - 53,312.67 =) 30,320.40				303.20
	TOTAL				83,936.27
	Add CPOH @ 15% except on A i.e on (83,936.27 - 53,312.67 =) 30,623.60				4,593.54
	Cost of 9 metre				88,529.81
	Cost of 1 metre				9,836.65
	Say				9,836.65

20.1.8 1500 mm dia piles

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 9 m length of pile				
	MATERIAL:				
	Concrete $3.14/4x1.5^2$ x9 =15.90 cum				
5.33.1	Rate as per Item Number 5.33.1 of SH: Reinforced cement concrete work	cum	15.90	5,242.15	83,350.18(A)
9999	Sundries	L.S.	1,113.48	1.49	1,659.09
7181	C.I. pile shoe @ 80 kg per pile	kilogram	80.00	46.00	3,680.00
7182	M.S. clamps for pile shoe @ 35 kg per pile	kilogram	35.00	42.00	1,470.00
	MACHINERY:				
0024	Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site	day	0.77	34,000.00	26,180.00
0025	Hire and running charges of light crane	day	0.10	2,200.00	220.00
	LABOUR:				
	Work supervisor				
0130	Mistry	day	0.20	301.00	60.20
0114	Beldar	day	5.00	247.00	1,235.00
	TOTAL				1,17,854.47
	Add Water Charges @ 1% except on A i.e on (1,17,854.47 - 83,350.18 =) 34,504.29				345.04
	TOTAL				1,18,199.51
	Add CPOH @ 15% except on A i.e on (1,18,199.51 - 83,350.18 =) 34,849.33				5,227.40
	Cost of 9 metre				1,23,426.91
	Cost of 1 metre				13,714.10
	Say				13,714.10

220.2 Boring, providing and installing bored cast-in-situ reinforced cement concrete piles of grade M-25 of specified diameter and length below the pile cap, to carry a safe working load not less than specified, excluding the cost of steel reinforcement but including the cost of boring, with bentonite solution and temporary casing of appropriate length for setting out and removal of same and the length of the pile to be embedded in the pile cap etc. all complete, including removal of excavated earth with all lifts and leads (Length of pile for payment shall be measured upto bottom of pile cap).

20.2.1 300 mm dia piles

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 20 m length of pile				
	MATERIAL:				
	Concrete $3.14/4 \times 0.30^2 \times 20$ = 1.41 cum				
5.33.1	Rate as per Item Number 5.33.1 of SH: Reinforced cement concrete work	cum	1.41	5,242.15	7,391.43(A)
7183	Bentonite	tonne	0.16	3,100.00	496.00
9999	Sundries	L.S.	289.85	1.49	431.88
	MACHINERY:				
0024	Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site	day	0.36	34,000.00	12,240.00
0025	Hire and running charges of light crane	day	0.06	2,200.00	132.00
0026	Hire and running charges of bentonite pump	day	0.38	4,200.00	1,596.00
0018	Hire and running charges of loader	day	0.30	5,000.00	1,500.00
0017	Hire and running charges of tipper	day	0.30	1,700.00	510.00
	LABOUR:				
	Work supervisor				
0130	Mistry	day	0.12	301.00	36.12
0114	Beldar	day	2.00	247.00	494.00
	TOTAL				24,827.43
	Add Water Charges @ 1% except on A i.e on (24,827.43 - 7,391.43 =) 17,436.00				174.36
	TOTAL				25,001.79
	Add CPOH @ 15% except on A i.e on (25,001.79 - 7,391.43 =) 17,610.36				2,641.55
	Cost of 20 metre				27,643.34
	Cost of 1 metre				1,382.17
	Say				1,382.15

20.2.2 400 mm dia piles

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 20 m length of pile				
	MATERIAL:				
	Concrete $3.14/4 \times 0.40^2 \times 20$ = 2.51 cum				
5.33.1	Rate as per Item Number 5.33.1 of SH: Reinforced cement concrete work	cum	2.51	5,242.15	13,157.80(A)
7183	Bentonite	tonne	0.225	3,100.00	697.50
9999	Sundries	L.S.	79.06	1.49	117.80
	MACHINERY:				
0024	Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site	day	0.36	34,000.00	12,240.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0025	Hire and running charges of light crane	day	0.06	2,200.00	132.00
0026	Hire and running charges of bentonite pump	day	0.38	4,200.00	1,596.00
0018	Hire and running charges of loader	day	0.30	5,000.00	1,500.00
0017	Hire and running charges of tipper	day	0.30	1,700.00	510.00
	LABOUR:				
	Work supervisor				
0130	Mistry	day	0.12	301.00	36.12
0114	Beldar	day	2.00	247.00	494.00
	TOTAL				30,481.22
	Add Water Charges @ 1% except on A i.e on (30,481.22 - 13,157.80 =) 17,323.42				173.23
	TOTAL				30,654.45
	Add CPOH @ 15% except on A i.e on (30,654.45 - 13,157.80 =) 17,496.65				2,624.50
	Cost of 20 metre				33,278.95
	Cost of 1 metre				1,663.95
	Say				1,663.95

20.2.3 450 mm dia piles

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 20 m length of pile				
	MATERIAL:				
	Concrete $3.14/4 \times 0.45^2 \times 20 = 3.18$ cum				
5.33.1	Rate as per Item Number 5.33.1 of SH: Reinforced cement concrete work	cum	3.18	5,242.15	16,670.04(A)
7183	Bentonite	tonne	0.25	3,100.00	775.00
9999	Sundries	L.S.	230.69	1.49	343.73
	MACHINERY:				
0024	Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site	day	0.47	34,000.00	15,980.00
0025	Hire and running charges of light crane	day	0.63	2,200.00	1,386.00
0026	Hire and running charges of bentonite pump	day	0.38	4,200.00	1,596.00
0018	Hire and running charges of loader	day	0.30	5,000.00	1,500.00
0017	Hire and running charges of tipper	day	0.30	1,700.00	510.00
	LABOUR:				
	Work supervisor				
0130	Mistry	day	0.12	301.00	36.12
0114	Beldar	day	2.50	247.00	617.50
	TOTAL				39,414.39
	Add Water Charges @ 1% except on A i.e on (39,414.39 - 16,670.04 =) 22,744.35				227.44
	TOTAL 39,641.83				
	Add CPOH @ 15% except on A i.e on (39,641.83 - 16,670.04 =) 22,971.79				3,445.77
	Cost of 20 metre				43,087.60
	Cost of 1 metre				2,154.38
	Say				2,154.40

20.2.4 500 mm dia piles

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 20 m length of pile				
	MATERIAL:				
	Concrete 3.14/4x0.50² = 3.925 cum				
5.33.1	Rate as per Item Number 5.33.1 of SH: Reinforced cement concrete work	cum	3.925	5,242.15	20,575.44(A)
7183	Bentonite	tonne	0.28	3,100.00	868.00
9999	Sundries	L.S.	87.95	1.49	131.05
	MACHINERY:				
0024	Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site	day	0.60	34,000.00	20,400.00
0025	Hire and running charges of light crane	day	0.06	2,200.00	132.00
0026	Hire and running charges of bentonite pump	day	0.38	4,200.00	1,596.00
0017	Hire and running charges of tipper	day	0.30	1,700.00	510.00
0018	Hire and running charges of loader	day	0.30	5,000.00	1,500.00
	LABOUR:				
	Work supervisor				
0130	Mistry	day	0.12	301.00	36.12
0114	Beldar	day	2.50	247.00	617.50
	TOTAL				46,366.11
	Add Water Charges @ 1% except on A i.e on (46,366.11 - 20,575.44 =) 25,790.67				257.91
	TOTAL				46,624.02
	Add CPOH @ 15% except on A i.e on (46,624.02 - 20,575.44 =) 26,048.58				3,907.29
	Cost of 20 metre				50,531.31
	Cost of 1 metre				2,526.57
	Say				2,526.55

20.2.5 600 mm dia piles

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 20 m length of pile				
	MATERIAL:				
	Concrete 3.14/4x0.60²x20= 5.65 cum				
5.33.1	Rate as per Item Number 5.33.1 of SH: Reinforced cement concrete work	cum	5.65	5,24215.	29,618.15(A)
7183	Bentonite	tonne	0.33	3,100.00	1,023.00
9999	Sundries	L.S.	317.43	1.49	472.97
	MACHINERY:				
0024	Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site	day	0.75	34,000.00	25,500.00
0025	Hire and running charges of light crane	day	0.06	2,200.00	132.00
0026	Hire and running charges of bentonite pump	day	0.38	4,200.00	1,596.00
0017	Hire and running charges of tipper	day	0.30	1,700.00	510.00
0018	Hire and running charges of loader	day	0.30	5,000.00	1,500.00
	LABOUR:				
	Work supervisor				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0130	Mistry	day	0.12	301.00	36.12
0114	Beldar	day	3.00	247.00	741.00
	TOTAL				61,129.24
	Add Water Charges @ 1% except on A i.e on (61,129.24 - 29,618.15 =) 31,511.09				315.11
	TOTAL				61,444.35
	Add CPOH @ 15% except on A i.e on (61,444.35 - 29,618.15 =) 31,826.20				4,773.93
	Cost of 20 metre				66,218.28
	Cost of 1 metre				3,310.91
	Say				3,310.90

20.2.6 750 mm dia piles

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 15 m length of pile				
	MATERIAL:				
	Concrete 3.14/4x0.75²x15 = 6.62 cum				
5.33.1	Rate as per Item Number 5.33.1 of SH: Reinforced cement concrete work	cum	6.62	5,242.15	34,703.03(A)
7183	Bentonite	tonne	0.30	3,100.00	930.00
9999	Sundries	L.S.	131.58	1.49	196.05
	MACHINERY:				
	Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site	day	0.70	34,000.00	23,800.00
0025	Hire and running charges of light crane	day	0.06	2,200.00	132.00
0026	Hire and running charges of bentonite pump	day	0.75	4,200.00	3,150.00
0017	Hire and running charges of tipper	day	0.30	1,700.00	510.00
0018	Hire and running charges of loader	day	0.30	5,000.00	1,500.00
	LABOUR:				
	Work supervisor				
0130	Mistry	day	0.14	301.00	42.14
0114	Beldar	day	3.50	247.00	864.50
	TOTAL				65,827.72
	Add Water Charges @ 1% except on A i.e on (65,827.72 - 34,703.03 =) 31,124.69				311.25
	TOTAL				66,138.97
	Add CPOH @ 15% except on A i.e on (66,138.97 - 34,703.03 =) 31,435.94				4,715.39
	Cost of 15 metre				70,854.36
	Cost of 1 metre				4,723.62
	Say				4,723.60

20.2.7 - 1000 mm dia piles

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 m length of pile				
	MATERIAL:				
	Concrete 3.14/4x1.00²x10 = 7.85 cum				
5.33.1	Rate as per Item Number 5.33.1 of SH: Reinforced cement concrete work	cum	7.85	5,242.15	41,150.88(A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7183	Bentonite	tonne	0.35	3,100.00	1,085.00
9999	Sundries	L.S.	175.89	1.49	262.08
	MACHINERY:				
0024	Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site	day	0.69	34,000.00	23,460.00
0025	Hire and running charges of light crane	day	0.06	2,200.00	132.00
0026	Hire and running charges of bentonite pump	day	0.75	4,200.00	3,150.00
0017	Hire and running charges of tipper	day	0.40	1,700.00	680.00
0018	Hire and running charges of loader	day	0.40	5,000.00	2,000.00
	LABOUR:				
	Work supervisor				
0130	Mistry	day	0.16	301.00	48.16
0114	Beldar	day	4.00	247.00	988.00
	TOTAL				72,956.12
	Add Water Charges @ 1% except on A i.e on (72,956.12 - 41,150.88 =) 31,805.24				318.05
	TOTAL				73,274.17
	Add CPOH @ 15% except on A i.e on (73,274.17 - 41,150.88 =) 32,123.29				4,818.49
	Cost of 10 metre				78,092.66
	Cost of 1 metre				7,809.27
	Say				7,809.25

20.2.8 1200 mm dia piles

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 9 m length of pile				
	MATERIAL:				
	Concrete 3.14/4x1.20²x9 =10.17 cum				
5.33.1	Rate as per Item Number 5.33.1 of SH: Reinforced cement concrete work	cum	10.17	5,242.15	53,312.67(A)
7183	Bentonite	tonne	0.385	3,100.00	1,193.50
9999	Sundries	L.S.	290.79	1.49	433.28
	MACHINERY:				
0024	Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site	day	0.67	34,000.00	22,780.00
0025	Hire and running charges of light crane	day	0.06	2,200.00	132.00
0026	Hire and running charges of bentonite pump	day	0.75	4,200.00	3,150.00
0017	Hire and running charges of tipper	day	0.50	1,700.00	850.00
0018	Hire and running charges of loader	day	0.50	5,000.00	2,500.00
	LABOUR:				
	Work supervisor				
0130	Mistry	day	0.18	301.00	54.18

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Beldar	day	4.50	247.00	1,111.50
	TOTAL				85,517.13
	Add Water Charges @ 1% except on A i.e on (85,517.13 - 53,312.67 =) 32,204.46				322.04
	TOTAL				85,839.17
	Add CPOH @ 15% except on A i.e on (85,839.17 - 53,312.67 =) 32,526.50				4,878.97
	Cost of 9 metre				90,718.14
	Cost of 1 metre				10,079.79
	Say				10,079.80

20.2.9 1500 mm dia piles

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 9 m length of pile				
	MATERIAL:				
	Concrete 3.14/4x1.50²x9 = 15.90 cum				
5.33.1	Rate as per Item Number 5.33.1 of SH: Reinforced cement concrete work	cum	15.90	5,242.15	83,350.18 (A)
7183	Bentonite	tonne	0.45	3,100.00	1,395.00
9999	Sundries	L.S.	593.48	1.49	884.29
	MACHINERY:				
0024	Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site	day	0.77	34,000.00	26,180.00
0025	Hire and running charges of light crane	day	0.10	2,200.00	220.00
0026	Hire and running charges of bentonite pump	day	0.96	4,200.00	4,032.00
0017	Hire and running charges of tipper	day	0.75	1,700.00	1,275.00
0018	Hire and running charges of loader	day	0.75	5,000.00	3,750.00
	LABOUR:				
	Work supervisor				
0130	Mistry	day	0.25	301.00	75.25
0114	Beldar	day	5.00	247.00	1,235.00
	TOTAL				1,22,396.72
	Add Water Charges @ 1% except on A i.e on (1,22,396.72 - 83,350.18 =) 39,046.54				390.47
	TOTAL				1,22,787.19
	Add CPOH @ 15% except on A i.e on (1,22,787.19 - 83,350.18 =) 39,437.01				5,915.55
	Cost of 9 metre				1,28,702.74
	Cost of 1 metre				14,300.30
	Say				14,300.30

20.3 Boring, providing and installing cast in situ single under reamed piles of specified diameter and length below pile cap in M-25 cement concrete, to carry a safe working load not less than specified, excluding the cost of steel reinforcement but including the cost of boring with bentonite solution and the length of the pile to be embedded in pile cap etc. all complete. (Length of pile for payment shall be measured upto to the bottom of pile cap) :

20.3.1 300 mm dia piles

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metres MATERIAL: R.C.C Stem -3.14/4x(0.30)²x9.625 = 0.680 cum Bulb -3.14/4x(0.75)²x0.075 = 0.033 cum 2x 3.14/4x(0.525)²x0.150 = 0.065 cum =0.778 cum				
5.33.1	Rate as per Item Number 5.33.1 of SH: Reinforced cement concrete work	cum	0.778	5,242.15	4,078.39 (A)
7183	Bentonite	tonne	0.08	3,100.00	248.00
9999	Sundries	L.S.	410.92	1.49	612.27
	MACHINERY:				
0024	Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site	day	0.36	34,000.00	12,240.00
0025	Hire and running charges of light crane	day	0.03	2,200.00	66.00
0026	Hire and running charges of bentonite pump	day	0.02	4,200.00	84.00
	LABOUR:				
	Work supervisor				
0130	Mistry	day	0.08	301.00	24.08
0114	Beldar	day	2.00	247.00	494.00
	TOTAL				17,846.74
	Add Water Charges @ 1% except on A i.e on (17,846.74 - 4,078.39 =) 13,768.35				137.68
	TOTAL				17,984.42
	Add CPOH @ 15% except on A i.e on (17,984.42 - 4,078.39 =) 13,906.03				2,085.90
	Cost of 10 metre				20,070.32
	Cost of 1 metre				2,007.03
	Say				2,007.05

20.3.2 400 mm dia piles

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metres MATERIAL: R.C.C Stem -3.14/4x(0.40)²x9.30 = 1.169 cum Bulb -3.14/4x(1.00)²x0.1 = 0.079 cum 2x 3.14/4x(0.7)²x0.30 = 0.23 cum = 1.478 cum				
5.33.1	Rate as per Item Number 5.33.1 of SH: Reinforced cement concrete work	cum	1.478	5,242.15	7,747.90(A)
7183	Bentonite	tonne	0.15	3,100.00	465.00
9999	Sundries	L.S.	276.82	1.49	412.46
	MACHINERY:				
0024	Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site	day	0.36	34,000.00	12,240.00
0025	Hire and running charges of light crane	day	0.06	2,200.00	132.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0026	Hire and running charges of bentonite pump	day	0.02	4,200.00	84.00
	LABOUR:				
	Work supervisor				
0130	Mistry	day	0.08	301.00	24.08
0114	Beldar	day	2.00	247.00	494.00
	TOTAL				21,599.44
	Add Water Charges @ 1% except on A i.e on (21,599.44 - 7,747.90 =) 13,851.54				138.52
	TOTAL				21,737.96
	Add CPOH @ 15% except on A i.e on (21,737.96 - 7,747.90 =) 13,990.06				2,098.51
	Cost of 10 metre				23,836.47
	Cost of 1 metre				2,383.65
	Say				2,383.65

20.3.3 450 mm dia piles

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metres				
	MATERIAL:				
	R.C.C				
	Stem -3.14/4x(0.45)²x9.212 = 1.465 cum				
	Bulb -3.14/4x(1.125)²x0.113 = 0.112 cum				
	2x 3.14/4x(0.788)²x0.337 =0.329 cum				
	= 1.906 cum				
5.33.1	Rate as per Item Number 5.33.1 of SH: Reinforced cement concrete work	cum	1.906	5,242.15	9,991.54 (A)
7183	Bentonite	tonne	0.19	3,100.00	589.00
9999	Sundries	L.S.	194.81	1.49	290.27
	MACHINERY:				
0024	Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site	day	0.36	34,000.00	12,240.00
0025	Hire and running charges of light crane	day	0.06	2,200.00	132.00
0026	Hire and running charges of bentonite pump	day	0.02	4,200.00	84.00
	LABOUR:				
	Work supervisor				
0130	Mistry	day	0.08	301.00	24.08
0114	Beldar	day	2.00	247.00	494.00
	TOTAL				23,844.89
	Add Water Charges @ 1% except on A i.e on (23,844.89 - 9,991.54 =) 13,853.35				138.53
	TOTAL				23,983.42
	Add CPOH @ 15% except on A i.e on (23,983.42 - 9,991.54 =) 13,991.88				2,098.78
	Cost of 10 metre				26,082.20
	Cost of 1 metre				2,608.22
	Say				2,608.20

20.3.4 550 mm dia piles

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metres MATERIAL: R.C.C Stem -3.14/4x(0.50)²x9.125 = 1.792 cum Bulb -3.14/4x(1.25)²x0.125 = 0.153 cum 2x 3.14/4x(0.875)²x0.375 = 0.451 cum = 2.396 cum				
5.33.1	Rate as per Item Number 5.33.1 of SH: Reinforced cement concrete work	cum	2.40	5,242.15	12,581.16(A)
7183	Bentonite	tonne	0.20	3,100.00	620.00
9999	Sundries	L.S.	208.15	1.49	310.14
	MACHINERY:				
0024	Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site	day	0.36	34,000.00	12,240.00
0025	Hire and running charges of light crane	day	0.06	2,200.00	132.00
0026	Hire and running charges of bentonite pump	day	0.02	4,200.00	84.00
	LABOUR:				
	Work supervisor				
0130	Mistry	day	0.08	301.00	24.08
0114	Beldar	day	2.00	247.00	494.00
	TOTAL				26,485.38
	Add Water Charges @ 1% except on A i.e on (26,485.38 - 12,581.16 =) 13,904.22				139.04
	TOTAL				26,624.42
	Add CPOH @ 15% except on A i.e on (26,624.42 - 12,581.16 =) 14,043.26				2,106.49
	Cost of 10 metre				28,730.91
	Cost of 1 metre				2,873.09
	Say				2,873.10

20.4 Extra over item No. 20.3 for providing additional bulb in under reamed piles, under specified dia meter (Only the quantity of extra bulbs are to be paid).

20.4.1 300 mm dia piles

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 bulb MATERIAL: Bulb - 0.033 cum				
5.33.1	Rate as per Item Number 5.33.1 of SH: Reinforced cement concrete work	cum	0.033	5,242.15	172.99 (A)
7183	Bentonite	tonne	0.003	3,100.00	9.30
	MACHINERY:				
0024	Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site	day	0.02	34,000.00	680.00
0025	Hire and running charges of light crane	day	0.01	2,200.00	22.00
0026	Hire and running charges of bentonite pump	day	0.01	4,200.00	42.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	LABOUR:				
	Work supervisor				
0130	Mistry	day	0.02	301.00	6.02
0114	Beldar	day	1.00	247.00	247.00
	TOTAL				1,179.31
	Add Water Charges @ 1% except on A i.e on (1,179.31 - 172.99 =) 1,006.32				10.06
	TOTAL				1,189.37
	Add CPOH @ 15% except on A i.e on (1,189.37 - 172.99 =) 1,016.38				152.46
	Cost of each				1,341.83
	Say				1,341.85

20.4.2 400 mm dia piles

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 bulb				
	MATERIAL:				
	Bulb - 0.063 cum				
5.33.1	Rate as per Item Number 5.33.1 of SH: Reinforced cement concrete work	cum	0.063	5,242.15	330.26 (A)
7183	Bentonite	tonne	0.006	3,100.00	18.60
	MACHINERY:				
0024	Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site	day	0.02	34,000.00	680.00
0025	Hire and running charges of light crane	day	0.01	2,200.00	22.00
0026	Hire and running charges of bentonite pump	day	0.01	4,200.00	42.00
	LABOUR:				
	Work supervisor				
0130	Mistry	day	0.02	301.00	6.02
0114	Beldar	day	1.00	247.00	247.00
	TOTAL				1,345.88
	Add Water Charges @ 1% except on A i.e on (1,345.88 - 330.26 =) 1,015.62				10.16
	TOTAL				1,356.04
	Add CPOH @ 15% except on A i.e on (1,356.04 - 330.26 =) 1,025.78				153.87
	Cost of each				1,509.91
	Say				1,509.90

20.4.3 450 mm dia piles

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 bulb				
	MATERIAL:				
	Bulb-0.081 cum				
5.33.1	Rate as per Item Number 5.33.1 of SH: Reinforced cement concrete work	cum	0.081	5,242.15	424.61 (A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7183	Bentonite	tonne	0.008	3,100.00	24.80
	MACHINERY:				
0024	Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site	day	0.02	34,000.00	680.00
0025	Hire and running charges of light crane	day	0.01	2,200.00	22.00
0026	Hire and running charges of bentonite pump	day	0.01	4,200.00	42.00
	LABOUR:				
	Work supervisor				
0130	Mistry	day	0.02	301.00	6.02
0114	Beldar	day	1.00	247.00	247.00
	TOTAL				1,446.43
	Add Water Charges @ 1% except on A i.e on (1,446.43 - 424.61 =) 1,021.82				10.22
	TOTAL				1,456.65
	Add CPOH @ 15% except on A i.e on (1,456.65 - 424.61 =) 1,032.04				154.81
	Cost of each				1,611.46
	Say				1,611.45

20.4.4 550 mm dia piles

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 bulb				
	MATERIAL:				
	Bulb-0.102 cum				
5.33.1	Rate as per Item Number 5.33.1 of SH: Reinforced cement concrete work	cum	0.102	5,242.15	534.70 (A)
7183	Bentonite	tonne	0.01	3,100.00	31.00
	MACHINERY:				
0024	Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site	day	0.02	34,000.00	680.00
0025	Hire and running charges of light crane	day	0.01	2,200.00	22.00
0026	Hire and running charges of bentonite pump	day	0.02	4,200.00	84.00
	LABOUR:				
	Work supervisor				
0130	Mistry	day	0.02	301.00	6.02
0114	Beldar	day	1.00	247.00	247.00
	TOTAL				1,604.72
	Add Water Charges @ 1% except on A i.e on (1,604.72 - 534.70 =) 1,070.02				10.70
	TOTAL				1,615.42
	Add CPOH @ 15% except on A i.e on (1,615.42 - 534.70 =) 1,080.72				162.11
	Cost of each				1,777.53
	Say				1,777.55

20.5 Providing, driving and installing driven Pre-cast reinforced cement concrete piles of specified diameter and length below the pile cap in M-25 cement concrete to carry safe working load not less than specified. With a central through preformed hole with M.S. black pipe of dia, 40 mm for grouting with cement sand grouting of mix 1:2 (1 cement : 2 coarse sand) under sufficient positive pressure to ensure complete filling including centring, shuttering, driving and removing the steel casing pipe and lifting casing etc. complete but excluding the cost of steel reinforcement. (Length of pile for payment shall be measured from top of the shoe to the bottom of pile cap).

20.5.1 400 mm dia piles

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 20 m length of pile				
	MATERIAL:				
	Concrete -3.14/4x(0.40)²x20 = 2.51 cum				
5.33.1	Rate as per Item Number 5.33.1 of SH: Reinforced cement concrete work	cum	2.51	5,242.15	13,157.80(A)
	Add				
5.19	Rate as per Item Number 5.19 of SH: Reinforced cement concrete work	cum	2.51	7,259.65	18,221.72(A)
	Deduct				
5.1.3	Rate as per Item Number 5.1.3 of SH: Reinforced cement concrete work	cum	-2.51	4,703.90	-11,806.79(A)
	Cement mortar 1:2 for grout				
3.7	Rate as per Item Number 3.7 of SH: Mortars	cum	0.025	4,863.85	121.60
9999	Sundries	L.S.	442.00	1.49	658.58
7181	C.I. pile shoe @ 80 kg per pile	kilogram	80.00	46.00	3,680.00
7182	M.S. clamps for pile shoe @35 kg per pile	kilogram	35.00	42.00	1,470.00
	MACHINERY:				
0027	Hire and running charges of vibrating pile driving hammer complete with power unit and accessories	day	0.38	35,000.00	13,300.00
0028	Hire and running charges of crane 20 tonne capacity	day	0.06	9,250.00	555.00
	LABOUR:				
	Work supervisor				
0130	Mistry	day	0.12	301.00	36.12
0114	Beldar	day	3.00	247.00	741.00
	TOTAL				40,135.03
	Add Water Charges @ 1% except on A i.e on (40,135.03 - 19,572.73 =) 20,562.30				205.62
	TOTAL				40,340.65
	Add CPOH @ 15% except on A i.e on (40,340.65 - 19,572.73 =) 20,767.92				3,115.19
	Cost of 20 metre				43,455.84
	Cost of 1 metre				2,172.79
	Say				2,172.80

20.5.2 450 mm dia piles

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 20 m length of pile				
	MATERIAL:				
	Concrete -3.14/4x(0.45)²x20 = 3.18 cum				
5.33.1	Rate as per Item Number 5.33.1 of SH: Reinforced cement concrete work	cum	3.18	5,242.15	16,670.04(A)
	Add				
5.19	Rate as per Item Number 5.19 of SH: Reinforced cement concrete work	cum	3.18	7,259.65	23,085.69(A)
	Deduct				
5.1.3	Rate as per Item Number 5.1.3 of SH: Reinforced cement concrete work	cum	-3.18	4,703.90	-14,958.40(A)
	Cement mortar 1:2 for grout				
3.7	Rate as per Item Number 3.7 of SH: Mortars	cum	0.025	4,863.85	121.60
9999	Wooden block @ 1 block per two piles	L.S.	442.00	1.49	658.58
7181	C.I. pile shoe @ 80 kg per pile	kilogram	80.00	46.00	3,680.00
7182	M.S. clamps for pile shoe @ 35 kg per pile	kilogram	35.00	42.00	1,470.00
	MACHINERY:				
0027	Hire and running charges of vibrating pile driving hammer complete with power unit accessories	day	0.38	35,000.00	13,300.00
0028	Hire and running charges of crane 20 tonne capacity	day	0.06	9,250.00	555.00
	LABOUR:				
	Work supervisor				
0130	Mistry	day	1.08	301.00	325.08
0114	Beldar	day	10.78	247.00	2,662.66
	TOTAL				47,570.25
	Add Water Charges @ 1% except on A i.e on (47,570.25 - 24,797.33 =) 22,772.92				227.73
	TOTAL				47,797.98
	Add CPOH @ 15% except on A i.e on (47,797.98 - 24,797.33 =) 23,000.65				3,450.10
	Cost of 20 metre				51,248.08
	Cost of 1 metre				2,562.40
	Say				2,562.40

20.5.3 500 mm dia piles

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 20 m length of pile				
	MATERIAL:				
	Concrete -3.14/4x(0.50)²x20 = 3.925 cum				
5.33.1	Rate as per Item Number 5.33.1 of SH: Reinforced cement concrete work	cum	3.925	5,242.15	20,575.44(A)
	Add				
5.19	Rate as per Item Number 5.19 of SH: Reinforced cement concrete work	cum	3.925	7,259.65	28,494.13(A)
	Deduct				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
5.1.3	Rate as per Item Number 5.1.3 of SH: Reinforced cement concrete work Cement mortar 1:2 for grout	cum	-3.925	4,703.90	-18,462.81(A)
3.7	Rate as per Item Number 3.7 of SH: Mortars	cum	0.025	4,863.85	121.60
9999	Wooden block @ 1 block per two piles	L.S.	442.00	1.49	658.58
7181	C.I. pile shoe @ 80 kg per pile	kilogram	80.00	46.00	3,680.00
7182	M.S. clamps for pile shoe @ 35 kg per pile	kilogram	35.00	42.00	1,470.00
	MACHINERY:				
0027	Hire and running charges of vibrating pile driving hammer complete with power unit and accessories	day	0.38	35,000.00	13,300.00
0028	Hire and running charges of crane 20 tonne capacity	day	0.06	9,250.00	555.00
	LABOUR:				
	Work supervisor				
0130	Mistry	day	0.12	301.00	36.12
0114	Beldar	day	3.00	247.00	741.00
	TOTAL				51,169.06
	Add Water Charges @ 1% except on A i.e on (51,169.06 - 30,606.76 =) 20,562.30				205.62
	TOTAL				51,374.68
	Add CPOH @ 15% except on A i.e on (51,374.68 - 30,606.76 =) 20,767.92				3,115.19
	Cost of 20 metre				54,489.87
	Cost of 1 metre				2,724.49
	Say				2,724.50

20.5.4 550 mm dia piles

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 20 m length of pile				
	MATERIAL:				
	Concrete -3.14/4x$(0.55)^2$x20 = 4.75 cum				
5.33.1	Rate as per Item Number 5.33.1 of SH: Reinforced cement concrete work	cum	4.75	5,242.15	24,900.21(A)
	Add				
5.19	Rate as per Item Number 5.19 of SH: Reinforced cement concrete work	cum	4.75	7,259.65	34,483.34(A)
	Deduct				
5.1.3	Rate as per Item Number 5.1.3 of SH: Reinforced cement concrete work	cum	-4.75	4,703.90	-22,343.5(A)
3.7	Rate as per Item Number 3.7 of SH: Mortars	cum	0.025	4,863.85	121.60
9999	Wooden block @ 1 block per two piles	L.S.	442.00	1.49	658.58
7181	C.I. pile shoe @ 80 kg per pile	kilogram	80.00	46.00	3,680.00
7182	M.S. clamps for pile shoe @ 35 kg per pile	kilogram	35.00	42.00	1,470.00
	MACHINERY:				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0027	Hire and running charges of vibrating pile driving hammer complete with power unit and accessories	day	0.38	35,000.00	13,300.00
0028	Hire and running charges of crane 20 tonne capacity	day	0.06	9,250.00	555.00
	LABOUR:				
	Work supervisor				
0130	Mistry	day	0.12	301.00	36.12
0114	Beldar	day	3.00	247.00	741.00
	TOTAL				57,602.33
	Add Water Charges @ 1% except on A i.e on (57,602.33 - 37,040.03 =) 20,562.30				205.62
	TOTAL				57,807.95
	Add CPOH @ 15% except on A i.e on (57,807.95 - 37,040.03 =) 20,767.92				3,115.19
	Cost of 20 metre				60,923.14
	Cost of 1 metre				3,046.16
	Say				3,046.15

20.5.5 750 mm dia piles

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 20 m length of pile				
	MATERIAL:				
	Concrete -3.14/4x(0.75)²x20 = 10.88 cum				
5.33.1	Rate as per Item Number 5.33.1 of SH: Reinforced cement concrete work	cum	10.88	5,242.15	57,034.59(A)
	Add				
5.19	Rate as per Item Number 5.19 of SH: Reinforced cement concrete work	cum	10.88	7,259.65	78,984.99(A)
	Deduct				
5.1.3	Rate as per Item Number 5.1.3 of SH: Reinforced cement concrete work	cum	-10.88	4,703.90	-51,178.43(A)
3.7	Rate as per Item Number 3.7 of SH: Mortars	cum	0.025	4,863.85	121.60
9999	Wooden block @ 1 block per two piles	L.S.	442.00	1.49	658.58
7181	C.I. pile shoe @ 80 kg per pile	kilogram	80.00	46.00	3,680.00
7182	M.S. clamps for pile shoe @ 35 kg per pile	kilogram	35.00	42.00	1,470.00
	MACHINERY:				
0027	Hire and running charges of vibrating pile driving hammer complete with power unit and accessories	day	0.38	35,000.00	13,300.00
0028	Hire and running charges of crane 20 tonne capacity	day	0.06	9,250.00	555.00
	LABOUR:				
	Work supervisor				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0130	Mistry	day	0.12	301.00	36.12
0114	Beldar	day	3.00	247.00	741.00
	TOTAL				1,05,403.45
	Add Water Charges @ 1% except on A i.e on (1,05,403.45 - 84,841.15 =) 20,562.30				205.62
	TOTAL				1,05,609.07
	Add CPOH @ 15% except on A i.e on (1,05,609.07 - 84,841.15 =) 20,767.92				3,115.19
	Cost of 20 metre				1,08,724.26
	Cost of 1 metre				5,436.21
	Say				5,436.20

20.5.6 1000 mm dia piles

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 20 m length of pile				
	MATERIAL:				
	Concrete -3.14/4x(1.00)²x20 =15.70 cum				
5.33.1	Rate as per Item Number 5.33.1 of SH: Reinforced cement concrete work	cum	15.70	5,242.15	82,301.75(A)
	Add				
5.19	Rate as per Item Number 5.19 of SH: Reinforced cement concrete work	cum	15.70	7,259.65	1,13,976.50(A)
	Deduct				
5.1.3	Rate as per Item Number 5.1.3 of SH: Reinforced cement concrete work	cum	-15.70	4,703.90	-73,851.23(A)
3.7	Rate as per Item Number 3.7 of SH: Mortars	cum	0.025	4,863.85	121.60
9999	Wooden block @ 1 block per two piles	L.S.	442.00	1.49	658.58
7181	C.I. pile shoe @ 80 kg per pile	kilogram	80.00	46.00	3,680.00
7182	M.S. clamps for pile shoe @ 35 kg per pile	kilogram	35.00	42.00	1,470.00
	MACHINERY:				
0027	Hire and running charges of vibrating pile driving hammer complete with power unit and accessories	day	0.38	35,000.00	13,300.00
0028	Hire and running charges of crane 20 tonne capacity	day	0.06	9,250.00	555.00
	LABOUR:				
	Work supervisor				
0130	Mistry	day	0.12	301.00	36.12
0114	Beldar	day	3.00	247.00	741.00
	TOTAL				1,42,989.32
	Add Water Charges @ 1% except on A i.e on (1,42,989.32 - 1,22,427.02 =) 20,562.30				205.62
	TOTAL				1,43,194.94
	Add CPOH @ 15% except on A i.e on (1,43,194.94 - 1,22,427.02 =) 20,767.92				3,115.19
	Cost of 20 metre				1,46,310.13
	Cost of 1 metre				7,315.51
	Say				7,315.50

20.6 Vertical load testing of 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 specification & the direction of Engineer-in-Charge.

20.6.1 Single pile upto 50 tonne capacity

20.6.1.1 Initial test

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 test				
7246	Vertical load testing (initial) of 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 specification and up to 50 tonne capacity pile	per test	1.00	33,200.00	33,200.00
	TOTAL				33,200.00
	Add Water Charges @ 1%				332.00
	TOTAL				33,532.00
	Add CPOH @ 15%				5,029.80
	Cost per test				38,561.80
	Say				38,561.80

20.6.1.2 Routine test

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 test				
7249	Cyclic vertical load testing of piles in accordance with IS : 2911 (Part-IV) including preparation of pile head etc. for Single pile up to 50 tonne capacity	per test	1.00	15,000.00	15,000.00
	TOTAL				15,000.00
	Add Water Charges @ 1%				150.00
	TOTAL				15,150.00
	Add CPOH @ 15%				2,272.50
	Cost per test 17,				422.50
	Say				17,422.50

20.6.2 Single pile above 50 tonne and upto 100 tonne capacity

20.6.2.1 Initial test

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 test				
7247	Vertical load testing (initial) of 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	per test	1.00	40,300.00	40,300.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	test cap after test etc. complete as per specification & above 50 tonne and up to 100 tonne				
	TOTAL				40,300.00
	Add Water Charges @ 1%				403.00
	TOTAL				40,703.00
	Add CPOH @ 15%				6,105.45
	Cost per test				46,808.45
	Say				46,808.45

20.6.2.2 Routine test

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 test				
7250	Cyclic vertical load testing of piles in per accordance with IS : 2911 (Part- IV) including preparation of pile head etc. for Single pile above 50 tonne capacity pile and up to 100 tonne capacity pile	test	1.00	23,000.00	23,000.00
	TOTAL				23,000.00
	Add Water Charges @ 1%				230.00
	TOTAL				23,230.00
	Add CPOH @ 15%				3,484.50
	Cost per test				26,714.50
	Say				26,714.50

20.6.3 Group of two or more piles upto 50 tonne capacity

20.6.3.1 Initial test

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 test				
7248	Vertical load testing (initial) of 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 specification & group of two or more up to 50 tonne	per test	1.00	48,500.00	48,500.00
	TOTAL				48,500.00
	Add Water Charges @ 1%				485.00
	TOTAL				48,985.00
	Add CPOH @ 15%				7,347.75
	Cost per test				56,332.75
	Say				56,332.80

20.6.3.2 Routine test

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 test				
7251	Cyclic vertical load testing of piles in accordance with IS : 2911 (Part- IV) including preparation of pile head etc. for Group of two piles up to 50 tonne capacity each	per test	1.00	29,500.00	29,500.00
	TOTAL				29,500.00
	Add Water Charges @ 1%				295.00
	TOTAL				29,795.00
	Add CPOH @ 15%				4,469.25
	Cost per test				34,264.25
	Say				34,264.20

20.7 Cyclic vertical load testing of pile in accordance with IS Code of practice IS: 2911 (part IV) including preparation of pile head etc for.

20.7.1 Single pile

20.7.1.1 Upto 50 tonne capacity pile

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 test				
7249	Cyclic vertical load testing of piles in accordance with IS : 2911 (Part-IV) including preparation of pile head etc. for Single pile up to 50 tonne capacity	per test	1.00	15,000.00	15,000.00
	TOTAL				15,000.00
	Add Water Charges @ 1%				150.00
	TOTAL				15,150.00
	Add CPOH @ 15%				2,272.50
	Cost per test				17,422.50
	Say				17,422.50

20.7.1.2 Above 50 tonne and upto 100 tonne capacity pile

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 test				
7250	Cyclic vertical load testing of piles in accordance with IS : 2911 (Part- IV) including preparation of pile head etc. for Single pile above 50 tonne capacity pile and up to 100 tonne capacity pile	per test	1.00	23,000.00	23,000.00
	TOTAL				23,000.00
	Add Water Charges @ 1%				230.00
	TOTAL				23,230.00
	Add CPOH @ 15%				3,484.50
	Cost per test				26,714.50
	Say				26,714.50

20.7.2 Group of two piles

20.7.2.1 Upto 50 tonne capacity each

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 test				
7251	Cyclic vertical load testing of piles in accordance with IS : 2911 (Part- IV) including preparation of pile head etc. for Group of two piles up to 50 tonne capacity each	per test	1.00	29,500.00	29,500.00
	TOTAL				29,500.00
	Add Water Charges @ 1%				295.00
	TOTAL				29,795.00
	Add CPOH @ 15%				4,469.25
	Cost per test				34,264.25
	Say				34,264.20

20.8 Lateral load testing of single pile in accordance with IS Code of practice IS : 2911 (Part IV) for determining safe allowable lateral load on pile:

20.8.1 Upto 50 tonne capacity pile.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 test				
7252	Lateral load testing of single pile in accordance with IS : 2911 part -IV for determining safe allowable lateral load on pile up to 50 tonne capacity	per test	1.00	15,000.00	15,000.00
	TOTAL				15,000.00
	Add Water Charges @ 1%				150.00
	TOTAL				15,150.00
	Add CPOH @ 15%				2,272.50
	Cost per test				17,422.50
	Say				17,422.50

20.8.2 Above 50 tonne and upto 100 tonne capacity pile.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 test				
7253	Lateral load testing of single pile in accordance with IS : 2911 part -IV for determining safe allowable lateral load on pile above 50 tonne capacity	per test	1.00	23,500.00	23,500.00
	TOTAL				23,500.00
	Add Water Charges @ 1%				235.00
	TOTAL				23,735.00
	Add CPOH @ 15%				3,560.25
	Cost per test				27,295.25
	Say				27,295.20

20.9 Integrity testing of Pile using Low Strain/ Sonic Integrity Test/ Sonic Echo Test method in accordance with IS 14893 including surface preparation of pile top by removing soil, mud, dust & chipping lean concrete lumps etc. and use of computerised equipment and high skill trained personal for conducting the test & submission of results, all complete as per direction of Engineer-in-charge. Note:- The inclusion of the above item in the schedule of work shall be judiciously decided by the technical sanctioning authority, keeping in view the quality control, type of soil strata & importance of the project.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	detail of cost for one pit test (Ten pits in one day)				
	MATERIAL				
0081	Pile Integrity testing equipment	day	0.10	3,000.00	300.00
	LABOUR				
0160	Technician	day	0.10	700.00	70.00
0161	Helper (Technician)	day	0.10	300.00	30.00
	miscllaneous				
9999	Reporting charges	L.S.	100.67	1.49	150.00
9999	Transportation and consumables etc.	L.S.	33.56	1.49	50.00
	TOTAL				600.00
	Add Water Charges @ 1%				6.00
	TOTAL				606.00
	Add CPOH @ 15%				90.90
	Cost per test				696.90
	Say				696.90

SUB HEAD : 21

ALUMINIUM WORK

21.1 Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular sections/ appropriate Z sections and other sections of approved make conforming to IS: 733 and IS: 1285, fixing with dash fasteners of required dia and size, including necessary filling up the gaps at junctions, i.e. at top, bottom and sides with required EPDM rubber/ neoprene gasket etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, Aluminium snap beading for glazing / paneling, C.P. brass / stainless steel screws, all complete as per architectural drawings and the directions of Engineer-in-charge. (Glazing, paneling and dash fasteners to be paid for separately) :

21.1.1 For fixed portion

21.1.1.1 Anodised aluminium (anodised transparent or dyed to required shade according to IS: 1868, Minimum anodic coating of grade AC 15)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 40.02 kg MATERIAL: Aluminium Section (i) External member of the frame (Jindal section no 4605) V = 2x2.40 = 4.80 m H = 2x3x0.95 = 5.70 m = 10.50 m @ 1.653 kg/m = 17.36 kg (ii) Internal member of the frame (Jindal section no 4604) V = 2x2.40 = 4.80 m H = 1x3x0.95 = 2.85 m Total = 7.65 m @ 1.692 kg/m = 12.94 kg (iii) Aluminium snap beading on both side (Jindal section no 4407) 2x6x2 (1.14+0.95) = 50.16 m Snap beading = 50.16 m @ 0.176 kg/m = 8.33 kg (iv) Angle cleat 38x38x4.8 mm 50 mm long 18x0.05 = 0.900 m @ 0.985 kg/m = 0.89 kg Sub total =40.02 kg Add 5% wastage = 2.00 kg Total = 42.02 kg				
7306	Aluminium T or L sections (v) C.P. brass /stainless steel screws 20 mm for cleat angle 18x4 = 72 Nos	kilogram	42.02	220.00	9,244.40
0589	Chromium plated Brass screws 20 mm (vi)	100 nos	72.00	100.00	72.00
7389	Anodising 15 microns on aluminium sections (vii)	kilogram	42.02	40.00	1,680.80
9999	Carriage of material	L.S.	52.00	1.49	77.48
	LABOUR: For fabrication of frame				
0116	Fitter (grade 1)	day	2.00	301.00	602.00
0139	Skilled Beldar (for floor rubbing etc.)	day	1.00	260.00	260.00
0114	Beldar	day	1.00	247.00	247.00
0100	Bandhani	day	0.05	260.00	13.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Labour for drilling holes, hire charges of drill, electricity charges, carriage of dash hold fastners and sundries	L.S.	100.00	1.49	149.00
	TOTAL				12,345.68
	Add Water Charges @ 1%				123.46
	TOTAL				12,469.14
	Add CPOH @ 15%				1,870.37
	Cost of 40.02 kg				14,339.51
	Cost of 1 kg				358.31
	Say				358.30

21.1.1.2 Powder coated aluminium (minimum thickness of powder coating 50 micron)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 40.02 kg MATERIAL: Aluminium Section (i) External member of the frame (Jindal section no 4605) V= 2x2.40 = 4.80 m H = 2x3x0.95 = 5.70 m = 10.50 m @ 1.653 kg/m = 17.36 kg (ii) Internal member of the frame (Jindal section no 4604) V= 2x2.40 = 4.80 m H= 1x3x0.95= 2.85 m Total = 7.65 m @ 1.692 kg/m = 12.94 kg (iii) Aluminium snap beading on both side (Jindal section no 4407) 2x6x2 (1.14+0.95) = 50.16 m Snap beading = 50.16 m @ 0.176 kg/m = 8.33 kg (iv) Angle cleat 38x38x4.8 mm 50 mm long 18x0.05 = 0.900 m @ 0.985 kg/m = 0.89 kg Sub total =40.02 kg Add 5% wastage = 2.00 kg Total = 42.02 kg				
7306	Aluminium T or L sections (v) C.P. brass /stainless steel screws 20 mm for cleat angle 18x4 = 72 Nos	kilogram	42.02	220.00	9,244.40
0589	Chromium plated Brass screws 20 mm (vi) Epoxy	100 nos	72.00	100.00	72.00
7392	Powder coating 50 microns on aluminium sections (vii)	kilogram	42.02	64.00	2,689.28
9999	Carriage of material LABOUR: For fabrication of frame	L.S.	52.00	1.49	77.48
0116	Fitter (grade 1)	day	2.00	301.00	602.00
0139	Skilled Beldar (for floor rubbing etc.)	day	1.00	260.00	260.0
0114	Beldar	day	1.00	247.00	247.00
0100	Bandhani	day	0.05	260.00	13.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Labour for drilling holes, hire charges of drill, electricity charges, carriage of dash hold fastners and sundries	L.S.	100.00	1.49	149.00
	TOTAL				13,354.16
	Add Water Charges @ 1%				133.54
	TOTAL				13,487.70
	Add CPOH @ 15%				2,023.16
	Cost of 40.02 kg				15,510.86
	Cost of 1 kg				387.58
	Say				387.60

21.1.1.3 Polyester powder coated aluminium (minimum thickness of polyester powder coating 50 micron)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 40.02 kg MATERIAL: Aluminium Section (i) External member of the frame (Jindal section no 4605) V= 2x2.40 = 4.80 m H = 2x3x0.95 = 5.70 m = 10.50 m @ 1.653 kg/m = 17.36 kg (ii) Internal member of the frame (Jindal section no 4604) V= 2x2.40 = 4.80 m H= 1x3x0.95= 2.85 m = 7.65 m @ 1.692 kg/m = 12.94 kg (iii) Aluminium snap beading on both side (Jindal section no 4407) 2x6x2 (1.14+0.95) = 50.16 m Snap beading = 50.16 m @ 0.176 kg/m = 8.33 kg (iv) Angle cleat 38x38x4.8 mm 50 mm long 18x0.05 = 0.900 m @ 0.985 kg/m = 0.89 kg Sub total =40.02 kg Add 5% wastage = 2.00 kg Total = 42.02 kg				
7306	Aluminium T or L sections (v) C.P. brass /stainless steel screws 20 mm for cleat angle 18x4 = 72 Nos	kilogram	42.02	220.00	9,244.40
0589	Chromium plated Brass screws 20 mm (vi)	100 nos	72.00	100.00	72.00
7393	Polyester powder coating 50 microns on aluminium sections (vii)	kilogram	42.02	70.00	2,941.40
9999	Carriage of material LABOUR:	L.S.	52.00	1.49	77.48
0116	Fitter (grade 1)	day	2.00	301.00	602.00
0139	Skilled Beldar (for floor rubbing etc.)	day	1.00	260.00	260.00
0114	Beldar	day	1.00	247.00	247.00
0100	Bandhani	day	0.05	260.00	13.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Labour for drilling holes, hire charges of drill, electricity charges, carriage of dash hold fastners and sundries	L.S.	100.00	1.49	149.00
	TOTAL				13,606.28
	Add Water Charges @ 1%				136.06
	TOTAL				13,742.34
	Add CPOH @ 15%				2,061.35
	Cost of 40.02 kg				15,803.69
	Cost of 1 kg				394.89
	Say				394.90

21.1.2 For shutters of doors, windows & ventilators including providing and fixing hinges / pivots and making provision for fixing of fittings wherever required including the cost of EPDM rubber / neoprene gasket required (Fittings shall be paid for separately).

21.1.2.1 Anodised aluminium (anodised transparent or dyed to required shade according to IS: 1868, Minimum anodic coating of grade AC 15)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 20.21 kg MATERIAL: (i) Hanging style (Jindal section no 4524) 1x2.35 = 2.35 m @ 2.53 kg/m = 5.95 kg (ii) Meeting style (Jindal section no 4526) 1x2.35 = 2.35 m @ 2.465 kg/m = 5.79 kg (iii) Top & bottom rail (Jindal section no 4510) 2x0.75 = 1.50 m @ 2.48 kg/m = 3.72 kg (iv) Lock rail (Jindal section no 4524) 1x0.75 = 0.75 m @ 2.53 kg/m = 1.90 kg (v) Glazing plate (Jindal section no 440) on one side of lock rail 1x0.75 = 0.75 m @ 0.459 kg/m = 0.34 kg (vi) Aluminium snap beading (Jindal section no 4497) on both side 2x2 (0.75+1.26) = 8.04 m 2x2 (0.75+0.81) = 6.24 m = 14.28 m @ 0.176 kg/m = 2.51 kg (vii) Aluminium angle cleat 38x38x4.8 mm 35 mm long 3x4x0.035 = 0.42 m @ 0.985 kg/m = 0.41 kg Sub total = 20.62 kg Add 5% wastage = 1.03 kg Total = 21.65 kg				
7306	Aluminium T or L sections (viii)	kilogram	21.65	220.00	4,763.00
0689	Anodised Aluminium butt hinges 100x75x4 mm (ix) C.P. brass /stainless steel screws 20 mm For cleat 12x4 = 48 For cleat 4x8 = 32	10 nos	4.00	500.00	200.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	For glazing plate @ 15 cm centre to centre in 75 cm length 2x6 = 12 Total = 92 Nos				
0589	Chromium plated Brass screws 20 mm (x)	100 nos	92.00	100.00	92.00
7389	Anodising 15 microns on aluminium sections (xi)	kilogram	21.65	40.00	866.00
9999	Carriage of material	L.S.	31.20	1.49	46.49
	(xii) Neoprene/ EPDM gasket in groove of meeting style				
7390	Neoprene/EPDM rubber gasket	metre	2.35	25.00	58.75
	LABOUR:				
0116	Fitter (grade 1)	day	1.00	301.00	301.00
0139	Skilled Beldar (for floor rubbing etc.)	day	1.00	260.00	260.00
0114	Beldar	day	0.50	247.00	123.50
0100	Bandhani	day	0.40	260.00	104.00
	For fixing the shutter including hinges				
0111	Carpenter 1 st class	day	0.20	301.00	60.20
0114	Beldar	day	0.50	247.00	123.50
9999	Labour for making provision for fittings and carriage of screws etc. including sundries	L.S.	50.00	1.49	74.50
	TOTAL				7,072.94
	Add Water Charges @ 1%				70.73
	TOTAL				7,143.67
	Add CPOH @ 15%				1,071.55
	Cost of 20.21 kg				8,215.22
	Cost of 1 kg				406.49
	Say				406.50

21.1.2.2 Powder coated aluminium (minimum thickness of powder coating 50 micron)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 20.21 kg MATERIAL: (i) Hanging style (Jindal section no 4524) 1x2.35 = 2.35 m @ 2.53 kg/m = 5.95 kg (ii) Meeting style (Jindal section no 4526) 1x2.35 = 2.35 m @ 2.465 kg/m = 5.79 kg (iii) Top & bottom rail (Jindal section no 4510) 2x0.75 = 1.50 m @ 2.48 kg/m = 3.72 kg (iv) Lock rail (Jindal section no 4524) 1x0.75 = 0.75 m @ 2.53 kg/m = 1.90 kg (v) Glazing plate (Jindal section no 440) on one side of lock rail 1x0.75 = 0.75 m @ 0.459 kg/m = 0.34 kg (vi) Aluminium snap beading (Jindal section no 4497) on both side 2x2 (0.75+1.26) = 8.04 m 2x2 (0.75+0.81) = 6.24 m = 14.28 m@ 0.176 kg/m = 2.51 kg				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	(vii) Aluminium angle cleat 38x38x4.8 mm 35 mm long 3x4x0.035 = 0.42 m @ 0.985 kg/m = 0.41 kg Sub total = 20.62 kg Add 5% wastage = 1.03 kg Total = 21.65 kg				
7306	Aluminium T or L sections	kilogram	21.65	220.00	4,763.00
	(viii)				
0689	Anodised Aluminium butt hinges 100x75x4 mm	10 nos	4.00	500.00	200.00
	(ix) C.P. brass /stainless steel screws 20 mm For cleat 12x4 = 48 For cleat 4x8 = 32 For glazing plate @ 15 cm centre to centre in 75 cm length 2x6 = 12 Total = 92 Nos				
0589	Chromium plated Brass screws 20 mm	100 nos	92.00	100.00	92.00
	(x) Epoxy				
7392	Powder coating 50 microns on aluminium sections	kilogram	21.65	64.00	1,385.60
	(xi)				
9999	Carriage of material	L.S.	31.20	1.49	46.49
	(xii) Neoprene/ EPDM rubber gasket in groove of meeting style				
7390	Neoprene/EPDM rubber gasket	metre	2.35	25.00	58.75
	LABOUR:				
0116	Fitter (grade 1)	day	1.00	301.00	301.00
0139	Skilled Beldar (for floor rubbing etc.)	day	1.00	260.00	260.00
0114	Beldar	day	0.50	247.00	123.50
0100	Bandhani	day	0.40	260.00	104.00
	For fixing the shutter including hinges:				
0111	Carpenter 1 st class	day	0.20	301.00	60.20
0114	Beldar	day	0.50	247.00	123.50
9999	Labour for making provision for fittings and carriage of screws etc. including sundries	L.S.	50.00	1.49	74.50
	TOTAL				7,592.54
	Add Water Charges @ 1%				75.93
	TOTAL				7,668.47
	Add CPOH @ 15%				1,150.27
	Cost of 20.21 kg				8,818.74
	Cost of 1 kg				436.36
	Say				436.35

21.1.2.3 Polyester powder coated aluminium (minimum thickness of polyester powder coating 50 micron)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 20.21 kg MATERIAL: (i) Hanging style (Jindal section no 4524) 1x2.35 = 2.35 m @ 2.53 kg/m = 5.95 kg (ii) Meeting style (Jindal section no 4526) 1x2.35 = 2.35 m @ 2.465 kg/m = 5.79 kg				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	(iii) Top & bottom rail (Jindal section no 4510) 2x0.75 = 1.50 m @ 2.48 kg/m = 3.72 kg (iv) Lock rail (Jindal section no 4524) 1x0.75 = 0.75 m @ 2.53 kg/m = 1.90 kg (v) Glazing plate (Jindal section no 440) on one side of lock rail 1x0.75 = 0.75 m @ 0.459 kg/m = 0.34 kg (vi) Aluminium snap beading (Jindal section no 4497) on both side 2x2 (0.75+1.26) = 8.04 m 2x2 (0.75+0.81) = 6.24 m = 14.28 m @ 0.176 kg/m = 2.51 kg (vii) Aluminium angle cleat 38x38x4.8 mm 35 mm long 3x4x0.035 = 0.42 m @ 0.985 kg/m = 0.41 kg Sub total = 20.62 kg Add 5% wastage = 1.03 kg Total = 21.65 kg				
7306	Aluminium T or L sections	kilogram	21.65	220.00	4,763.00
	(viii)				
0689	Anodised Aluminium butt hinges 100x75x4 mm	10 nos	4.00	500.00	200.00
	(ix) C.P. brass /stainless steel screws 20 mm For cleat 12x4 = 48 For cleat 4x8 = 32 For glazing plate @ 15 cm centre to centre in 75 cm length 2x6 = 12 Total = 92 Nos				
0589	Chromium plated Brass screws 20 mm	100 nos	92.00	100.00	92.00
	(x)				
7393	Polyester powder coating 50 microns on aluminium sections	kilogram	21.65	70.00	1,515.50
	(xi)				
9999	Carriage of material	L.S.	31.20	1.49	46.49
	(xii) Neoprene/ EPDM rubber gasket in groove of meeting style				
7390	Neoprene/EPDM rubber gasket	metre	2.35	25.00	58.75
	LABOUR: For fabrication				
0116	Fitter (grade 1)	day	1.00	301.00	301.00
0139	Skilled Beldar (for floor rubbing etc.)	day	1.00	260.00	260.00
0114	Beldar	day	0.50	247.00	123.50
0100	Bandhani	day	0.40	260.00	104.00
	For fixing the shutter including hinges				
0111	Carpenter 1 st class	day	0.20	301.00	60.20
0114	Beldar	day	0.50	247.00	123.50
9999	Labour for making provision for fittings and carriage of screws etc. including sundries	L.S.	50.00	1.49	74.50
	TOTAL				7,722.44
	Add Water Charges @ 1%				77.22
	TOTAL				7,799.66
	Add CPOH @ 15%				1,169.95
	Cost of 20.21 kg				8,969.61
	Cost of 1 kg				443.82
	Say				443.80

21.2 Providing and fixing 12 mm thick prelaminated particle board flat pressed three layer or graded wood particle board conforming to IS: 12823 Grade I Type II, in panelling fixed in aluminum doors, windows shutters and partition frames with C.P. brass / stainless steel screws etc. complete as per architectural drawings and directions of Engineer-in-Charge.

21.2.1 Pre-laminated particle board with decorative lamination on one side and balancing lamination on other side

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 7 sqm				
	MATERIAL:				
	12 mm thick particle board = 7.00 sqm				
	Add 5% wastage = 0.35 sqm				
	Total = 7.35 sqm				
7477	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	7.35	690.00	5,071.50
9999	Carriage of particle board	L.S.	13.65	1.49	20.34
9999	Sundries & screws etc.	L.S.	27.30	1.49	40.68
	LABOUR:				
0112	Carpenter 2nd class	day	0.90	273.00	245.70
0114	Beldar	day	1.00	247.00	247.00
	TOTAL				5,625.22
	Add Water Charges @ 1%				56.25
	TOTAL				5,681.47
	Add CPOH @ 15%				852.22
	Cost of 7 sqm				6,533.69
	Cost of 1 sqm				933.38
	Say				933.40

21.2.2 Pre-laminated particle board with decorative lamination on both sides

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 7 sqm				
	MATERIAL:				
	12 mm thick particle board = 7.00 sqm				
	Add 5% wastage = 0.35 sqm.				
	Total = 7.35 sqm				
7480	Pre/aminated 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	7.35	720.00	5,292.00
9999	Carriage of particle board	L.S.	13.65	1.49	20.34
9999	Sundries & screws etc.	L.S.	27.30	1.49	40.68
	LABOUR:				
0112	Carpenter 2nd class	day	0.90	273.00	245.70

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Beldar	day	1.00	247.00	247.00
	TOTAL				5,845.72
	Add Water Charges @ 1%				58.46
	TOTAL				5,904.18
	Add CPOH @ 15%				885.63
	Cost of 7 sqm				6,789.81
	Cost of 1 sqm				969.97
	Say				969.95

21.3 Providing and fixing glazing in aluminium door, window, ventilator shutters and partitions etc. with EPDM rubber / neoprene gasket etc. complete as per the architectural drawings and the directions of Engineer-in-Charge. (Cost of aluminium snap beading shall be paid in basic item):

21.3.1 With float glass panes of 4.0 mm thickness

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 sqm				
	MATERIAL:				
	Float glass panes 4.00 mm thick = 1.00 sqm				
	Add for wastage and breakage @ 10%=0.10 sqm.				
	Total =1.10 sqm				
2406	Float glass sheet of nominal thickness 4 mm (weight not less than 10 kg/sqm)	sqm	1.10	310.00	341.00
9999	Carriage of glass	L.S.	2.42	1.49	3.61
7390	Neoprene/EPDM rubber gasket	metre	6.00	25.00	150.00
	LABOUR:				
0112	Carpenter 2nd class	day	0.23	273.00	62.79
0114	Beldar	day	0.23	247.00	56.81
9999	Sundries and carriage of gasket	L.S.	6.89	1.49	10.27
	TOTAL				624.48
	Add Water Charges @ 1%				6.24
	TOTAL				630.72
	Add CPOH @ 15%				94.61
	Cost of 1 sqm				725.33
	Say				725.35

21.3.2 With float glass panes of 5.50 mm thickness

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 sqm				
	MATERIAL:				
	Glass panes 5.50 mm thick = 1.00 sqm				
	Add for wastage and breakage @ 10%= 0.10 sqm				
	Total =1.10 sqm				
2407	Float glass sheet of nominal thickness 5.5 mm (weight not less than 13.50 kg/sqm)	sqm	1.10	450.00	495.00
9999	Carriage of glass	L.S.	3.33	1.49	4.96
7390	Neoprene/EPDM rubber gasket	metre	6.00	25.00	150.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	LABOUR:				
0112	Carpenter 2nd class	day	0.23	273.00	62.79
0114	Beldar	day	0.23	247.00	56.81
9999	Sundries and carriage of gasket	L.S.	6.89	1.49	10.27
	TOTAL				779.83
	Add Water Charges @ 1%				7.80
	TOTAL				787.63
	Add CPOH @ 15%				118.14
	Cost of 1 sqm				905.77
	Say				905.75

21.3.3 With float glass panes of 8 mm thickness

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 sqm MATERIAL: Float glass panes 8.00 mm thick = 1.00 sqm Add for wastage and breakage @ 10%= 0.10 sqm Total =1.10 sqm				
2408	Float glass sheet of nominal thickness 8 mm (weight not less than 20.00 kg/sqm)	sqm	1.10	700.00	770.00
9999	Carriage of glass	L.S.	4.84	1.49	7.21
7390	Neoprene/EPDM rubber gasket	metre	6.00	25.00	150.00
	LABOUR:				
0112	Carpenter 2nd class	day	0.23	273.00	62.79
0114	Beldar	day	0.23	247.00	56.81
9999	Sundries and carriage of gasket	L.S.	6.89	1.49	10.27
	TOTAL				1,057.08
	Add Water Charges @ 1%				10.57
	TOTAL				1,067.65
	Add CPOH @ 15%				160.15
	Cost of 1 sqm				1,227.80
	Say				1,227.80

21.4 Providing and fixing double action hydraulic floor spring of approved brand and manufacture conforming to IS : 6315 , having brand logo embossed on the body/ plate with double spring mechanism and door weight upto 125 kg, for doors including cost of cutting floors ,embeding in floors as required and making good the same matching to the existing floor finishing and cover plates with brass pivot and single piece M.S. sheet outer box with slide plate etc. complete as per the direction of Engineer-in-Charge.

21.4.1 With stainless steel cover plate minimum 1.25 mm thickness

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one number MATERIAL:				
7394	Double action hydraulic floor spring with stainless steel cover plate	each	1.00	1,525.00	1,525.00
9999	Carriage	L.S.	13.00	1.49	19.37

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries and screws	L.S.	26.00	1.49	38.74
	Cement concrete 1:2:4				
4.1.3	Rate as per Item Number 4.1.3 of SH: Concrete work	cum	0.002	4,514.05	9.03 (A)
	LABOUR:				
0123	Mason (brick layer) 1 st class	day	0.08	301.00	24.08
0124	Mason (brick layer) 2nd class	day	0.08	273.00	21.84
0112	Carpenter 2nd class	day	0.01	273.00	2.73
0114	Beldar	day	0.17	247.00	41.99
	TOTAL				1,682.78
	Add Water Charges @ 1% except on A i.e on (1,682.78 - 9.03 =) 1,673.75				16.74
	TOTAL				1,699.52
	Add CPOH @ 15% except on A i.e on (1,699.52 - 9.03 =) 1,690.49				253.57
	Cost of each				1,953.09
	Say				1,953.10

21.4.2 With brass cover plate minimum 1.25 mm thickness

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one number				
	MATERIAL:				
7396	Double action hydraulic floor spring with brass cover plate	each	1.00	1,675.00	1,675.00
9999	Carriage	L.S.	13.00	1.49	19.37
9999	Sundries and screws	L.S.	26.00	1.49	38.74
	Cement concrete 1:2:4				
4.1.3	Rate as per Item Number 4.1.3 of SH: Concrete work	cum	0.002	4,514.05	9.03 (A)
	LABOUR:				
	For cutting hole and making it good				
0123	Mason (brick layer) 1 st class	day	0.08	301.00	24.08
0124	Mason (brick layer) 2nd class	day	0.08	273.00	21.84
0112	Carpenter 2nd class	day	0.01	273.00	2.73
	for fixing				
0114	Beldar	day	0.17	247.00	41.99
	TOTAL				1,832.78
	Add Water Charges @ 1% except on A i.e on (1,832.78 - 9.03 =) 1,823.75				18.24
	TOTAL				1,851.02
	Add CPOH @ 15% except on A i.e on (1,851.02 - 9.03 =) 1,841.99				276.30
	Cost of each				2,127.32
	Say				2,127.30

21.5 Providing and fixing powder coated aluminium work (minimum thickness of powder coating 50 micron) consisting of tee / angle sections, of approved make conforming to IS : 733 in frames of false ceiling including aluminium angle cleats with necessary C.P. brass / stainless steel sunk screws, aluminium perimeter angles fixed to wall with stainless steel rawl plugs @ 450mm centre to centre and fixing the frame work to G.I. level adjusting hangers 6mm 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).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 6.35 kg (2.40x2.40=5.76 sqm) MATERIAL: (i) Aluminium main runner - assuming Tee of size 35x23.5x1.5 mm @ 600 mm centre to centre 3.00x2.40m, =7.20m Extra for light fittings 2x1.20 m = 2.40 m Total = 9.60 m @ 0.247 kg/m = 2.370 kg Aluminium cross runner - assuming Tee of size 35x23.5x1.5 mm @ 600 mm centre to centre 3x4x0.60 m = 7.20 m (-) 2x0.30 = (-) 0.60 m Total =6.60 m @ 0.247 kg/m = 1.630 kg Perimeter angle aluminium - assuming size 25.4x25.4xl .63 mm @ 600 mm centre to centre 4x2.40 m = 9.60 m @ 0.213 kg/m = 2.045 kg (ii) CLEATS Aluminium angle- assuming size 25.4x25.4xl.63 mm Extra for light fittings =3x2x2 = 12.00 Corner = 4.00 For joining runners = 42.00 Total = 58.00x0.025 = 1.45 m@ 0.213 kg/m = 0.309 kg Sub total = 2.370 + 1.630 + 2.045 + 0.309 = 6.354 kg Add 5% wastage = 0.318 kg Total = 6.672 kg				
7306	Aluminium T or L sections (iii) C.P. brass/ stainless steel screws 20 mm for angle cleats	kilogram	6.672	220.00	1,467.84
0589	Chromium plated Brass screws 20 mm (iv) Rawl plug for fixing perimeter angles	100 nos	1.16	100.00	1.16
7048	Rawl plug 50 mm (designation 10 nos) Epoxy	each	24.00	10.00	240.00
7392	Powder coating 50 microns on aluminium sections (vi)	kilogram	6.67	64.00	426.88
9999	Carriage of material (vii)	L.S.	13.00	1.49	19.37
9999	C.P. brass screws for fixing frame with suspenders LABOUR: For fabrication and erection	L.S.	13.00	1.49	19.37
0111	Carpenter 1 st class	day	0.64	301.00	192.64
0114	Beldar	day	0.64	247.00	158.08

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Scaffolding and sundries	L.S.	13.00	1.49	19.37
	TOTAL				2,544.71
	Add Water Charges @ 1%				25.45
	TOTAL				2,570.16
	Add CPOH @ 15%				385.52
	Cost of 6.35 kg				2,955.68
	Cost of 1 kg				465.46
	Say				465.45

21.6 Providing and fixing 6 mm dia. G.I. level adjusting hangers (upto 1200 mm length), fixed to roof slabs by means of ceiling cleats made out of G.I. flat 40x3 mm size 60 mm long and stainless steel expandable dash fastener of 12.5 mm dia and 50 mm long, complete as per direction of Engineer -in-charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 23 nos (hangers in 2.40m x 2.40 m = 5.76 sqm)				
	MATERIAL:				
	6 mm dia G.I. adjustable hangers including clips (upto 1.20 metre length)				
	For light fiting 2x4=8.00 Nos				
	For runners = 15.00 total = 23.00 Nos				
7395	6 mm dia G.I. adjustable hangers including clips (up to 1.2 m length)	each	23.00	28.00	644.00
	Ceiling cleats				
	G.I. flat 40X3 mm 60mm long				
	23x0.06= 1.38m@0.95kg/m= 1.31kg				
	Add 5% wastage = 0.07 kg				
	Total = 1.38 kg				
0992	Galvanised steel plain sheets	quintal	0.014	4,750.00	66.50
7388	Dash hold fastener 12.5 mm dia, 50 mm long with 6 mm dia bolt	each	23.00	48.00	1,104.00
9999	Carriage of material	L.S.	5.20	1.49	7.75
	LABOUR:				
0111	Carpenter 1 st class	day	0.35	301.00	105.35
0114	Beldar	day	0.27	247.00	66.69
	TOTAL				1,994.29
	Add Water Charges @ 1%				19.94
	TOTAL				2,014.23
	Add CPOH @ 15%				302.13
	Cost of 23 nos				2,316.36
	Cost of each				100.71
	Say				100.70

21.7 Providing and fixing machine moulded aluminium covering of approved pattern & design, made out of machine cut aluminium sheet and machine holed for receiving dash fastener, over expansion joints on vertical surfaces/ceiling floors , the fixing on plate in one row on one side of joint only shall be done with stainless steel dash fastners of 8 mm dia and 75 mm long bolt including providing aluminim-washers 2 mm thick 15 mm dia, at a staggered pitch of 200 mm centre to centre including drilling holes in the receiving surface and providing expandable plastic sleeves in holes etc. complete as per drawing and direction of Engineer-in-charge.

21.7.1 Anodised aluminium sheet 2.5 mm thick (anodised transparent or dyed to required shade according to IS: 1868, Minimum anodic coating of grade AC 15)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 7 kg MATERIAL: Anodised aluminium sheet 2.5 mm thick, 170 mm wide 5.88m x0.17m = 1.00 sqm @ 7.00 kg/sqm = 7.00kg Add 5% wastage = 0.035 kg Total = 7.35 kg				
2704	Aluminium Strip 40 mm wide and 2 mm thick	kilogram	7.35	210.00	1,543.50
7389	Anodising 15 microns on aluminium sections	kilogram	7.35	40.00	294.00
7347	Cadmium plated full threaded steel screws (30x4 mm dia)	100 Nos	30.00	28.00	8.40
7348	Aluminium washer 2 mm thick 15 mm dia	100 nos	30.00	10.00	3.00
8776	Stainless steel dash fastener of 8 mm dia and 75 mm long bolt	each	30.00	20.00	600.00
9999	Carriage of material	L.S.	6.50	1.49	9.68
	LABOUR:				
0112	Carpenter 2nd class	day	0.392	273.00	107.02
0114	Beldar	day	0.392	247.00	96.82
9999	Sundries including machine work	L.S.	21.45	1.49	31.96
	TOTAL				2,694.38
	Add Water Charges @ 1%				26.94
	TOTAL				2,721.32
	Add CPOH @ 15%				408.20
	Cost of 7 kg				3,129.52
	Cost of 1 kg				447.07
	Say				447.05

21.7.2 Powder coated aluminium sheet 2.5 mm thick (minimum thickness of powder coating 50 micron)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 7 kg MATERIAL: Anodised aluminium sheet 2.5 mm thick, 170 mm wide 5.88 mm x0.17m =1.00 m@ 7.00kg/sqm wide Add 5% wastage = 0.35 kg Total = 7.35 kg				
2704	Aluminium Strip 40 mm wide and 2 mm thick	kilogram	7.35	210.00	1,543.50
7392	Powder coating 50 microns on aluminium sections	kilogram	7.35	64.00	470.40
7347	Cadmium plated full threaded steel screws (30x4 mm dia)	100 Nos	30.00	28.00	8.40
7348	Aluminium washer 2 mm thick 15 mm dia	100 nos	30.00	10.00	3.00
8776	Stainless steel dash fastener of 8 mm dia and 75 mm long bolt	each	30.00	20.00	600.00
9999	Carriage of material	L.S.	6.50	1.49	9.68
	LABOUR:				
0112	Carpenter 2nd class	day	0.392	273.00	107.02
0114	Beldar	day	0.392	247.00	96.82

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries including machine work	L.S.	21.45	1.49	31.96
	TOTAL				2,870.78
	Add Water Charges @ 1%				28.71
	TOTAL				2,899.49
	Add CPOH @ 15%				434.92
	Cost of 7 kg				3,334.41
	Cost of 1 kg				476.34
	Say				476.35

21.8 Filling the gap in between aluminium frame & adjacent RCC / Brick / Stone work by providing weather silicon sealant over backer rod of approved quality as per architectural drawings and direction of Engineer-in-Charge complete.

21.8.1 Upto 5 mm depth and 5 mm width

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one metre				
	MATERIAL:				
8646	Silicon sealant (including 5% wastage)	cartridge	0.087	307.00	26.71
8654	Masking tape	metre	2.00	1.55	3.10
9999	Sundries and profile	L.S.	2.60	1.49	3.87
9999	Labour	L.S.	20.80	1.49	30.99
	TOTAL				64.67
	Add Water Charges @ 1%				0.65
	TOTAL				65.32
	Add CPOH @ 15%				9.80
	Cost of 1 metre				75.12
	Say				75.10

21.9 Extra for applying additional anodic coating AC 25 instead of AC 15 to aluminium extruded sections.

21.9.1 For fixed portion

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 41.09 kg				
	Difference in cost of				
7391	Anodising 25 microns on aluminium sections	kilogram	41.09	50.00	2,054.50
7389	Anodising 15 microns on aluminium sections	kilogram	-41.09	40.00	-1,643.60
	TOTAL				410.90
	Add Water Charges @ 1%				4.11
	TOTAL				415.01
	Add CPOH @ 15%				62.25
	Cost of 41.09 kg				477.26
	Cost of 1 kg				11.62
	Say				11.60

21.9.2 For shutters of doors, windows & ventilators

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 21.65 kg				
	Difference in cost of				
7391	Anodising 25 microns on aluminium sections	kilogram	21.65	50.00	1,082.50
7389	Anodising 15 microns on aluminium sections	kilogram	-21.65	40.00	-866.00
	TOTAL				216.50
	Add Water Charges @ 1%				2.16
	TOTAL				218.66
	Add CPOH @ 15%				32.80
	Cost of 21.65 kg				251.46
	Cost of 1 kg				11.61
	Say				11.60

21.10 Providing and fixing double glazed hermetically sealed glazing in aluminium windows, ventilators and partition etc. with 6 mm thick clear float glass both side, having 12 mm air gap, including providing EPDM gasket, perforated aluminium spacers, desiccants, sealant (Both primary and secondary sealant) etc. as per specifications, drawings and direction of Engineer-in-Charge complete.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 sqm				
	MATERIAL:				
	Hermetically sealled double glazed unit made with 6mm thick clear float glass both side having 12 mm air gap. = 1.00 sqm				
	Add for wastage & breakage @ 10% = 0.10sqm				
	Total =1.10sqm				
8648	Hermetically sealed double glazed unit made with 6 mm thick clear float glass both side having 12 mm air gap	sqm	1.10	2,290.00	2,519.00
9999	Carriage of glass	L.S.	6.66	1.49	9.92
7390	Neoprene/EPDM rubber gasket	metre	6.00	25.00	150.00
	LABOUR:				
	Glazier /				
0112	Carpenter 2nd class	day	0.23	273.00	62.79
0114	Beldar	day	0.46	247.00	113.62
9999	Sundries and carriage of gasket	L.S.	6.89	1.49	10.27
	TOTAL				2,865.60
	Add Water Charges @ 1%				28.66
	TOTAL				2,894.26
	Add CPOH @ 15%				434.14
	Cost of 1 sqm				3,328.40
	Say				3,328.40

21.11 Providing and fixing stainless steel (SS 304 grade) adjustable friction windows stays of approved quality with necessary stainless steel screws etc. to the side hung windows as per direction of Engineer-in-Charge complete.

21.11.1 205 X 19 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos.				
	MATERIAL:				
8649	Stainless steel (SS 304 grade) adjustable friction window stay 205 x 19 mm	each	10.00	168.00	1,680.00
8647	Stainless steel screws 30 mm x4 mm	100 Nos	40.00	29.00	11.60
9999	Carriage	L.S.	2.73	1.49	4.07
	LABOUR:				
0112	Carpenter 2nd class	day	0.14	273.00	38.22
0114	Beldar	day	0.14	247.00	34.58
	TOTAL				1,768.47
	Add Water Charges @ 1%				17.68
	TOTAL				1,786.15
	Add CPOH @ 15%				267.92
	Cost of 10 nos				2,054.07
	Cost of each				205.41
	Say				205.40

21.11.2 255 X 19 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos				
	MATERIAL:				
8650	Stainless steel (SS 304 grade) adjustable friction window stay 255 x 19 mm	each	10.00	189.00	1,890.00
8647	Stainless steel screws 30 mm x4 mm	100 Nos	40.00	29.00	11.60
9999	Carriage	L.S.	2.73	1.49	4.07
	LABOUR:				
0112	Carpenter 2nd class	day	0.14	273.00	38.22
0114	Beldar	day	0.14	247.00	34.58
	TOTAL				1,978.47
	Add Water Charges @ 1%				19.78
	TOTAL				1,998.25
	Add CPOH @ 15%				299.74
	Cost of 10 nos				2,297.99
	Cost of each				229.80
	Say				229.80

21.11.3 355 X 19 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos				
	MATERIAL:				
8651	Stainless steel (SS 304 grade) adjustable friction window stay 355 x 19 mm	each	10.00	236.00	2,360.00
8647	Stainless steel screws 30 mm x4 mm	100 Nos	40.00	29.00	11.60
9999	Carriage	L.S.	2.73	1.49	4.07

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	LABOUR:				
0112	Carpenter 2nd class	day	0.14	273.00	38.22
0114	Beldar	day	0.14	247.00	34.58
	TOTAL				2,448.47
	Add Water Charges @ 1%				24.48
	TOTAL				2,472.95
	Add CPOH @ 15%				370.94
	Cost of 10 nos				2,843.89
	Cost of each				284.39
	Say				284.40

21.11.4 510X19 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos				
	MATERIAL:				
8652	Stainless steel (SS 304 grade) adjustable friction window stay 510 x 19 mm	each	10.00	437.00	4,370.00
8647	Stainless steel screws 30 mm x4 mm	100 Nos	40.00	29.00	11.60
9999	Carriage	L.S.	2.73	1.49	4.07
	LABOUR:				
0112	Carpenter 2nd class	day	0.14	273.00	38.22
0114	Beldar	day	0.14	247.00	34.58
	TOTAL				4,458.47
	Add Water Charges @ 1%				44.58
	TOTAL				4,503.05
	Add CPOH @ 15%				675.46
	Cost of 10 nos				5,178.51
	Cost of each				517.85
	Say				517.85

21.11.5 710X19 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos				
	MATERIAL:				
8653	Stainless steel (SS 304 grade) adjustable friction window stay 710 x 19 mm	each	10.00	793.00	7,930.00
8647	Stainless steel screws 30 mm x4 mm	100 Nos	40.00	29.00	11.60
9999	Carriage	L.S.	2.73	1.49	4.07
	LABOUR:				
0112	Carpenter 2nd class	day	0.14	273.00	38.22
0114	Beldar	day	0.14	247.00	34.58
	TOTAL				8,018.47
	Add Water Charges @ 1%				80.18
	TOTAL				8,098.65
	Add CPOH @ 15%				1,214.80
	Cost of 10 nos				9,313.45
	Cost of each				931.35
	Say				931.35

21.12 Providing and fixing aluminium tubular handle bar 32 mm outer dia, 3.0 mm thick & 2100 mm long with SS screws etc .complete as per direction of Engineer-in-Charge.

21.12.1 Anodized (AC 15) aluminium tubular handle bar

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos handle bar.				
	MATERIAL:				
	10x22/7 x 1/4 (0.032x0.032 - 0.026 x 0.026) x 2.10 = 0.0057 cum				
	0.0057 cum @ 2710 kg/ cum = 15.56kg				
	Add 5% wastage = 0.78 kg				
	Total = 16.34 kg				
7306	Aluminium T or L sections	kilogram	16.34	220.00	3,594.80
7389	Anodising 15 microns on aluminium sections	kilogram	16.34	40.00	653.60
9999	Carriage of material	L.S.	4.42	1.49	6.59
8647	Stainless steel screws 30 mm x4 mm	100 Nos	8.00	29.00	2.32
	LABOUR:				
0111	Carpenter 1 st class	day	0.125	301.00	37.62
	TOTAL				4,294.93
	Add Water Charges @ 1%				42.95
	TOTAL				4,337.88
	Add CPOH @ 15%				650.68
	Cost of 10 nos				4,988.56
	Cost of each				498.86
	Say				498.85

21.12.2 Powder coated minimum thickness 50 micron aluminium tubular handle bar

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos handle bar.				
	MATERIAL:				
	10x22/7 x 1/4 (0.032x0.032 - 0.026 x 0.026) x 2.10 = 0.0057 cum				
	0.0057 cum @ 2710 kg/ cum = 15.56kg				
	Add 5% wastage = 0.78 kg				
	Total = 16.34 kg				
7306	Aluminium T or L sections	kilogram	16.34	220.00	3,594.80
	Epoxy				
7392	Powder coating 50 microns on aluminium sections	kilogram	16.34	64.00	1,045.76
9999	Carriage of material	L.S.	4.42	1.49	6.59
8647	Stainless steel screws 30 mm x4 mm	100 Nos	8.00	29.00	2.32
	LABOUR:				
0111	Carpenter 1 st class	day	0.125	301.00	37.62
	TOTAL				4,687.09
	Add Water Charges @ 1%				46.87
	TOTAL				4,733.96
	Add CPOH @ 15%				710.09
	Cost of 10 nos				5,444.05
	Cost of each				544.41
	Say				544.40

21.12.3 Polyester powder coated minimum thickness 50 micron aluminium tubular handle bar

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos handle bar.				
	MATERIAL:				
	10x22/7 x 1/4 (0.032x0.032 - 0.026 x 0.026) x 2.10 = 0.0057 cum				
	0.0057 cum @ 2710 kg/ cum = 15.56kg				
	Add 5% wastage = 0.78 kg				
	Total = 16.34 kg				
7306	Aluminium T or L sections	kilogram	16.34	220.00	3,594.80
7393	Polyester powder coating 50 microns on aluminium sections	kilogram	16.34	70.00	1,143.80
9999	Carriage of material	L.S.	4.42	1.49	6.59
8647	Stainless steel screws 30 mm x4 mm	100 Nos	8.00	29.00	2.32
	LABOUR:				
0111	Carpenter 1 st class	day	0.125	301.00	37.62
	TOTAL				4,785.13
	Add Water Charges @ 1%				47.85
	TOTAL				4,832.98
	Add CPOH @ 15%				724.95
	Cost of 10 nos				5,557.93
	Cost of each				555.79
	Say				555.80

21.13 Providing and fixing 100 mm brass locks (best make of approved quality) for aluminium doors including necessary cutting and making good etc. complete.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no				
	MATERIAL:				
7001	Brass 100mm mortice latch and lock with 6 levers without pair of handles	each	1.00	250.00	250.00
	LABOUR:				
0111	Carpenter 1 st class	day	0.17	301.00	51.17
9999	Sundry and screws	L.S.	3.64	1.49	5.42
	TOTAL				306.59
	Add Water Charges @ 1%				3.07
	TOTAL				309.66
	Add CPOH @ 15%				46.45
	Cost of each				356.11
	Say				356.10

21.14 Providing and fixing anodised aluminium (anodised transparent or dyed to required shade according to IS: 1868. Minimum anodic coating of grade AC 15) sub frame work for windows and ventilators with extruded built up standard tubular sections of approved make conforming to IS: 733 and IS: 1285, fixed with dash fastener of required dia and size (Dash fastener to be paid for separately).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 4.082 kg				
	MATERIAL:				
	Aluminium Section				
	(i) External member of the frame (Jindal section no TU/ 3644)				
	V = 2x2.00 = 4.00 m				
	H = 2x1.20 = 2.40 m				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Total = 6.40 m @ 0.607 kg/m = 3.885kg Angle cleat 38x38x4.8 mm 50 mm long 4x0.05 = 0.200 m @ 0.985 kg/m = 0.197 kg sub total = 4.082kg. Add 5% wastage = 0.204kg Total = 4.286kg				
7306	Aluminium T or L sections	kilogram	4.286	220.00	942.92
0589	Chromium plated Brass screws 20 mm	100 nos	8.00	100.00	8.00
7389	Anodising 15 microns on aluminium sections	kilogram	4.286	40.00	171.44
9999	Carriage of material	L.S.	5.20	1.49	7.75
	LABOUR:				
	For fabrication of frame				
0116	Fitter (grade 1)	day	0.04	301.00	12.04
0139	Skilled Beldar (for floor rubbing etc.)	day	0.04	260.00	10.40
0114	Beldar	day	0.02	247.00	4.94
0100	Bandhani	day	0.01	260.00	2.60
9999	Labour for drilling holes, hire charges of drill, electricity charges, carriage of dash hold fastners and sundries	L.S.	5.20	1.49	7.75
	TOTAL				1,167.84
	Add Water Charges @ 1%				11.68
	TOTAL				1,179.52
	Add CPOH @ 15%				176.93
	Cost of 4.082 kg				1,356.45
	Cost of 1 kg				332.30
	Say				332.30

21.15 Providing and fixing aluminium casement windows fastener of required length for aluminium windows with necessary screws etc. complete.

21.15.1 Anodized (AC 15) aluminium

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos				
	MATERIAL:				
8660	Aluminium casement window fastener (Anodised AC 15)	each	10.00	40.00	400.00
8666	Stainless steel screws 25 mm x4 mm	100 Nos	40.00	32.00	12.80
	LABOUR:				
0111	Carpenter 1 st class	day	0.06	301.00	18.06
9999	Carriage of material	L.S.	2.73	1.49	4.07
	TOTAL				434.93
	Add Water Charges @ 1%				4.35
	TOTAL				439.28
	Add CPOH @ 15%				65.89
	Cost of 10 nos				505.17
	Cost of each				50.52
	Say				50.50

21.15.2 Powder coated minimum thickness 50 micron aluminium

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos				
	MATERIAL:				
8661	Aluminium casement window fastener (powder coated)	each	10.00	41.00	410.00
8666	Stainless steel screws 25 mm x4 mm	100 Nos	40.00	32.00	12.80
	LABOUR:				
0111	Carpenter 1 st class	day	0.06	301.00	18.06
9999	Carriage of material	L.S.	2.73	1.49	4.07
	TOTAL				444.93
	Add Water Charges @ 1%				4.45
	TOTAL				449.38
	Add CPOH @ 15%				67.41
	Cost of 10 nos				516.79
	Cost of each				51.68
	Say				51.70

21.15.3 Polyester powder coated minimum thickness 50 micron aluminium

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos				
	MATERIAL:				
8662	Aluminium casement window fastener (polyester powder coated)	each	10.00	42.00	420.00
8666	Stainless steel screws 25 mm x4 mm	100 Nos	40.00	32.00	12.80
	LABOUR:				
0111	Carpenter 1 st class	day	0.06	301.00	18.06
9999	Carriage of material	L.S.	2.73	1.49	4.07
	TOTAL				454.93
	Add Water Charges @ 1%				4.55
	TOTAL				459.48
	Add CPOH @ 15%				68.92
	Cost of 10 nos				528.40
	Cost of each				52.84
	Say				52.85

21.16 Providing and fixing aluminium round shape handle of outer dia 100 mm with SS screws etc. complete as per direction of Engineer-in-Charge.

21.16.1 Anodized (AC 15) aluminium

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos				
	MATERIAL:				
8663	Aluminium round shape handle (anodised AC 15)	each	10.00	49.00	490.00
8666	Stainless steel screws 25 mm x4 mm	100 Nos	40.00	32.00	12.80
	LABOUR:				
0111	Carpenter 1 st class	day	0.06	301.00	18.06
9999	Carriage of material	L.S.	2.73	1.49	4.07
	TOTAL				524.93
	Add Water Charges @ 1%				5.25
	TOTAL				530.18
	Add CPOH @ 15%				79.53
	Cost of 10 nos				609.71
	Cost of each				60.97
	Say				60.95

21.16.2 Powder coated minimum thickfness 50 micron aluminium

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos				
	MATERIAL:				
8664	Aluminium round shape handle (powder coated)	each	10.00	54.00	540.00
8666	Stainless steel screws 25 mm x4 mm	100 Nos	40.00	32.00	12.80
	LABOUR:				
0111	Carpenter 1 st class	day	0.06	301.00	18.06
9999	Carriage of materials	L.S.	2.73	1.49	4.07
	TOTAL				574.93
	Add Water Charges @ 1%				5.75
	TOTAL				580.68
	Add CPOH @ 15%				87.10
	Cost of 10 nos				667.78
	Cost of each				66.78
	Say				66.80

21.16.3 Polyester powder coated minimum thickness 50 micron aluminium

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos				
	MATERIAL:				
8665	Aluminium round shape handle (polyester powder coated)	each	10.00	59.00	590.00
8666	Stainless steel screws 25 mm x4 mm	100 Nos	40.00	32.00	12.80
	LABOUR:				
0111	Carpenter 1 st class	day	0.06	301.00	18.06
9999	Carriage of materials	L.S.	2.73	1.49	4.07
	TOTAL				624.93
	Add Water Charges @ 1%				6.25
	TOTAL				631.18
	Add CPOH @ 15%				94.68
	Cost of 10 nos				725.86
	Cost of each				72.59
	Say				72.60

21.17 Providing and fixing anodised aluminium grill (anodised transparent or dyed to required shade according to IS: 1868 with minimum anodic coating of grade AC 15) of approved design/pattern, with approved standard section and fixed to the existing window frame with C.P. brass/ stainless steel screws @ 200 mm centre to centre, including cutting the grill to proper opening size for fixing and operation of handles and fixing approved anodised aluminium standard section around the opening, all complete as per requirement and direction of Engineer-in-charge. (Only weight of grill to be measured for payment).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 kg				
	MATERIAL:				
	Aluminium grill = 10 Kg.				
	Add Wastage @ 20% = 2 Kg.				
	= 12 Kg.				
8774	Aluminium Grill	kg	12.00	250.00	3,000.00
9999	Carriage	L.S.	11.00	1.49	16.39
	LABOUR:				
	for fixing				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0116	Fitter (grade 1)	day	0.50	301.00	150.50
0139	Skilled Beldar (for floor rubbing etc.)	day	0.25	260.00	65.00
0114	Beldar	day	0.25	247.00	61.75
0100	Bandhani	day	0.05	260.00	13.00
9999	Sundries	L.S.	25.00	1.49	37.25
	TOTAL				3,343.89
	Add Water Charges @ 1%				33.44
	TOTAL				3,377.33
	Add CPOH @ 15%				506.60
	Cost of 10 kg				3,883.93
	Cost of 1 kg				388.39
	Say				388.40

21.18 Providing and fixing 12 mm thick frameless toughened glass door shutter of approved brand and manufacture, including providing and fixing top & bottom pivot & spring type fixing arrangement and making necessary holes etc. for fixing required door fittings, all complete as per direction of Engineer-in-charge (Door handle, lock and stopper etc.to be paid separately).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 2.10 sqm				
	MATERIAL:				
	Glass= 2.10 Sqm.				
	Add Wastage @ 10% = 0.21 sqm.				
	Total= 2.31 sqm.				
8778	Toughened glass 12 mm thickness	sqm	2.31	1,800.00	4,158.00
9999	Carriage of glass panes and other materials	L.S.	8.19	1.49	12.20
9999	Methylated spirit	L.S.	5.33	1.49	7.94
21.4.1	Stainless steel pivot and spring type fixing Rate as per Item Number 21.4.1 of SH: Aluminium Work	each	2.00	1,953.10	3,906.20 (A)
	LABOUR:				
0119	Glazier	day	0.90	273.00	245.70
0114	Beldar	day	0.90	247.00	222.30
9999	Sundries, sush rog cotton etc.	L.S.	1.13	1.49	1.68
	TOTAL				8,554.02
	Add Water Charges @ 1% except on A i.e on (8,554.02 - 3,906.20 =) 4,647.82				46.48
	TOTAL				8,600.50
	Add CPOH @ 15% except on A i.e on (8,600.50 - 3,906.20 =) 4,694.30				704.14
	Cost of 2.1 sqm				9,304.64
	Cost of 1 sqm				4,430.78
	Say				4,430.80

SUB HEAD : 22

WATER PROOFING

22.1 Providing and laying integral cement based treatment for water proofing on horizontal surface at all depth below ground level for under ground structures as directed by Engineer-in-Charge and consisting of : i) 1st layer of 22 mm to 25 mm thick approved and specified rough stone slab over a 25 mm thick base of cement mortar 1:3 (1 cement : 3 coarse sand) mixed with water proofing compound conforming to IS:2645 in the recommended proportion over the leveling course (leveling course to be paid separately). Joints sealed and grouted with cement slurry mixed with water proofing compound. ii) 2nd layer of 25 mm thick cement mortar 1:3 (1 cement : 3 coarse sand) mixed with water proofing compound in recommended proportions. iii) Finishing top with stone aggregate of 10 mm to 12 mm nominal size spreading @ 8 cudm/sqm thoroughly embedded in the 2nd layer.

22.1.1 Using rough kota stone

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm MATERIAL: 1st layer Cement mortar 1:3 for fixing of stone 10 x 0.025 = 0.25				
3.8	Rate as per Item Number 3.8 of SH: Mortars Kota stone slab = 10 sqm Wastage @ 10% = 1 sqm Total = 11 sqm	cum	0.25	4,145.55	1,036.39
1169	Kota stone slab 25mm thick (rough chiseled) Carriage 11x0.025 @2330 kg/m3 = 0.64 t	sqm	11.00	175.00	1,925.00
2216	Carriage of stone blocks white & red sand stone & kota stone slab Cement mortar 1:3 10x0.025 = 0.25 cum Wastage @ 12% = 0.03 cum Total = 0.28 cum	tonne	0.64	77.87	49.84
3.8	Rate as per Item Number 3.8 of SH: Mortars for slurry Bed 2x10.00 @ 2kg/m3 = 40.00 kg Joints 4x3.7x0.02x0.037 = 0.011 cum 25x0.6x0.02x0.037 = 0.011 cum = 0.022 cum @ 1440 kg/cum =31.68 kg Total = 71.88 kg or 0.072 t	cum	0.28	4,145.55	1,160.75
0367	Portland Cement	tonne	0.072	5,000.00	360.00
2209	Carriage of cement Mortar = 0.25 + 0.28 = 0.53 cum Cement in 0.53 cum @ 5.1 q/cum = 2.7 quintal Cement in slurry = 0.73 quintal Total = 3.43 quintal @ 1 kg for 50 kg of cement i.e. 6.86 kg	tonne	0.072	77.87	5.61
1213	Water proofing materials	kilogram	6.86	25.00	171.50
0296	Stone Aggregate (Single size) : 12.5 mm nominal size @ 8 cudm/sqm 1x10.3x8x1/1000 = 0.08 cum	cum	0.08	1,050.00	84.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	CARRIAGE:				
2202	Carriage of stone aggregate below 40 mm nominal size	cum	0.08	87.60	7.01
	Labour for base mortar & kota stone laying i/c slurry job				
0125	Mason (for plain stone work) 2nd class	day	1.20	273.00	327.60
0114	Beldar	day	1.00	247.00	247.00
0115	Coolie	day	1.00	247.00	247.00
	Labour for top layer & spreading stone grit				
0125	Mason (for plain stone work) 2nd class	day	1.08	273.00	294.84
0114	Beldar	day	1.08	247.00	266.76
0101	Bhisti	day	0.45	260.00	117.00
9999	Sundries	L.S.	6.24	1.49	9.30
	TOTAL				6,309.60
	Add Water Charges @ 1%				63.10
	TOTAL				6,372.70
	Add CPOH @ 15%				955.90
	Cost of 10 sqm				7,328.60
	Cost of 1 sqm				732.86
	Say				732.85

22.2 Providing and laying integral cement based treatment for water proofing on the vertical surface by fixing specified stone slab 22 mm to 25 mm thick with cement slurry mixed with water proofing compound conforming to IS:2645 in recommended proportions with a gap of 20 mm (minimum) between stone slabs and the receiving surfaces and filling the gaps with neat cement slurry mixed with water proofing compound and finishing the exterior of stone slab with cement mortar 1:3 (1 cement : 3 coarse sand) 20 mm thick with neat cement punning mixed with water proofing compound in recommended proportion complete at all levels and as directed by Engineer-in-Charge:

22.2.1 Using rough Kota stone

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
	1st layer				
	Kota stone slab = 10 sqm				
	Wastage 10% = 1 sqm				
	Total = 11 sqm				
1169	Kota stone slab 25mm thick (rough chiseled)	sqm	11.00	175.00	1,925.00
	Cartage 11x0.025 @ 2330 kg/m3 = 0.64t				
2216	Carriage of stone blocks white & red sand stone & kota stone slab	tonne	0.64	77.87	49.84
	Cement slurry for jointing				
	6x3.70 = 22.20 m				
	7x2.78= 19.46 m				
	=41.66x0.025x0.012 = 0.013 cum				
	Cement slurry for filling 20 mm gap				
	10x0.02 = 0.200 cum				
	= 0.213 cum @ 1440 kg/cum = 306.70 kg or 0.307 t say 0.31 t				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0367	Portland Cement	tonne	0.31	5,000.00	1,550.00
2209	Carriage of cement	tonne	0.31	77.87	24.14
	Cement plaster 1:3 with neat cement punning)				
13.9.2	Rate as per Item Number 13.9.2 of SH: Finishing	sqm	10.00	233.80	2,338.00 (A)
	Water proofing material				
	Cement slurry = 0.31 t = 310 kg				
	Cement plaster 1:3 @ 13.62 q/100sqm = 136.20 kg				
	Total = 446.20 kg @ 1 kg for 50 kg of cement i.e. 8.90 kg				
1213	Water proofing materials	kilogram	8.90	25.00	222.50
	LABOUR:				
	for fixing of Kota stone and applying cement & applying slurry				
0125	Mason (for plain stone work) 2nd class	day	3.00	273.00	819.00
0114	Beldar	day	3.00	247.00	741.00
0115	Coolie	day	1.00	247.00	247.00
9999	Sundries and scaffolding	L.S.	18.20	1.49	27.12
	TOTAL				7,943.60
	Add Water Charges @ 1% except on A i.e on (7,943.60 - 2,338.00 =) 5,605.60				56.06
	TOTAL				7,999.66
	Add CPOH @ 15% except on A i.e on (7,999.66 - 2,338.00 =) 5,661.66				849.25
	Cost of 10 sqm				8,848.91
	Cost of 1 sqm				884.89
	Say				884.90

22.3 Providing and laying water proofing treatment to vertical and horizontal surfaces of depressed portions of W.C., kitchen and the like consisting of: i) I 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) II course of 20 mm cement plaster 1:3 (1 cement : 3 coarse sand) mixed with water proofing compound in recommended proportion including rounding off junction of vertical and horizontal surface. iii) III course of applying blown or residual bitumen applied hot at 1.7 kg per sqm of area. iv) IV 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).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
	Cement slurry @ 4.4 kg/sqm = 44.00 kg or 0.044 t				
0367	Portland Cement	tonne	0.044	5,000.00	220.00
2209	Carriage of cement	tonne	0.044	77.87	3.43
	MATERIAL:				
	Cement plaster 1:3 (20 mm thick)				
3.8	Rate as per Item Number 3.8 of SH: Mortars	cum	0.224	4,145.55	928.60

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	LABOUR:				
0155	Mason (average)	day	0.94	287.00	269.78
0115	Coolie	day	1.02	247.00	251.94
0101	Bhisti	day	1.10	260.00	286.00
9999	Scafolding and sundries	L.S.	12.61	1.49	18.79
0313	Blown type petroleum bitumen of penetration 85/25 of approved quality = 10x1.70= 17 kg = 0.017 t	tonne	0.017	37,000.00	629.00
2211	Carriage of tar / bitumen	tonne	0.017	87.60	1.49
3002	Polyvinyle chloride sheet 400 micron thick	sqm	10.00	31.00	310.00
9999	Carriage	L.S.	13.00	1.49	19.37
1213	Water proofing materials @ 1 kg per 50 kg of cement used Cement slurry = 44 kg Cement plaster 1:3 10x(13.62xl00)/100= 136.2 kg Total = 180.2 kg/50 = 3.60 kg	kilogram	3.60	25.00	90.00
	MATERIAL:				
0131	Painter	day	0.20	273.00	54.60
0114	Beldar	day	1.33	247.00	328.51
0130	Mistry	day	0.06	301.00	18.06
9999	Sundries	L.S.	7.28	1.49	10.85
	TOTAL				3,440.42
	Add Water Charges @ 1%				34.40
	TOTAL				3,474.82
	Add CPOH @ 15%				521.22
	Cost of 10 sqm				3,996.04
	Cost of 1 sqm				399.60
	Say				399.60

22.4 Providing and Placing in position suitable PVC water stops conforming to IS : 12200 for construction / expansion joints between two RCC members and fixed to the reinforcement with binding wire before pouring concrete etc. complete:

22.4.1 Serrated with central bulb (225 mm wide, 8-11 mm thick)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 metres				
	MATERIAL:				
7427	Water stops Serrated with central bulb (225 mm wide, 8-11 mm thick)	metre	100.00	390.00	39,000.00
0114	Beldar	day	2.00	247.00	494.00
9999	Sundries & wire etc.	L.S.	26.00	1.49	38.74
	TOTAL				39,532.74
	Add Water Charges @ 1%				395.33
	TOTAL				39,928.07
	Add CPOH @ 15%				5,989.21
	Cost of 100 metre				45,917.28
	Cost of 1 metre				459.17
	Say				459.15

22.4.2 Dumb bell with central bulb (180 mm wide, 8 mm thick)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 metres				
	MATERIAL:				
7428	Water stops Dumb bell with central bulb	metre	100.00	351.00	35,100.00
	LABOUR:				
0114	Beldar	day	2.00	247.00	494.00
9999	Sundries & wire etc.	L.S.	26.00	1.49	38.74
	TOTAL				35,632.74
	Add Water Charges @ 1%				356.33
	TOTAL				35,989.07
	Add CPOH @ 15%				5,398.36
	Cost of 100 metre				41,387.43
	Cost of 1 metre				413.87
	Say				413.85

22.4.3 Kickers (320 mm wide, 5 mm thick)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 metres				
	MATERIAL:				
7429	Kickers	metre	100.00	360.00	36,000.00
	LABOUR:				
0114	Beldar	day	2.00	247.00	494.00
9999	Sundries & wire etc.	L.S.	26.00	1.49	38.74
	TOTAL				36,532.74
	Add Water Charges @ 1%				365.33
	TOTAL				36,898.07
	Add CPOH @ 15%				5,534.71
	Cost of 100 metre				42,432.78
	Cost of 1 metre				424.33
	Say				424.35

22.5 Providing and laying water proofing treatment in sunken portion of WCs, bathroom etc., by applying cement slurry mixed with water proofing cement compound consisting of applying : a) First layer of slurry of cement @ 0.488 kg /sqm mixed with water proofing cement compound @ 0.253 kg/sqm. This layer will be allowed to air cure for 4 hours. b) Second layer of slurry of cement @ 0.242 kg/ sqm mixed with water proofing cement compound @ 0.126 kg/ sqm. This layer will be allowed to air cure for 4 hours followed with water curing for 48 hours. The rate includes preparation of surface, treatment and sealing of all joints, corners, junctions of pipes and masonry with polymer mixed slurry.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
	Cement 10x(0.488 + 0.242) = 7.30 kg				
	Sealing fillets10 x 0.5 kg =5.00kg				
	Total = 12.30 kg = 0.012 tonne				
0367	Portland Cement	tonne	0.012	5,000.00	60.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
2209	Carriage of cement Bonding material 1.6 kgx30x2 = 96 kg Bitumen (blown/residual type) 10x(0.25+0.126) = 3.79kg Sealing fillets 10x0.10 kg / sqm = 1.00 kg Wastage @ 5% on 4.79 kg = 0.24 kg Total = 5.03 kg Say 5.00 kg	tonne	0.012	77.87	0.93
8501	Polymer modified cementation coating	kilogram	5.00	127.00	635.00
	LABOUR:				
0155	Mason (average)	day	2.00	287.00	574.00
0114	Beldar	day	2.00	247.00	494.00
0101	Bhisti	day	0.25	260.00	65.00
9999	Sundries, brushes etc.	L.S.	15.60	1.49	23.24
	TOTAL				1,852.17
	Add Water Charges @ 1%				18.52
	TOTAL				1,870.69
	Add CPOH @ 15%				280.60
	Cost of 10 sqm				2,151.29
	Cost of 1 sqm				215.13
	Say				215.15

22.6 Providing and laying water proofing treatment on roofs of slabs by applying cement slurry mixed with water proofing cement compound consisting of applying: a) after surface preparation, first layer of slurry of cement @ 0.488 kg/ sqm mixed with water proofing cement compound @ 0.253 kg/ sqm. b) laying second layer of fibre glass cloth when the first layer is still green. Overlaps of joints of fibre cloth should not be less than 10 cm. c) third layer of 1.5 mm thickness consisting of slurry of cement @ 1.289 kg/ sqm mixed with water proofing cement compound @ 0.670 kg/ sqm and coarse sand @ 1.289 kg/ sqm. This will be allowed to air cure for 4 hours followed by water curing for 48 hours. The entire treatment will be taken upto 30 cm on parapet wall and tucked into groove in parapet all around. d) fourth and final layer of brick tiling with cement mortar (which will be paid for separately. For the purpose of measurement the entire treated surface will be measured).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm MATERIAL: Cement 10x (1.289 + 0.488) = 17.77 kg Sealing fillets @ 10% = 1.77 kg Total = 19.54kg = 0.020 tonne				
0367	Portland Cement	tonne	0.02	5,000.00	100.00
2209	Carriage of cement Bonding material 1.6 kgx30x2 = 96 kg Bitumen (blown/residual type) 10x(0.253+0.67) = 9.23kg Wastage 5% = 0.46 kg Total = 9.69 kg	tonne	0.02	77.87	1.56
8501	Polymer modified cementation coating Fibre Glass cloth = 10.00 sqm Wastage 10 % - 1.00 sqm Total = 11.00 sqm	kilogram	9.69	127.00	1,230.63

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8502	Fibre glass cloth	sqm	11.00	39.00	429.00
	LABOUR:				
0155	Mason (average)	day	2.00	287.00	574.00
0114	Beldar	day	1.00	247.00	247.00
0101	Bhisti	day	0.25	260.00	65.00
9999	Sundries, brushes etc.	L.S.	23.40	1.49	34.87
	TOTAL				2,682.06
	Add Water Charges @ 1%				26.82
	TOTAL				2,708.88
	Add CPOH @ 15%				406.33
	Cost of 10 sqm				3,115.21
	Cost of 1 sqm				311.52
	Say				311.50

22.7 Providing and laying integral cement based water proofing treatment including preparation of surface as required for treatment of roofs, balconies, terraces etc consisting of following operations: a) Applying a slurry coat of neat cement using 2.75 kg/ sqm of cement admixed with water proofing compound conforming to IS. 2645 and approved by Engineer-in-Charge over the RCC slab including adjoining walls upto 300 mm height including cleaning the surface before treatment. b) Laying brick bats with mortar using broken bricks/brick bats 25 mm to 115 mm size with 50% of cement mortar 1:5 (1 cement : 5 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-Charge over 20 mm thick layer of cement mortar of mix 1:5 (1 cement : 5 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-Charge to required slope and treating similarly the adjoining walls upto 300 mm height including rounding of junctions of walls and slabs c) After two days of proper curing applying a second coat of cement slurry using 2.75 kg/ sqm of cement admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-Charge. d) Finishing the surface with 20 mm thick jointless cement mortar of mix 1:4 (1 cement : 4 coarse sand) admixed with water proofing compound conforming to IS: 2645 and approved by Engineer-in-Charge including laying glass fibre cloth of approved quality in top layer of plaster and finally finishing the surface with trowel with neat cement slurry and making pattern of 300x300 mm square 3 mm deep. e) The whole terrace so finished shall be flooded with water for a minimum period of two weeks for curing and for final be flooded with water for a minimum period of two weeks for curing and for final test. All above operations to be done in order and as directed and specified by the Engineer-in-Charge:

22.7.1 With average thickness of 120 mm and minimum thickness at khurra as 65 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
	i) Cement slurry				
0367	Portland Cement	tonne	0.0275	5,000.00	137.50
	ii) Cement mortar 1:5 (1 cement: 5 coarse sand)				
3.10	Rate as per Item Number 3.10 of SH: Mortars	cum	0.224	3,129.95	701.11
	iii) Roof treatment with brick bats and cement				
	mortar				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Materials:				
0285	Brick Aggregate (Single size) : 63 mm nominal size	cum	0.94	475.00	446.50
2260	Carriage of brick aggregate	cum	0.94	95.22	89.51
	Cement mortar 1:5				
3.10	Rate as per Item Number 3.10 of SH: Mortars	cum	0.50	3,129.95	1,564.98
	LABOUR:				
0114	Beldar	day	1.75	247.00	432.25
0101	Bhisti	day	0.28	260.00	72.80
0123	Mason (brick layer) 1 st class	day	0.05	301.00	15.05
0124	Mason (brick layer) 2nd class	day	0.05	273.00	13.65
0128	Mate	day	0.04	260.00	10.40
	Extra labour for ramming				
0114	Beldar	day	0.25	247.00	61.75
9999	Sundries	L.S.	13.65	1.49	20.34
	iv) Cement slury				
0367	Portland Cement	tonne	0.0275	5,000.00	137.50
0114	Beldar	day	0.20	247.00	49.40
	v) 20 mm cement plaster 1:4(1 cement: 4 coarse sand)				
13.6.1	Rate as per Item Number 13.6.1 of SH: Finishing	sqm	10.00	186.70	1,867.00 (A)
	vi) Water proofing compound 27.50+27.50+69.40+124.00 = 248.40 kg @ 1 kg per bag of cement				
1213	Water proofing materials	kilogram	5.00	25.00	125.00
	Extra for making chequers for 10 sqm				
7233	Fibre glass tissue reinforcement Type II Grade I	sqm	10.50	65.00	682.50
0124	Mason (brick layer) 2nd class	day	0.36	273.00	98.28
0114	Beldar	day	0.36	247.00	88.92
9999	Add labour for laying 20 mm bed mortar	L.S.	13.65	1.49	20.34
0124	Mason (brick layer) 2nd class	day	0.54	273.00	147.42
0114	Beldar	day	0.54	247.00	133.38
0101	Bhisti	day	0.45	260.00	117.00
	TOTAL				7,032.58
	Add Water Charges @ 1% except on A i.e on (7,032.58 - 1,867.00 =) 5,165.58				51.66
	TOTAL				7,084.24
	Add CPOH @ 15% except on A i.e on (7,084.24 - 1,867.00 =) 5,217.24				782.59
	Cost of 10 sqm				7,866.83
	Cost of 1 sqm				786.68
	Say				786.70

22.8 Providing and laying four courses water proofing treatment with bitumen felt over roofs consisting of first and third courses of blown bitumen 85/25 or 90/15 conforming to IS : 702 applied hot @ 1.45 Kg per square metre of area for each course, second course of roofing felt type 3 grade-I (hessian based self finished bitumen felt) and fourth and final course of stone grit 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 :

22.8.1 Bitumen felt (hessian base) type 3 grade I conforming to IS : 1322

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 30 sqm MATERIAL: Blown or / and residual bitumen applied hot = 2x1.45x30 = 87 kg				
0313	Blown type petroleum bitumen of penetration 85/25 of approved quality Hession felt type 3 Grade I (hessian base self finished bitumen felt) = 30 sqm Add for over lapping @ 10% = 3 sqm. Total = 33 Sqm	tonne	0.087	37,000.00	3,219.00
0322	Bitumen felt :Type 3 grade 1	sqm	33.00	50.00	1,650.00
1177	Stone grit 6 mm and down size or pea sized gravel 30x6=180 cudm	cum	0.18	900.00	162.00
2202	Carriage of stone aggregate below 40 mm nominal size	cum	0.18	87.60	15.77
2211	Carriage of tar / bitumen 0.087t+2.7x.001x33=0.162t	tonne	0.162	87.60	14.19
0370	Coal (steam) = 2 quintals/t of bitumen i.e. 2x0.087=0.174q	quintal	0.174	400.00	69.60
2200	Carriage of steam coal	tonne	0.0174	100.11	1.74
9999	Preparing roof surface, cutting groove and making good etc. LABOUR:	L.S.	134.55	1.49	200.48
0131	Painter	day	2.16	273.00	589.68
0114	Beldar	day	3.24	247.00	800.28
0130	Mistry	day	0.18	301.00	54.18
9999	Sudries, brushes etc.	L.S.	6.76	1.49	10.07
	TOTAL				6,786.99
	Add Water Charges @ 1%				67.87
	TOTAL				6,854.86
	Add CPOH @ 15%				1,028.23
	Cost of 30 sqm				7,883.09
	Cost of 1 sqm				262.77
	Say				262.75

22.9 Providing and laying six courses water proofing treatment with bitumen felt over roofs consisting of first, third and fifth course of blown bitumen 85/25 or 90/15 conforming to IS : 702 applied hot @ 1.45, 1.20 and 1.45 Kg per square metre of area respectively, second and fourth courses of roofing felt type 3 grade I conforming to IS : 1322 (Hessian based self finished bitumen felt) 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.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 30 sqm MATERIAL: Blown or / and residual bitumen applied hot 1.45+1.20+1.45)x30 = 123 kg				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0313	Blown type petroleum bitumen of penetration 85/25 of approved quality Bitumen felt type 3 grade I (hession base self finished bitumen felt) = 60 sqm.+ Add for over lapping @ 10% = 6 sqm. Total =66 Sqm	tonne	0.123	37,000.00	4,551.00
0322	Bitumen felt :Type 3 grade 1	sqm	66.00	50.00	3,300.00
2211	Carriage of tar / bitumen 0.123t+2.7x.001x66=0.273t	tonne	0.273	87.60	23.91
1177	Stone grit 6 mm and down size or pea sized gravel 30x6=180cudm	cum	0.18	900.00	162.00
2202	Carriage of stone aggregate below 40 mm nominal size	cum	0.18	87.60	15.77
0370	Coal (steam) = 2 quintals/t of bitumen i.e. 2x0.123=0.246q	quintal	0.246	400.00	98.40
2200	Carriage of steam coal	tonne	0.0246	100.11	2.46
9999	Preparing roof surface, cutting groove and making good etc. LABOUR:	L.S.	134.55	1.49	200.48
0131	Painter	day	3.24	273.00	884.52
0114	Beldar	day	4.86	247.00	1,200.42
0130	Mistry	day	0.20	301.00	60.20
9999	Sundries, brushes etc.	L.S.	6.76	1.49	10.07
	TOTAL				10,509.23
	Add Water Charges @ 1%				105.09
	TOTAL				10,614.32
	Add CPOH @ 15%				1,592.15
	Cost of 30 sqm				12,206.47
	Cost of 1 sqm				406.88
	Say				406.90

22.10 Providing and laying six courses water proofing treatment with bitumen felt over roofs consisting of first, third and fifth courses of blown or / and residual bitumen applied hot at 1.45, 1.20 and 1.70 kg per square metre of area respectively, second and fourth courses of roofing felt type 2 grade I (fibre base self finished bitumen felt) six and final courses of stone grit 6mm and down size or pea sized gravel spread at 6cu.dm per sqm including preparation of surface, excluding grading, compete.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 30 sqm MATERIAL: Blown bitumen applied hot (1.45+1.20+1.70)x30 = 130.5 kg.				
0313	Blown type petroleum bitumen of penetration 85/25 of approved quality Bitumen felt type B grade I (fibre base self finished bitumen felt) = 60 sqm.	tonne	0.1305	37,000.00	4,828.50

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Add for over lapping @ 10% = 6 sqm. Total =66 Sqm				
0318	Bitumen felt fibre base (vegetable or animal):Type 2 grade 1	sqm	66.00	55.00	3,630.00
2211	Carriage of tar / bitumen (0.131 t+2.22x.001x66 = 0.275t)	tonne	0.275	87.60	24.09
1177	Stone grit 6 mm and down size or pea sized gravel 30x6=180cudm	cum	0.18	900.00	162.00
	CARRIAGE:				
2202	Carriage of stone aggregate below 40 mm nominal size Fuel (Steam coal) = 2 quintals/t of bitumen i.e. 2x0.1305=0.261q	cum	0.18	87.60	15.77
0370	Coal (steam)	quintal	0.261	400.00	104.40
2200	Carriage of steam coal	tonne	0.0261	100.11	2.61
9999	Preparing roof surface, cutting groove and making good etc.	L.S.	134.55	1.49	200.48
	LABOUR:				
0131	Painter	day	4.32	273.00	1,179.36
0114	Beldar	day	6.48	247.00	1,600.56
0130	Mistry	day	0.36	301.00	108.36
9999	Sundries, brushes etc.	L.S.	6.76	1.49	10.07
	TOTAL				11,866.20
	Add Water Charges @ 1%				118.66
	TOTAL				11,984.86
	Add CPOH @ 15%				1,797.73
	Cost of 30 sqm				13,782.59
	Cost of 1 sqm				459.42
	Say				459.40

22.11 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.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 30 sqm MATERIAL: Blown or / and residual bitumen applied hot (1.45+1.20+1.70)x30 =130.5 kg.				
0313	Blown type petroleum bitumen of penetration 85/25 of approved quality Bitumen felt type 2 grade II (fibre base self finished bitumen felt) = 60 sqm.+ Add for over lapping @ 10% = 6 sqm. Total =66 Sqm	tonne	0.1305	37,000.00	4,828.50

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0319	Bitumen felt fibre base (vegetable or animal): grade 1 as per I.S code 7193	sqm	66.00	76.00	5016.00
2211	Carriage of tar / bitumen (0.131t+3.08x.001x66=334t.)	tonne	0.334	87.60	29.26
1177	Stone grit 6 mm and down size or pea sized gravel 30x6=180cudm	cum	0.18	900.00	162.00
2202	Carriage of stone aggregate below 40 mm nominal size Fuel (Steam coal) = 2 quintals/t of bitumen i.e. 2x0.1305=0.261q	cum	0.18	87.60	15.77
0370	Coal (steam)	quintal	0.261	400.00	104.40
2200	Carriage of steam coal	tonne	0.0261	100.11	2.61
9999	Preparing roof surface, cutting groove and making good etc.	L.S.	134.55	1.49	200.48
	LABOUR:				
0131	Painter	day	4.32	273.00	1,179.36
0114	Beldar	day	6.48	247.00	1,600.56
0130	Mistry	day	0.36	301.00	108.36
9999	Sundries, brushes etc.	L.S.	6.76	1.49	10.07
	TOTAL				13,257.33
	Add Water Charges @ 1%				132.57
	TOTAL				13,389.94
	Add CPOH @ 15%				2002.49
	Cost of 30 sqm				15,399.43
	Cost of 1 sqm				513.22
	Say				513.30

22.12 Supplying and applying bituminous solution primer on roof and or wall surface at 0.24 litre per sqm.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
0316	Bitumen solution primer of approved quality	litre	2.40	40.00	96.00
9999	Carriage	L.S.	1.43	1.49	2.13
	LABOUR:				
0131	Painter	day	0.17	273.00	46.41
0114	Beldar	day	0.17	247.00	41.99
9999	Sundries brushes etc.	L.S.	13.52	1.49	20.14
	TOTAL				206.67
	Add Water Charges @ 1%				2.07
	TOTAL				208.74
	Add CPOH @ 15%				31.31
	Cost of 10 sqm				240.05
	Cost of 1 sqm				24.01
	Say				24.00

22.13 Deduct for omitting in water proofing treatment final course of spreading stone grit 6mm down size or pea sized gravel:

22.13.1 At 6 cudm per sqm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
1177	Stone grit 6 mm and down size or pea sized gravel 6x10 = 60 cudm	cum	0.06	900.00	54.00
2202	Carriage of stone aggregate below 40 mm nominal size	cum	0.06	87.60	5.26
9999	Labour for screening and spreading grit	L.S.	21.58	1.49	32.15
9999	Sundries	L.S.	6.76	1.49	10.07
	TOTAL				101.48
	Add Water Charges @ 1%				1.01
	TOTAL				102.49
	Add CPOH @ 15%				15.37
	Cost of 10 sqm				117.86
	Cost of 1 sqm				11.79
	Say				11.80

22.13.2 At 8 cudm per sqm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
1177	Stone grit 6 mm and down size or pea sized gravel 6x10 = 60 cudm	cum	0.08	900.00	72.00
2202	Carriage of stone aggregate below 40 mm nominal size	cum	0.08	87.60	7.01
9999	Labour for screening and spreading grit	L.S.	26.91	1.49	40.10
9999	Sundries	L.S.	6.76	1.49	10.07
	TOTAL				129.18
	Add Water Charges @ 1%				1.29
	TOTAL				130.47
	Add CPOH @ 15%				19.57
	Cost of 10 sqm				150.04
	Cost of 1 sqm				15.00
	Say				15.00

22.14 Grading roof for water proofing treatment with:

22.14.1 Cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum				
0295	Stone Aggregate (Single size) : 20 mm nominal size	cum	0.67	1,050.00	703.50
0297	Stone Aggregate (Single size) : 10 mm nominal size	cum	0.22	1,050.00	231.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
2202	Carriage of stone aggregate below 40 mm nominal size	cum	0.89	87.60	77.96
0982	Coarse sand (zone III)	cum	0.45	1,120.00	504.00
2203	Carriage of coarse sand	cum	0.45	87.60	39.42
0367	Portland Cement	tonne	0.32	5,000.00	1,600.00
2209	Carriage of cement	tonne	0.32	77.87	24.92
	LABOUR:				
0114	Beldar	day	1.63	247.00	402.61
0101	Bhisti	day	0.70	260.00	182.00
0123	Mason (brick layer) 1 st class	day	0.10	301.00	30.10
9999	Sundries, brushes etc.	L.S.	14.30	1.49	21.31
0002	Hire charges of Concrete Mixer 0.25 to 0.40 cum with Hopper	day	0.07	800.00	56.00
0012	Vibrator (Needle type 40 mm)	day	0.07	300.00	21.00
9999	Sundries for laying in terrace	L.S.	45.76	1.49	68.18
	TOTAL				3,962.00
	Add Water Charges @ 1%				39.62
	TOTAL				4,001.62
	Add CPOH @ 15%				600.24
	Cost of 1 cum				4,601.86
	Say				4,601.85

22.14.2 Cement mortar 1:3 (1 cement : 3 coarse sand)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum				
	Cement mortar 1:3				
3.8	Rate as per Item Number 3.8 of SH: Mortars	cum	1.00	4,145.55	4,145.55
	LABOUR:				
0155	Mason (average)	day	1.00	287.00	287.00
0114	Beldar	day	2.00	247.00	494.00
0101	Bhisti	day	0.50	260.00	130.00
0115	Coolie	day	5.00	247.00	1,235.00
9999	Sundries	L.S.	11.70	1.49	17.43
	TOTAL				6,308.98
	Add Water Charges @ 1%				63.09
	TOTAL				6,372.07
	Add CPOH @ 15%				955.81
	Cost of 1 cum				7,327.88
	Say				7,327.90

22.14.3 Cement mortar 1:4 (1cement : 4 coarse sand)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum				
	MATERIAL:				
	Cement mortar 1:4				
3.9	Rate as per Item Number 3.9 of SH: Mortars	cum	1.00	3,485.40	3,485.40
0155	Mason (average)	day	1.00	287.00	287.00
0114	Beldar	day	2.00	247.00	494.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0101	Bhisti	day	0.50	260.00	130.00
0115	Coolie	day	5.00	247.00	1,235.00
9999	Sundries	L.S.	10.79	1.49	16.08
	TOTAL				5,647.48
	Add Water Charges @ 1%				56.47
	TOTAL				5,703.95
	Add CPOH @ 15%				855.59
	Cost of 1 cum				6,559.54
	Say				6,559.55

22.15 Providing and laying in situ seven course water proofing treatment with APP (Atactic poly-propylene) modified Polymeric memberane over roof consisting of first coat of bitumen primer @ 0.40 Kg per sqm, 2nd, 4th & 6th courses of bonding material @ 1.20 Kg/ sqm, which shall consist of blown type bitumen of grade 85/25 conforming to IS : 702, 3rd and 5th layers of roofing membrane APP modified Polymeric membrane 1.5 mm thick of 2.25 Kg/ sqm weight consisting of five layers prefabricated with centre core as 20 micron HMHDPE film sandwiched on both sides with polymeric mix and the polymeric mix is protected on both side with 20 micron HMHDPE film. 7th, the top most layer shall be finished with brick tiles of class designation 10 grouted with cement mortar 1:3 (1cement :3 fine sand) mixed with 2% integral water proofing compound by weight of cement over a 12 mm layer of cement mortar 1:3 (1 cement : 3 fine sand) and finished neat (item of laying brick tiles shall be paid for separetely.)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 30 sqm MATERIAL: APP modified polymeric felt (two layers) 1.5 mm thick = 2x30 = 60 sqm Add 10% wastage = 6 sqm Total = 66 sqm				
8200	A.P.P. modified polymeric felt (two layers) 1.5 mm thick	sqm	66.00	59.00	3,894.00
0316	Bitumen solution primer of approved quality 0.4x30 = 12	litre	12.00	40.00	480.00
0313	Blown type petroleum bitumen of penetration 85/25 of approved quality 3x36 =108 kg = 0.108 tonne	tonne	0.108	37,000.00	3,996.00
2211	Carriage of tar / bitumen	tonne	0.12	87.60	10.51
9999	Carriage of polymeric felt	L.S.	7.80	1.49	11.62
	Fuel				
0370	Coal (steam)	quintal	0.174	400.00	69.60
2200	Carriage of steam coal	tonne	0.0174	100.11	1.74
9999	Preparing roof surface, cutting groove and making good etc.	L.S.	134.55	1.49	200.48
	LABOUR:				
0131	Painter	day	2.16	273.00	589.68
0114	Beldar	day	3.24	247.00	800.28
0130	Mistry	day	0.18	301.00	54.18

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries, brushes etc.	L.S.	6.76	1.49	10.07
	TOTAL				10,118.16
	Add Water Charges @ 1%				101.18
	TOTAL				10,219.34
	Add CPOH @ 15%				1,532.90
	Cost of 30 sqm				11,752.24
	Cost of 1 sqm				391.74
	Say				391.75

22.16 Providing and laying in situ five course water proofing treatment with APP (Atactic Polypropylene) modified Polymeric memberane over roof consisting of first coat of bitumen primer @ 0.40 Kg per sqm, 2nd & 4th courses of bonding material @ 1.20 Kg/ sqm, which shall consist of blown type bitumen of grade 85/25 conforming to IS : 702, 3rd layer of roofing membrane APP modified Polymeric membrane 2.0 mm thick of 3.00 Kg/ sqm weight consisting of five layers prefabricated with centre core as 100 micron HMHDPE film sandwiched on both sides with polymeric mix and the polymeric mix is protected on both side with 20micron HMHDPE film. 5th, the top most layer shall be finished with brick tiles of class designation 10 grouted with cement mortar 1:3 (1 cement : 3 fine sand) mixed with 2% integral water proofing compound by weight of cement over a 12 mm layer of cement mortar 1:3 (1 cement : 3 fine sand) and finished neat (item of laying brick tiles shall be paid for separetely.)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 30 sqm				
	MATERIAL:				
	APP modified polymeric felt (two layers) 2.0 mm thick =30 sqm				
	Total = 33 sqm				
8201	A.P.P. modified polymeric felt (two layers) 2 mm thick	sqm	33.00	99.00	3,267.00
0316	Bitumen solution primer of approved quality 0.4x30 = 12	litre	12.00	40.00	480.00
0313	Blown type petroleum bitumen of penetration 85/25 of approved quality 1.20x30x2 =72 kg = 0.072 tonne	tonne	0.072	37,000.00	2,664.00
2211	Carriage of tar / bitumen	tonne	0.084	87.60	7.36
9999	Carriage of polymeric felt	L.S.	7.80	1.49	11.62
	Fuel				
0370	Coal (steam)	quintal	0.174	400.00	69.60
2200	Carriage of steam coal	tonne	0.0174	100.11	1.74
9999	Preparing roof surface, cutting groove and making good etc.	L.S.	134.55	1.49	200.48
	LABOUR:				
0131	Painter	day	1.58	273.00	431.34
0114	Beldar	day	2.37	247.00	585.39
0130	Mistry	day	0.13	301.00	39.13
9999	Sundries, brushes etc.	L.S.	6.76	1.49	10.07
	TOTAL				7,767.73
	Add Water Charges @ 1%				77.68
	TOTAL				7,845.41
	Add CPOH @ 15%				1,176.81
	Cost of 30 sqm				9,022.22
	Cost of 1 sqm				300.74
	Say				300.75

22.17 Providing and laying in situ seven course water proofing treatment with APP (Atactic Polypropylene) modified Polymeric memberane over roof consisting of first coat of bitumen primer @ 0.40 Kg per sqm, 2nd, 4th & 6th courses of bonding material @ 1.20 Kg /sqm, which shall consist of blown type bitumen of grade 85/ 25 conforming to IS : 702, 3rd and 5th layers of roofing membrane APP modified Polymeric membrane 2.0 mm thick of 3.00 Kg/ sqm weight consisting of five layers prefabricated with centre core as 100 micron HMHDPE film sandwiched on both sides with polymeric mix and the polymeric mix is protected on both side on both sides with polymeric mix and the polymeric mix is protected on both side with 20 micron HMHDPE film. 7th, the top most layer shall be finished with brick tiles of class designation 10 grouted with cement mortar 1:3 (1 cement : 3 fine sand) mixed with 2% integral water proofing compound by weight of cement over a 12 mm layer of cement mortar 1:3 (1 cement : 3 fine sand) and finished neat (item of laying brick tiles shall be paid for separetely.)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 30 sqm				
	MATERIAL:				
	APP modified polymeric felt (two layers) 2.0 mm thick = 3x30 = 60 sqm				
	Add 10% waistage = 6 sqm				
	Total = 66 sqm				
8201	A.P.P. modified polymeric felt (two layers) 2 mm thick	sqm	66.00	99.00	6,534.00
0316	Bitumen solution primer of approved quality 0.4x30 = 12	litre	12.00	40.00	480.00
0313	Blown type petroleum bitumen of penetration 85/25 of approved quality 3course x 36 = 108 kg = 0.108 tonne	tonne	0.108	37,000.00	3,996.00
2211	Carriage of tar / bitumen	tonne	0.12	87.60	10.51
9999	Carriage of polymeric felt	L.S.	7.80	1.49	11.62
	Fuel				
0370	Coal (steam)	quintal	0.174	400.00	69.60
2200	Carriage of steam coal	tonne	0.0174	100.11	1.74
9999	Preparing roof surface, cutting groove and making good etc.	L.S.	134.55	1.49	200.48
	LABOUR:				
0131	Painter	day	2.16	273.00	589.68
0114	Beldar	day	3.24	247.00	800.28
0130	Mistry	day	0.18	301.00	54.18
9999	Sundries, brushes etc.	L.S.	6.76	1.49	10.07
	TOTAL				12,758.16
	Add Water Charges @ 1%				127.58
	TOTAL				12,885.74
	Add CPOH @ 15%				1,932.86
	Cost of 30 sqm				14,818.60
	Cost of 1 sqm				493.95
	Say				493.95

22.18 Providing and fixing APP (Atactic Polypropylene Polymer) modified prefabricated five layer 2 mm thick water proofing membrance, black finished reinforced with glass fibre matt consisting of a coat of bitumen primer for bitumen membrane @ 0.40 litre/ sqm by the same membrance manufacture of density at 25°C, 0.87 - 0.89 kg/ litre and viscocity 70 - 160 cps. Over the primer coat the layer of membrane shall be laid using Butane torch and sealing all joints etc., and preparing the surface complete. The vital physical and chemical parameters of the membrane shall be as under : Joint strength in longitudinal and transverse direction at 23°C as 350/300 N/ 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.

22.18.1 2 mm (for corrugated roof sheets)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 30 sqm				
	MATERIAL:				
	A.P.P. modified 2 mm thick - 30 sqm				
	Add 10% for waistage = 3 sqm				
	Total = 33 sqm				
8203	A.P.P. modified 2 mm thick membrane reinforced with glass fibre matt	sqm	33.00	167.00	5,511.00
8206	Bitumen primer for bitumen membrane	litre	12.00	71.00	852.00
2211	Carriage of tar / bitumen	tonne	0.012	87.60	1.05
9999	Carriage of bitumen membrane	L.S.	7.80	1.49	11.62
	Fuel				
1241	Commercial LPG in cylinder	kg	7.00	51.00	357.00
9999	Preparing roof surface, cutting grooves	L.S.	49.53	1.49	73.80
	LABOUR:				
0159	Skilled torch operator for laying tack	day	2.16	301.00	650.16
0130	Mistry	day	0.18	301.00	54.18
0114	Beldar	day	3.24	247.00	800.28
9999	Sundries, brushes, bitumen torch etc.	L.S.	23.40	1.49	34.87
	TOTAL				8,345.96
	Add Water Charges @ 1%				83.46
	TOTAL				8,429.42
	Add CPOH @ 15%				1,264.41
	Cost of 30 sqm				9,693.83
	Cost of 1 sqm				323.13
	Say				323.15

22.19 Providing and laying APP (Atactic Polypropylene Polymer) modified prefabricated five layer, 3 mm thick water proofing membrane, black finished reinforced with glass fibre matt consisting of a coat of bitumen primer for bitumen membrane @ 0.40 litre/ sqm by the same membrane manufactured of density at 25°C, 0.87 - 0.89 kg/ litre and viscocity 70 - 160 cps. Over the primer coat the layer of membrane shall be laid using butane torch and sealing all joints etc., and preparing the surface complete. The vital physical and chemical parameters of the membrane shall be as under : Joint strength in longitudinal and transverse direction at 23°C as 350/ 300 N/5 cm. Tear strength in longitudinal and transverse direction as 60/80N.

Softening point of membrane not less than 150°C. Cold flexibility shall be upto -2°C when tested in accordance with ASTM, D - 5147. The laying of membrane shall be got done through the authorised applicator of the manufacturer of membrane :

22.19.1 - 3 mm thick

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 30 sqm MATERIAL: A.P.P. modified 3mm thick =-30 sqm Add 10% for wastage = 3 sqm. Total = 33 sqm				
8204	A.P.P. modified 3 mm thick membrane reinforced with glass fibre matt	sqm	33.00	207.00	6,831.00
8206	Bitumen primer for bitumen membrane	litre	12.00	71.00	852.00
2211	Carriage of tar / bitumen	tonne	0.012	87.60	1.05
9999	Carriage of bitumen membrane	L.S.	7.80	1.49	11.62
	Fuel				
1241	Commercial LPG in cylinder	kg	7.00	51.00	357.00
9999	Preparing roof surface, cutting grooves	L.S.	49.53	1.49	73.80
	LABOUR:				
0159	Skilled torch operator for laying tack	day	2.16	301.00	650.16
0130	Mistry	day	0.18	301.00	54.18
0114	Beldar	day	3.24	247.00	800.28
9999	Sundries, brushes, bitumen torch etc.	L.S.	23.40	1.49	34.87
	TOTAL				9,665.96
	Add Water Charges @ 1%				96.66
	TOTAL				9,762.62
	Add CPOH @ 15%				1,464.39
	Cost of 30 sqm				11,227.01
	Cost of 1 sqm				374.23
	Say				374.25

22.20 Providing and laying APP (Atactic Polypropylene Polymer) modified prefabricated five layer 3 mm thick water proofing membrane, black finished reinforced with non-woven polyester matt consisting of a coat of bitumen primer for bitumen membrane @ 0.40 litre/ sqm by the same membrane manufacture of density at 25°C, 0.87-0.89 kg/ litre and viscocity 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/ 5 cm. 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 :

22.20.1 3 mm thick

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 30 sqm MATERIAL: A.P.P. modified 3mm thick = 30 sqm Add 10% for wastage = 3 sqm. Total = 33 sqm				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8205	A.P.P. modified 3 mm thick membrane reinforced with polyester matt	sqm	33.00	245.00	8,085.00
8206	Bitumen primer for bitumen membrane	litre	12.00	71.00	852.00
2211	Carriage of tar / bitumen	tonne	0.012	87.60	1.05
9999	Carriage of bitumen membrane	L.S.	7.80	1.49	11.62
	Fuel				
1241	Commercial LPG in cylinder	kg	7.00	51.00	357.00
9999	Preparing roof surface, cutting grooves	L.S.	49.53	1.49	73.80
	LABOUR:				
0159	Skilled torch operator for laying tack	day	2.16	301.00	650.16
0130	Mistry	day	0.18	301.00	54.18
0114	Beldar	day	3.24	247.00	800.28
9999	Sundries, brushes, bitumen torch etc.	L.S.	23.40	1.49	34.87
	TOTAL				10,919.96
	Add Water Charges @ 1%				109.20
	TOTAL				11,029.16
	Add CPOH @ 15%				1,654.37
	Cost of 30 sqm				12,683.53
	Cost of 1 sqm				422.78
	Say				422.80

22.21 Extra for covering top of membrane with Geotextile, 120 gsm non woven, 100% polyester of thickness 1 to 1.25 mm bonded to the membrane with intermittent touch by heating the membrane by Butane Torch as per manufactures recommendation.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 30 sqm				
	MATERIAL:				
	Geotextile 120 gsm membrane =30 sqm				
	Add 5% for wastage = 1.5 sqm				
	Total = 31.50 sqm				
8207	Geotextile 120 grams per sqm membrane	sqm	31.50	32.00	1,008.00
9999	Carriage of Geotextile	L.S.	7.80	1.49	11.62
	LABOUR:				
0159	Skilled torch operator for laying tack or fitter 2.16 / 5 = 0.43	day	0.43	301.00	129.43
0130	Mistry 0.18 / 5 = 0.04	day	0.04	301.00	12.04
0114	Beldar 3.24-5 / 0.65	day	0.65	247.00	160.55
9999	Sundries, torch, LPG etc.	L.S.	46.80	1.49	69.73
	TOTAL				1,391.37
	Add Water Charges @ 1%				13.91
	TOTAL				1,405.28
	Add CPOH @ 15%				210.79
	Cost of 30 sqm				1,616.07
	Cost of 1 sqm				53.87
	Say				53.85

SUB HEAD : 23

HORTICULTURE AND LANDSCAPE

23.1 Trenching in ordinary soil up to a depth of 60 cm including removal and stacking of serviceable materials and then disposing of surplus soil, by spreading and neatly levelling within a lead of 50 m and making up the trenched area to proper levels by filling with earth or earth mixed with sludge or / and manure before and after flooding trench with water (excluding cost of imported earth, sludge or manure).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 cum				
	LABOUR:				
0114	Beldar	day	0.71	247.00	175.37
9999	Sundries	L.S.	2.73	1.49	4.07
0115	Coolie	day	0.35	247.00	86.45
	TOTAL				265.89
	Add Water Charges @ 1%				2.66
	TOTAL				268.55
	Add CPOH @ 15%				40.28
	Cost of 10 cum				308.83
	Cost of 1 cum				30.88
	Say				30.90

23.2 Supplying and stacking of good earth at site including royalty and carriage complete (earth measured in stacks will be reduced by 20% for payment).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum				
	Excavation:				
0114	Beldar	day	0.177	247.00	43.72
0115	Coolie	day	0.167	247.00	41.25
0979	Royalty for good earth	cum	1.00	30.00	30.00
2241	Carriage of good earth	cum	1.00	109.50	109.50
	by mechanical transport upto 5 km lead				
	TOTAL				224.47
	Add Water Charges @ 1%				2.24
	TOTAL				226.71
	Add CPOH @ 15%				34.01
	Cost of 1 cum				260.72
	Say				260.70

23.3 Supplying and stacking sludge at site including royalty and carriage complete (sludge measured in stacks will be reduced by 8% for payment).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum				
2317	Carriage of sludge	cum	1.00	95.22	95.22
	by mechanical transport upto 5 km lead				
0980	Royalty for sludge	cum	1.00	90.00	90.00
	TOTAL				185.22
	Add Water Charges @ 1%				1.85
	TOTAL				187.07
	Add CPOH @ 15%				28.06
	Cost of 1 cum				215.13
	Say				215.15

23.4 Supplying and stacking at site dump manure from approved source, including carriage complete (manure measured in stacks will be reduced by 8% for payment) :

23.4.1 Screened through sieve of I.S. designation 20 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum				
2242	Carriage of dump manure by mechanical transport upto 5 km lead	cum	1.00	95.22	95.22
	Labour for screening:				
0114	Beldar	day	0.08	247.00	19.76
9999	Sundries	L.S.	2.73	1.49	4.07
	TOTAL				119.05
	Add Water Charges @ 1%				1.19
	TOTAL				120.24
	Add CPOH @ 15%				18.04
	Cost of 1 cum				138.28
	Say				138.30

23.4.2 Screened through sieve of I.S. designation 16 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum				
2242	Carriage of dump manure by mechanical transport upto 5 km lead	cum	1.00	95.22	95.22
	Labour for screening:				
0114	Beldar	day	0.13	247.00	32.11
9999	Sundries	L.S.	2.73	1.49	4.07
	TOTAL				131.40
	Add Water Charges @ 1%				1.31
	TOTAL				132.71
	Add CPOH @ 15%				19.91
	Cost of 1 cum				152.62
	Say				152.60

223.4.3 Screened through sieve of I.S. designation 4.75 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum				
2242	Carriage of dump manure by mechanical transport upto 5 km lead	cum	1.00	95.22	95.22
	Labour for screening:				
0114	Beldar	day	0.17	247.00	41.99
9999	Sundries	L.S.	2.73	1.49	4.07
	TOTAL				141.28
	Add Water Charges @ 1%				1.41
	TOTAL				142.69
	Add CPOH @ 15%				21.40
	Cost of 1 cum				164.09
	Say				164.10

23.5 Rough dressing the trenched ground including breaking clods.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 sqm				
	LABOUR:				
0114	Beldar	day	0.20	247.00	49.40
9999	Sundries	L.S.	1.43	1.49	2.13
	TOTAL				51.53
	Add Water Charges @ 1%				0.52
	TOTAL				52.05
	Add CPOH @ 15%				7.81
	Cost of 100 sqm				59.86
	Say				59.85

23.6 Uprooting weeds from the trenched area after 10 to 15 days of its flooding with water including disposal of uprooted vegetation.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 sqm				
	LABOUR:				
0114	Beldar	day	0.33	247.00	81.51
0115	Coolie	day	0.33	247.00	81.51
9999	Sundries	L.S.	2.73	1.49	4.07
	TOTAL				167.09
	Add Water Charges @ 1%				1.67
	TOTAL				168.76
	Add CPOH @ 15%				25.31
	Cost of 100 sqm				194.07
	Say				194.05

23.7 Fine dressing of the ground.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 sqm				
	LABOUR:				
0114	Beldar	day	0.50	247.00	123.50
9999	Sundries	L.S.	1.43	1.49	2.13
	TOTAL				125.63
	Add Water Charges @ 1%				1.26
	TOTAL				126.89
	Add CPOH @ 15%				19.03
	Cost of 100 sqm				145.92
	Say				145.90

23.8 Spreading of sludge, dump manure and/or good earth in required thickness as per direction of officer-in-charge (cost of sludge, dump manure and/ or good earth to be paid separately).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum				
	LABOUR:				
0114	Beldar	day	0.07	247.00	17.29
9999	Sundries	L.S.	0.52	1.49	0.77
	TOTAL				18.06
	Add Water Charges @ 1%				0.18
	TOTAL				18.24
	Add CPOH @ 15%				2.74
	Cost of 1 cum				20.98
	Say				21.00

23.9 Mixing earth and sludge or manure in the required proportion specified or directed by the Officer-in-charge

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 cum				
	LABOUR:				
0114	Beldar	day	0.25	247.00	61.75
0115	Coolie	day	0.25	247.00	61.75
	TOTAL				123.50
	Add Water Charges @ 1%				1.24
	TOTAL				124.74
	Add CPOH @ 15%				18.71
	Cost of 10 cum				143.45
	Cost of 1 cum				14.35
	Say				14.35

23.10 Grassing with selection No. 1 grass including watering and maintenance of the lawn for 30 days or more till the grass forms a thick lawn, free from weeds and fit for mowing including supplying good earth, if needed (the good earth shall be paid for separately).

23.10.1 In rows 5 cm apart in both directions

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 sqm				
	LABOUR:				
0114	Beldar	day	0.80	247.00	197.60
0115	Coolie	day	1.60	247.00	395.20
9999	Sundries	L.S.	6.76	1.49	10.07
	TOTAL				602.87
	Add Water Charges @ 1%				6.03
	TOTAL				608.90
	Add CPOH @ 15%				91.34
	Cost of 100 sqm				700.24
	Say				700.25

23.10.2 With grass Turf

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 sqm				
	LABOUR:				
0114	Beldar	day	0.80	247.00	197.60
0115	Coolie	day	1.00	247.00	247.00
9999	Sundries	L.S.	6.76	1.49	10.07
	TOTAL				454.67
	Add Water Charges @ 1%				4.55
	TOTAL				459.22
	Add CPOH @ 15%				68.88
	Cost of 100 sqm				528.10
	Say				528.10

23.11 Renovating lawns including weeding, cheeling the grass, forking the ground, top dressing with sludge or manure, mixing the same with forked soil, watering and maintaining the lawn for 30 days or more till the grass forms a thick lawn free from weeds and fit for mowing and disposal of rubbish as directed, including supplying good earth if needed but excluding the cost of sludge or manure (the good earth shall be paid for separately).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 sqm				
	LABOUR:				
0114	Beldar	day	2.70	247.00	666.90
0115	Coolie	day	2.00	247.00	494.00
9999	Sundries	L.S.	2.73	1.49	4.07
	TOTAL				1,164.97
	Add Water Charges @ 1%				11.65
	TOTAL				1,176.62
	Add CPOH @ 15%				176.49
	Cost of 100 sqm				1,353.11
	Say				1,353.10

23.12 Uprooting rank vegetation and weeds by digging the area to a depth of 60 cm, removing all weeds and other growth with roots by forking repeatedly, breaking clods, rough dressing, flooding with water, uprooting fresh growths after 10 to 15 days and then fine dressing for planting new grass, including disposal of all rubbish with all leads and lifts.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 sqm				
	1. Labour for trenching to a depth of 30 cm				
0114	Beldar	day	1.50	247.00	370.50
0115	Coolie	day	0.75	247.00	185.25
	2. Labour for forking to remove weeds and rank vegetation				
0114	Beldar	day	1.00	247.00	247.00
0115	Coolie	day	0.50	247.00	123.50

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	3. Labour for trenching to a further depth of 30cm				
0114	Beldar	day	2.13	247.00	526.11
0115	Coolie	day	1.06	247.00	261.82
	4. Removal of weeds from the trenched area with 10 to 15 days of its flooding with water as per item No. 23.6				
0114	Beldar	day	0.33	247.00	81.51
0115	Coolie	day	0.33	247.00	81.51
9999	Sundries	L.S.	2.73	1.49	4.07
	5. Rough dressing as per item No.23.5				
0114	Beldar	day	0.20	247.00 4	9.40
9999	Sundries	L.S.	1.43	1.49	2.13
	6. Fine dressing as per item No.23.7				
0114	Beldar	day	0.50	247.00	123.50
9999	Sundries	L.S.	1.43	1.49	2.13
9999	Sundries	L.S.	6.76	1.49	10.07
	TOTAL				2,068.50
	Add Water Charges @ 1%				20.68
	TOTAL				2,089.18
	Add CPOH @ 15%				313.38
	Cost of 100 sqm				2,402.56
	Say				2,402.55

23.13 Preparation of beds for hedging and shrubbery by excavating 60 cm deep and trenching the excavated base to a further depth of 30 cm, refilling the excavated earth after breaking clods and mixing with sludge or manure in the ratio of 8:1 (8 parts of stacked volume of earth after reduction by 20% : one part of stacked volume of sludge or manure after reduction by 8%), flooding with water, filling with earth if necessary, watering and finally fine dressing, leveling etc. including stacking and disposal of materials declared unserviceable and surplus earth by spreading and leveling as directed, within a lead of 50 m, lift up to 1.5 m complete (cost of sludge, manure or extra earth to be paid for separately).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 cum				
	LABOUR:				
0114	Beldar	day	1.80	247.00	444.60
0115	Coolie	day	1.25	247.00	308.75
	TOTAL				753.35
	Add Water Charges @ 1%				7.53
	TOTAL				760.88
	Add CPOH @ 15%				114.13
	Cost of 10 cum				875.01
	Cost of 1 cum				87.50
	Say				87.50

23.14 Digging holes in ordinary soil and refilling the same with the excavated earth mixed with manure or sludge in the ratio of 2:1 by volume (2 parts of stacked volume of earth after reduction by 20% : 1 part of stacked volume of manure after reduction by 8%) flooding with water, dressing including removal of rubbish and surplus earth, if any, with all leads and lifts (cost of manure, sludge or extra good earth if needed to be paid for separately) :

23.14.1 Holes 1.2 m dia and 1.2 m deep

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 hole Volume - $22/7x(1.2)^2/4x1.2$ = 1.36 cum				
2.8.1	Rate as per Item Number 2.8.1 of SH: Earth work	cum	1.36	130.80	177.89(A)
9999	Refilling mixture and flooding	L.S.	5.20	1.49	7.75
	TOTAL				185.64
	Add Water Charges @ 1% except on A i.e on (185.64 - 177.89 =) 7.75				0.08
	TOTAL				185.72
	Add CPOH @ 15% except on A i.e on (185.72 - 177.89 =) 7.83				1.17
	Cost of each				186.89
	Say				186.90

23.14.2 Holes 90 cm dia, and 90 cm deep

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 hole Volume- [(22/7)x0.45x0.45x0.90]=0.57 cum Exacavation				
2.8.1	Rate as per Item Number 2.8.1 of SH: Earth work	cum	0.57	130.80	74.56(A)
9999	Refilling mixture and flooding	L.S.	3.25	1.49	4.84
	TOTAL				79.40
	Add Water Charges @ 1% except on A i.e on (79.40 - 74.56 =) 4.84				0.05
	TOTAL				79.45
	Add CPOH @ 15% except on A i.e on - 74.56 =) 4.89				(79.45 0.73
	Cost of each				80.18
	Say				80.20

23.14.3 Holes 60 cm dia, and 60 cm deep

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one hole Volume- [(22/7)x0.60x0.60/4x0.60]=0.17 cum Exacavation				
2.8.1	Rate as per Item Number 2.8.1 of SH: Earth work	cum	0.17	130.80	22.24(A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Refilling mixture and flooding	L.S.	1.43	1.49	2.13
	TOTAL				24.37
	Add Water Charges @ 1% except on A i.e on (24.37 - 22.24 =) 2.13				0.02
	TOTAL				24.39
	Add CPOH @ 15% except on A i.e on (24.39 - 22.24 =) 2.15				(24.39 0.32
	Cost of each				24.71
	Say				24.70

23.14.4 Holes 45 cm dia, and 45 cm deep.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one hole				
	Volume- [(22/7)x0.225x0.225x0.45]=0.07 cum				
	Exacavation				
2.8.1	Rate as per Item Number 2.8.1 of SH: Earth work	cum	0.07	130.80	9.16(A)
9999	Refilling mixture and flooding	L.S.	0.88	1.49	1.31
	TOTAL				10.47
	Add Water Charges @ 1% except on A i.e on (10.47 - 9.16 =) 1.31				0.01
	TOTAL				10.48
	Add CPOH @ 15% except on A i.e on (10.48 - 9.16 =) 1.32				(10.48 0.20
	Cost of each				10.68
	Say				10.70

223.15 Half brick circular tree guard in bricks, internal diameter 1.25 metre and height 1.2 metre above ground and 0.20 m below ground, bottom two courses laid dry and top three courses in cement mortar 1:6 (1 cement : 6 fine sand) and the intermediate courses being in dry honey comb masonry as per design complete:

23.15.1 With common burnt clay F.P.S. (non modular) bricks of class designation 5

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 tree guard				
	MATERIAL:				
	Brick 3rd class				
2603	Common burnt clay F.P.S. (non modular) bricks class designation 5.0	1000 Nos	230.00	2,450.00	563.50
2201	Carriage of bricks	1000 Nos	230.00	233.60	53.73
9999	Lime or cement mortar top 3 courses	L.S.	15.86	1.49	23.63
	LABOUR:				
0124	Mason (brick layer) 2nd class	day	0.25	273.00	68.25
0114	Beldar	day	0.25	247.00	61.75
9999	Sundries	L.S.	4.16	1.49	6.20
	TOTAL				777.06
	Add Water Charges @ 1%				7.77
	TOTAL				784.83
	Add CPOH @ 15%				117.72
	Cost of each				902.55
	Say				902.55

23.16 Providing and fixing M.S. flat iron tree guard 60 cm dia and 2 m high, above ground consisting 4 nos 25 x 6 mm, 2.25 m long and 8 nos 25 x 3 mm 2 m long verticals M.S. flats, riveted to 3 nos 25 x 6 mm M.S. flat iron rings in two halves, fixing together at site with required six numbers of 8 mm dia and 30 mm long bolts, including painting two coats with synthetic enamel paint of approved brand and manufacture over a coat of primer. One name plate of 1 mm thick M.S. sheet of size 250x100 mm shall be welded to the tree guard near the middle height and lettered CPWD / PWD/ any other approved name. The tree guard shall be suitably fixed to the ground by embedding four legs of tree guard in pits of suitable dia and to a depth of 25 cm, refilling the pits with soil and ramming, complete in all respect as 0 per satisfaction and direction of Officer-in-charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 tree guard MATERIAL: M.S. Flats: 25x6mm verticals = 4x2.25= 9.00m 25x6mm rings 3x(22/7x0.6)+0.16 = 6.14m Total = 15.14m weight @ 1.2kg per m = 18.17kg. 25x3.00mm verticals 8x2= 16m 16.00x0.25=0.40 sqm. weight @24.73kg/sqm = 9.89kg. Total M.S. flats = 28.06kg + Wastage @5% = 1.40kg Total = 29.46kg. Say 0.29 quintal				
1008	Flats up to 10 mm in thickness	quintal	0.29	4,200.00	1,218.00
9999	Rivets 36 Nos.	L.S.	40.30	1.49	60.05
9999	G.I. bolts and nuts.	L.S.	8.06	1.49	12.01
2205	Carriage of steel	tonne	0.029	77.87	2.26
	LABOUR:				
0103	Blacksmith 2nd class	day	2.00	273.00	546.00
0114	Beldar	day	1.00	247.00	247.00
	Painting- 4x2x0.03x2.25 = 0.56+ 8x2x0.028x2.00 = 0.90+ 2x6.14x0.031 =0.38 Total = 1.84 sqm				
13.50.4	Rate as per Item Number 13.50.4 of SH: Finishing	sqm	1.84	11.40	20.98(A)
13.61.1	Rate as per Item Number 13.61.1 of SH: Finishing	sqm	1.84	53.85	99.08(A)
0114	Beldar	day	0.13	247.00	32.11(A)
9999	T & P Sundries	L.S.	0.67	1.49	1.00(A)
	TOTAL				2,238.49
	Add Water Charges @ 1% except on A i.e on (2,238.49 - 120.06 =) 2,118.43				21.18
	TOTAL				2,259.67
	Add CPOH @ 15% except on A i.e on (2,259.67 - 120.06 =) 2,139.61				320.94
	Cost of each				2,580.61
	Say				2,580.60

23.17 Making tree guard 53 cm dia and 1.3 m high as per design from empty coal tar drums, supplied free by the department, including providing and fixing 2 nos M.S. sheet rings 50 x 0.5 mm fixed with rivets complete in all respects including painting inside and outside of tree guard with:

23.17.1 A coat of coal tar

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 tree guard				
9999	Cost of 2 putties	L.S.	13.39	1.49	19.95
9999	Cost of 6mm dia x 10mm rivets 22 Nos.	L.S.	26.91	1.49	40.10
9999	Fire wood	L.S.	2.73	1.49	4.07
	LABOUR:				
0103	Blacksmith 2nd class	day	0.13	273.00	35.49
0114	Beldar	day	0.07	247.00	17.29
9999	Sundries	L.S.	1.43	1.49	2.13
	Coal tarring alround inside and outside				
	1/2 x 2 x 22/7 x 0.53 x 1.30 = 2.16				
13.59	Rate as per Item Number 13.59 of SH: Finishing	sqm	2.16	24.55	53.03(A)
	TOTAL				172.06
	Add Water Charges @ 1% except on A i.e on (172.06 - 53.03 =) 119.03				1.19
	TOTAL				173.25
	Add CPOH @ 15% except on A i.e on (173.25 - 53.03 =) 120.22				18.03
	Cost of each				191.28
	Say				191.30

23.17.2 Two or more coats of synthetic enamel paint of approved quality shade over a priming coat

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 tree guard				
	Cost of one free guard				
23.17.1	Rate as per Item Number 23.17.1 of SH: Horticulture and landscape	each	1.00	191.30	191.30(A)
	Priming coat				
13.50.3	Rate as per Item Number 13.50.3 of SH: Finishing	sqm	2.16	20.70	44.71(A)
	Painting with synthetic enamel paint				
13.61.1	Rate as per Item Number 13.61.1 of SH: Finishing	sqm	2.16	53.85	116.32(A)
	Less cost of coal tarring				
13.59	Rate as per Item Number 13.59 of SH: Finishing	sqm	-2.16	24.55	-53.03(A)
	TOTAL				299.30
	Cost of each				299.30
	Say				299.30

23.18 Making tree guard 53 cm dia and 2 m high as per design from empty coal tar drums, supplied free by the department, including providing and fixing four legs 40 cm long of 30 x 3 mm M.S. flat riveted to tree guard and providing and fixing 2 nos M.S. sheet rings 50 x 0.5 mm fixed with rivets complete in all respects including painting inside and outside of tree guard with :

23.18.1 A coat of coal tar

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 tree guard				
9999	Cost of two M.S. sheet rings 50x0.5mm	L.S.	13.52	1.49	20.14
9999	Cost of 6mm dia. Rivets 10mm long 50 Nos.	L.S.	67.21	1.49	100.14
9999	Fire wood	L.S.	2.73	1.49	4.07
	LABOUR:				
0103	Blacksmith 2nd class	day	0.19	273.00	51.87
0114	Beldar	day	0.10	247.00	24.70
9999	Sundries	L.S.	1.43	1.49	2.13
	4 legs of M.S. flat 30x3mm including riveting and other end sharpened for easing fixing the tree guard in the ground 4 legs 0.4 each = 1.6m. 1.6x0.032=0.501sqm. @ 24.73kg/sqm. =1.26 kg = 0.013q				
1008	Flats up to 10 mm in thickness	quintal	0.013	4,200.00	54.60
	Carriage of M.S. flats (negligible)				
	Coal tarring alround inside and outside. 1/2x2x22/7x0.53x2.0 = 3.33sqm				
13.59	Rate as per Item Number 13.59 of SH: Finishing	sqm	3.33	24.55	81.75(A)
	TOTAL				339.40
	Add Water Charges @ 1% except on A i.e on (339.40 - 81.75 =) 257.65				2.58
	TOTAL				341.98
	Add CPOH @ 15% except on A i.e on (341.98 - 81.75 =) 260.23				39.03
	Cost of each				381.01
	Say				381.00

23.18.2 Two or more coats of synthetic enamel paint of approved quality and shade over a priming coat

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 tree guard				
23.18.1	Rate as per Item Number 23.18.1 of SH: Horticulture and landscape	each	1.00	381.00	381.00(A)
	Applying priming coat 1/2 x 2 x 22/7 x 0.53 x 2 = 3.33 sqm				
13.50.3	Rate as per Item Number 13.50.3 of SH: Finishing	sqm	3.33	20.70	68.93(A)
13.61.1	Rate as per Item Number 13.61.1 of SH: Finishing	sqm	3.33	53.85	179.32(A)
	Less cost of coal tarring				
13.59	Rate as per Item Number 13.59 of SH: Finishing	sqm	-3.33	24.55	-81.75(A)
	TOTAL				547.50
	Cost of each				547.50
	Say				547.50

23.19 Edging with bricks laid dry length wise, including required excavation, refilling, consolidating with hand packing and spreading surplus earth neatly within a lead of 50 m :

23.19.1 Common burnt clay F.P.S. (non modular) bricks of class designation 7.5

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 m length				
	MATERIAL:				
2602	Common burnt clay F.P.S. (non modular) bricks class designation 7.5	1000 Nos	50.00	2,900.00	145.00
2201	Carriage of bricks	1000 Nos	50.00	233.60	11.68
	LABOUR:				
0124	Mason (brick layer) 2nd class	day	0.05	273.00	13.65
0115	Coolie	day	0.05	247.00	12.35
9999	Earth work in excavation and removal of rubbish (or spreading and dressing neatly of surplus earth)	L.S.	13.52	1.49	20.14
	TOTAL				202.82
	Add Water Charges @ 1%				2.03
	TOTAL				204.85
	Add CPOH @ 15%				30.73
	Cost of 10 metre				235.58
	Cost of 1 metre				23.56
	Say				23.55

23.20 Filling mixture of earth and sludge or manure in the desired proportion in trenches, flooding with water and leveling (cost of supplying earth and sludge or manure and mixing excluded).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 cum				
	LABOUR:				
0114	Beldar	day	0.17	247.00	41.99
0115	Coolie	day	0.08	247.00	19.76
	TOTAL				61.75
	Add Water Charges @ 1%				0.62
	TOTAL				62.37
	Add CPOH @ 15%				9.36
	Cost of 10 cum				71.73
	Cost of 1 cum				7.17
	Say				7.15

23.21 Excavation in dumped stones or malba including stacking of serviceable and unserviceable material separately and disposal of unserviceable material, lead up to 50 m and lift up to 1.5 m, disposed material to be neatly dressed.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum				
	LABOUR:				
0114	Beldar	day	0.35	247.00	86.45

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0115	Coolie	day	0.35	247.00	86.45
	TOTAL				172.90
	Add Water Charges @ 1%				1.73
	TOTAL				174.63
	Add CPOH @ 15%				26.19
	Cost of 1 cum				200.82
	Say				200.80

23.22 Excavation in bajri path including stacking of serviceable and unserviceable material separately, lead up to 50 m and lift up to 1.5 m, disposed material to be neatly dressed.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum				
	LABOUR:				
0114	Beldar	day	0.43	247.00	106.21
0115	Coolie	day	0.35	247.00	86.45
	TOTAL				192.66
	Add Water Charges @ 1%				1.93
	TOTAL				194.59
	Add CPOH @ 15%				29.19
	Cost of 1 cum				223.78
	Say				223.80

23.23 Excavation in water bound macadam road including stacking the serviceable and unserviceable material, separately and disposal of unserviceable material, lead up to 50 m and lift up to 1.5 m, disposed material to be neatly dressed.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum				
	LABOUR:				
0114	Beldar	day	0.53	247.00	130.91
0115	Coolie	day	0.43	247.00	106.21
	TOTAL				237.12
	Add Water Charges @ 1%				2.37
	TOTAL				239.49
	Add CPOH @ 15%				35.92
	Cost of 1 cum				275.41
	Say				275.40

23.24 Flooding the ground with water including making kiaries and dismantling the same.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 sqm				
	LABOUR:				
0114	Beldar	day	0.17	247.00	41.99

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries	L.S.	35.88	1.49	53.46
	TOTAL				95.45
	Add Water Charges @ 1%				0.95
	TOTAL				96.40
	Add CPOH @ 15%				14.46
	Cost of 100 sqm				110.86
	Say				110.85

23.25 Supplying and stacking of well decayed cow dung manure at site including and carriage complete (Cow dung manure measured in stacks will reduced by 8% for Payment).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum				
0303	Cowdung	cum	1.00	47.00	47.00
2242	Carriage of dump manure	cum	1.00	95.22	95.22
	TOTAL				142.22
	Add Water Charges @ 1%				1.42
	TOTAL				143.64
	Add CPOH @ 15%				21.55
	Cost of 1 cum				165.19
	Say				165.20

23.26 Providing and fixing M. S. tree guard 45 cm square in plan, height 1.20 metre above ground level and 0.40 metre below ground level. The vertical members shall consist of four nos. angle iron of size 25x25x3 mm, 1.6 m long, one at each corner and 8 nos flat iron of size 25x3 mm, 1.2 m long. The vertical mambers shall be welded to 4 nos. 25x6 mm M. S. flats placed horizontally around the vertical member of the cage. One name plate of 1 mm thick M.S. sheet of size 250x100 mm shall be welded to the tree guard near the middle height and lettered CPWD/ PWD/ any other approved name. The tree guard shall be fixed to the ground by making suitable holes and by embedding four corners leg in the ground, including refilling the earth, compaction etc. complete. The tree guard shall be painted with two or more coats of synthetic enamel paint of approved brand and manufacture over a coat of primer, complete in all respect.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one tree guard (Ref. Fig. 1 of Tree Guard) (a)MS Angle iron 25x25x3 mm Verticle 4x1.60 mtrs= 6.40 mtrs 6.40 mtrs. @ 1.10 kg. / per mtr.=7.04 kg. (b)MS Flat 25x3 mm Verticle 2x4x1.20 mtrs.= 9.60 mtrs 9.60 @ 0.60kg / per mtr.=5.76 kg. (c) MS Flat 25x6 mm Horizontal 4x4x0.45 mtrs.= 7.20 mtrs 7.20 @ 1.20 kg/ per mtr.=8.64 kg.				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	(d)MS Sheet 1.00 mm thick 1x250x100 mm = 0.025 sqm. 0.025 sqm. @ 7.85 kg / per sqm.=0.20 kg Quantity (a+b+c+d) = 7.04+5.76+8.64+0.20= 21.64 kg Say 0.216 Qtl.				
10.2	Rate as per Item Number 10.2 of SH: Steel work	kg	21.60	66.50	1,436.40(A)
2205	Carriage of steel 2 Painting (e) M.S. Angle 25x25x3 mm Verticle 2x2(6.40x0.025) = 0.64 sqm. (f) M.S. Flat Verticle / Horizontal 2x 9.60 +7.20 x 0.025 = 0.84 sqm. (g) M. S. Sheet 1x2x0.25 x 0.10 = 0.05 sqm. Total Area for primer & painting (e+f+g) 0.64+0.84+0.05 =1.53 sqm	tonne	0.0216	77.87	1.68
13.61.1	Rate as per Item Number 13.61.1 of SH: Finishing	sqm	1.53	53.85	82.39(A)
	LABOUR: for fixing				
0114	Beldar	day	0.07	247.00	17.29
	TOTAL				1,537.76
	Add Water Charges @ 1% except on A i.e on (1,537.76 - 1,518.79 =) 18.97				0.19
	TOTAL				1,537.95
	Add CPOH @ 15% except on A i.e on (1,537.95 - 1,518.79 =) 19.16				2.87
	Cost of each				1,540.82
	Say				1,540.80

23.27 Providing and fixing M. S. tree guard 50 cm square in plan, height 1.40 metre above ground level and 0.50 metre below ground level. The vertical members shall consist of four nos of angle iron of size 25x25x5 mm 1.9 long, one at each corner and 8 nos flat iron of size 25x5 mm 1.4 long. The vertical members shall be welded to 4 nos 25x6 mm M. S. flats placed horizontally around the vertical member of the cage. One name plate of 1 mm thick M.S. sheet of size 250x100 mm shall be welded to the tree guard near the middle height and lettered CPWD / PWD/ any other approved name. The tree guard shall be fixed to the ground by making suitable holes and by embedding four corners leg in the ground, including refilling the earth , compaction etc. complete. The tree guard shall be painted with two coats of paint of approved brand and manufacture over a coat of primer, complete in all respect.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one tree guard (Ref. Fig. 2 of Tree Guard)s (a)MS Angle iron 25x25x5 mm Verticle 4x1.90 mtrs = 7.60 mtrs 7.60 mtrs. @ 1.80 kg. / per mtr.=13.68 Kg (b) MS Flat 25x5 mm Verticle 2x4x1.40 mtrs.= 11.20 mtrs				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	11.20 @ 1.00kg / per mtr.= 11.20 kg (c)MS Flat 25x6 mm Horizontal 4x4x0.50 mtrs.= 8.00 mtrs 8 mtrs. @ 1.20 kg / per mtr.= 9.60 kg (d)MS Sheet 1.00 mm thick 1x250x100 mm = 0.025 sqm. 0.025 sqm. @ 7.85 kg / per sqm.= 0.20 kg Structural steel work welded in built up section: (a+b+c+d) =13.68+11.20+9.60+0.20= 34.68 kg = 0.3468 Qtl. Say 34.68 kg				
10.2	Rate as per Item Number 10.2 of SH: Steel work (e) M. S. Angle Verticle 2x2(7.60x0.025)= 0.76 sqm. (f) M. S. flat Verticle / Horizontal 2x19.20x 0.025 = 0.96 sqm. (g) M. S. Sheet M. S. Sheet 1x2x025x 0.10 = 0.05 sqm. Total area for primer & painting = e+f+g= 1.77 sqm	kg	34.68	66.50	2,306.22(A)
13.61.1	Rate as per Item Number 13.61.1 of SH: Finishing LABOUR: for fixing	sqm	1.77	53.85	95.31(A)
0114	Beldar	day	0.07	247.00	17.29
	TOTAL				2,418.82
	Add Water Charges @ 1% except on A i.e on (2,418.82 - 2,401.53 =) 17.29				0.17
	TOTAL				2,418.99
	Add CPOH @ 15% except on A i.e on (2,418.99 - 2,401.53 =) 17.46				2.62
	Cost of each				2,421.61
	Say				2,421.60

23.28 Preparation of mounds of various size and shape by available excavated / supplied earth in layers not exceeding 20 cm in depth, breaking clods, watering of each layer, dressing etc., lead upto 50 meter and lift upto 1.5 m complete as per direction of Officer-in-charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 cum				
0114	Beldar	day	2.20	247.00	543.40
0115	Coolie	day	3.60	247.00	889.20
0101	Bhisti	day	0.40	260.00	104.00
9999	Sundries	L.S.	1.36	1.49	2.03
	TOTAL				1,538.63
	Add Water Charges @ 1%				15.39
	TOTAL				1,554.02
	Add CPOH @ 15%				233.10
	Cost of 10 cum				1,787.12
	Cost of 1 cum				178.71
	Say				178.70

23.29 Providing Circular Cement Concrete pots of specified size, cast with cement concrete of nominal mix 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 6 mm nominal size), reinforced with 7 Nos (3 nos horizontal & 4 nos vertical " U " shape) M.S. wires of 3.5 mm dia as per design, including required form work, finishing with cement punning on exposed surface, curing for specified period and stacking in required rows & height, all complete as per direction of Officer-in-charge.

23.29.1 Top inside dia 35 cm, outer bottom dia 25 cm, total height 35 cm with wall thickness of 25.4 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one pot MATERIAL: M.S. wire 3.5 mm dia 8 vertical wire 8 X 0.35= 2.80 mtr. 3 Horizontal wire 3 x 3.14 x 0.3 (av)= 2.83 Total = 5.63 Add wastage @ 5% = 0.28 Total = 5.91 5.91 Mtr. @ 0.08 Kg/ M = 0.4728 Say 0.47 Kg				
5.22.1	Rate as per Item Number 5.22.1 of SH: Reinforced cement concrete work Cement concrete 1:2:4 Area= (1/2) x[(3.14x 0.35) + (3.14 x 0.25])x 0.35+3.14x 0.125 x 0.125 = 0.3787 say 0.379 sqm. Thickness of Pots 2.54 cm or 0.0254 m Cubical v5.22.1olume 0.379 x 0.0254 = 0.0096 Say = 0.010 cum	kilogram	0.47	56.75	26.67(A)
5.1.3	Rate as per Item Number 5.1.3 of SH: Reinforced cement concrete work Neat cement punning	cum	0.01	4,703.90	47.04(A)
13.18	Rate as per Item Number 13.18 of SH: Finishing Centring and shuttering	sqm	0.379	31.10	11.79 (A)
5.9.15	Rate as per Item Number 5.9.15 of SH: Reinforced cement concrete work	sqm	0.38	166.90	63.42 (A)
	TOTAL Cost of each Say				148.92 148.92 148.90

23.29.2 Top inside dia 30 cm, outer bottom dia 20 cm, total height 30 cm with wall thickness of 25.4 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one pot MATERIAL: M.S. wire 3.5 mm dia 8 vertical wire 8 X 0.30= 2.40 3Horizontal wire 3x3.14x0.25(av)= 2.36 Total = 4.76 Add wastage @ 5%= 0.24 Total = 5.00 5.00 Mtr.@ 0.08 Kg/ M=0.40 Say 0.40 Kg				
5.22.1	Rate as per Item Number 5.22.1 of SH: Reinforced cement concrete work	kilogram	0.40	56.75	22.70 (A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Cement concrete 1:2:4 Area= (1/2)x{(3.14x 0.30) + (3.14 x 0.2)}x 0.30+3.14x 0.10 x 0.10 = 0.2669 say 0.267 sqm. Thickness of Pots 2.54 cm or 0.0254 m Cubical volume 0.267 x 0.0254 = 0.00678 Say = 0.007 cum				
5.1.3	Rate as per Item Number 5.1.3 of SH: Reinforced cement concrete work Neat cement punning	cum	0.007	4,703.90	32.93 (A)
13.18	Rate as per Item Number 13.18 of SH: Finishing Centring and shuttering	sqm	0.267	31.10	8.30 (A)
5.9.15	Rate as per Item Number 5.9.15 of SH: Reinforced cement concrete work	sqm	0.27	166.90	45.06 (A)
	TOTAL				108.99
	Cost of each				108.99
	Say				109.00

23.30 Providing Square Cement Concrete pots of specified size, cast with cement concrete of nominal mix 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 6 mm nominal size), reinforced with 7 Nos (3 nos horizontal & 4 nos vertical " U " shape) M.S. wires of 3.5 mm dia as per design, including required form work, finishing with cement punning on exposed surface, curing for specified period and stacking in required rows & height, all complete as per direction of Officer-in-harge.

23.30.1 Top inner width 35 cm, outer bottom width 25 cm, total height 35 cm and wall thickness 25.4 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one pot MATERIAL: M.S. wire 3.5 mm dia 8 vertical wire8 X 0.35= 2.80 3 Horizontal wire 3 x 3.14 x 0.3 (av)= 2.83 Total = 5.63 Add wastage @ 5%= 0.28 Total = 5.91 5.91 Mtr. @ 0.08 Kg/ M =0.4728 Say 0.47Kg				
5.22.1	Rate as per Item Number 5.22.1 of SH: Reinforced cement concrete work Area= (1x0.25x0.25)+4x(1/2)(0.35+0.25)x.35=0.4825 sqm. Say 0.483 sqm Thickness of Pots 2.54 cm or 0.0254 m Cubical volume 0.483 x 0.0254 = 0.0123 cum	kilogram	0.47 5	6.75	26.67 (A)
5.1.3	Rate as per Item Number 5.1.3 of SH: Reinforced cement concrete work Neat cement punning	cum	0.0123	4,703.90	57.86 (A)
13.18	Rate as per Item Number 13.18 of SH: Finishing Centring and shuttering	sqm	0.483	31.10	15.02 (A)
5.9.15	Rate as per Item Number 5.9.15 of SH: Reinforced cement concrete work	sqm	0.48	166.90	80.11 (A)
	TOTAL				179.66
	Cost of each				179.66
	Say				179.65

SUB HEAD : 24

RAIN WATER HARVESTING & TUBEWELLS

24.1 Boring/drilling bore well of required dia for casing/ strainer pipe, by suitable method prescribed in IS: 2800 (part I), including collecting samples from different strata, preparing and submitting strata chart/bore log, including hire & running charges of all equipments, tools, plants & machineries required for the job, all complete as per direction of Engineer –in-charge, upto 90 metre depth below ground level.

24.1.1 All types of soil

24.1.1.1 300 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 35 metre				
	MATERIAL:				
0020	Hydraulic Excavator (3D) with driver and fuel	day	1.00	7,500.00	7,500.00
0005	Hire charges of Diesel Truck - 9 tonne	day	0.4286	1,600.00	685.76
	Transportation charges for to and fro to site (assume 140m of bore for one shifting) (2 x30)/140				
	Loading, unloading &Errection charges of drilling Rig Machine				
0114	Beldar	day	4.00	247.00	988.00
0130	Mistry	day	1.00	301.00	301.00
7763	Water supply tanker of 5000 litre capacity	each	1.00	600.00	600.00
	Extra labour to assist M/C operator & security				
0114	Beldar	day	2.00	247.00	494.00
0113	Chowkidar	day	1.00	247.00	247.00
	TOTAL				10,815.76
	Add Water Charges @ 1%				108.16
	TOTAL				10,923.92
	Add CPOH @ 15%				1,638.59
	Cost of 35 metre				12,562.51
	Cost of 1 metre				358.93
	Say				358.95

24.1.1.2 350 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 32 metre				
	MATERIAL:				
0020	Hydraulic Excavator (3D) with driver and fuel	day	1.00	7,500.00	7,500.00
0005	Hire charges of Diesel Truck - 9 tonne	day	0.4286	1,600.00	685.76
	Transportation charges for to and fro to site (assume 140m of bore for one shifting) (2 x30)/140				
	Loading, unloading &Errection charges of drilling Rig Machine				
0114	Beldar	day	4.00	247.00	988.00
0130	Mistry	day	1.00	301.00	301.00
7763	Water supply tanker of 5000 litre capacity	each	1.00	600.00	600.00
	Extra labour to assist M/C operator & security				
0114	Beldar	day	2.00	247.00	494.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0113	Chowkidar	day	1.00	247.00	247.00
	TOTAL				10,815.76
	Add Water Charges @ 1%				108.16
	TOTAL				10,923.92
	Add CPOH @ 15%				1,638.59
	Cost of 32 metre				12,562.51
	Cost of 1 metre				392.58
	Say				392.60

24.1.1.3 400 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 25 metre				
	MATERIAL:				
0020	Hydraulic Excavator (3D) with driver and fuel	day	1.00	7,500.00	7,500.00
0005	Hire charges of Diesel Truck - 9 tonne	day	0.4286	1,600.00	685.76
	Transportation charges for to and fro to site (assume 140m of bore for one shifting) (2 x30)/140				
	Loading, unloading &Errection charges of drilling Rig Machine				
0114	Beldar	day	4.00	247.00	988.00
0130	Mistry	day	1.00	301.00	301.00
7763	Water supply tanker of 5000 litre capacity	each	1.00	600.00	600.00
	Extra labour to assist M/C operator & security				
0114	Beldar	day	2.00	247.00	494.00
0113	Chowkidar	day	1.00	247.00	247.00
	TOTAL				10,815.76
	Add Water Charges @ 1%				108.16
	TOTAL				10,923.92
	Add CPOH @ 15%				1,638.59
	Cost of 25 metre				12,562.51
	Cost of 1 metre				502.50
	Say				502.50

24.1.2 Rocky strata including Boulders

24.1.2.1 300 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 16 medtre				
	MATERIAL:				
0020	Hydraulic Excavator (3D) with driver and fuel	day	0.90	7,500.00	6,750.00
	Extra diesel required for boring in rocky strata				
1235	Diesel oil	litre	6.00	41.29	247.74

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0005	Hire charges of Diesel Truck - 9 tonne Transportation charges for to and fro to site (assume 140m of bore for one shifting) (2 x30)/140 Loading, unloading &Errection charges of drilling Rig Machine	day	0.4286	1,600.00	685.76
0114	Beldar	day	4.00	247.00	988.00
0130	Mistry	day	1.00	301.00	301.00
7763	Water supply tanker of 5000 litre capacity Extra labour to assist M/C operator & security	each	1.00	600.00	600.00
0134	Rock Hole Driller	day	0.75	247.00	185.25
0114	Beldar	day	3.00	247.00	741.00
0103	Blacksmith 2nd class	day	0.75	273.00	204.75
0113	Chowkidar	day	1.00	247.00	247.00
	TOTAL				10,950.50
	Add Water Charges @ 1%				109.50
	TOTAL				11,060.00
	Add CPOH @ 15%				1,659.00
	Cost of 16 metre				12,719.00
	Cost of 1 metre				794.94
	Say				794.95

24.1.2.2 350 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 16 metre MATERIAL:				
0020	Hydraulic Excavator (3D) with driver and fuel Extra diesel required for boring in rocky strata	day	0.90	7,500.00	6,750.00
1235	Diesel oil	litre	8.00	41.29	330.32
0005	Hire charges of Diesel Truck - 9 tonne Transportation charges for to and fro to site (assume 140m of bore for one shifting) (2 x30)/140 Loading, unloading &Errection charges of drilling Rig Machine	day	0.4286	1,600.00	685.76
0114	Beldar	day	4.00	247.00	988.00
0130	Mistry	day	1.00	301.00	301.00
7763	Water supply tanker of 5000 litre capacity Extra labour to assist M/C operator & security	each	1.00	600.00	600.00
0134	Rock Hole Driller	day	1.00	247.00	247.00
0114	Beldar	day	4.00	247.00	988.00
0103	Blacksmith 2nd class	day	0.75	273.00	204.75
0113	Chowkidar	day	1.00	247.00	247.00
	TOTAL				11,341.83
	Add Water Charges @ 1%				113.42
	TOTAL				11,455.25
	Add CPOH @ 15%				1,718.29
	Cost of 16 metre				13,173.54
	Cost of 1 metre				823.35
	Say				823.35

24.1.2.3 400 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 16 metre				
	MATERIAL:				
0020	Hydraulic Excavator (3D) with driver and fuel	day	0.90	7,500.00	6,750.00
	Extra diesel required for boring in rocky strata				
1235	Diesel oil	litre	16.00	41.29	660.64
0005	Hire charges of Diesel Truck - 9 tonne	day	0.4286	1,600.00	685.76
	Transportation charges for to and fro to site (assume 140m of bore for one shifting) (2 x30)/140				
	Loading, unloading &Errection charges of drilling Rig Machine				
0114	Beldar	day	4.00	247.00	988.00
0130	Mistry	day	1.00	301.00	301.00
7763	Water supply tanker of 5000 litre capacity	each	1.00	600.00	600.00
	Extra labour to assist M/C operator & security				
0134	Rock Hole Driller	day	1.20	247.00	296.40
0114	Beldar	day	8.00	247.00	1,976.00
0103	Blacksmith 2nd class	day	0.75	273.00	204.75
0113	Chowkidar	day	1.00	247.00	247.00
	TOTAL				12,709.55
	Add Water Charges @ 1%				127.10
	TOTAL				12,836.65
	Add CPOH @ 15%				1,925.50
	Cost of 16 metre				14,762.15
	Cost of 1 metre				922.63
	Say				922.65

24.2 Boring/drilling bore well of required dia for casing/ strainer pipe, by suitable method prescribed in IS: 2800 (part I), including collecting samples from different strata, preparing and submitting strata chart/bore log, including hire & running charges of all equipments, tools, plants & machineries required for the job, all complete as per direction of Engineer –in-charge, beyond 90 metre & upto 150 metre depth below ground level.

24.2.1 All types of soil

24.2.1.1 300 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 30 metre				
	MATERIAL:				
0020	Hydraulic Excavator (3D) with driver and fuel	day	1.00	7,500.00	7,500.00
0005	Hire charges of Diesel Truck - 9 tonne	day	0.4286	1,600.00	685.76
	Transportation charges for to and fro to site (assume 140m of bore for one shifting) (2 x30)/140				
	Loading, unloading &Errection charges of drilling Rig Machine				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Beldar	day	4.00	247.00	988.00
0130	Mistry	day	1.00	301.00	301.00
7763	Water supply tanker of 5000 litre capacity	each	1.00	600.00	600.00
	Extra labour to assist M/C operator & security				
0114	Beldar	day	2.00	247.00	494.00
0113	Chowkidar	day	1.00	247.00	247.00
	TOTAL				10,815.76
	Add Water Charges @ 1%				108.16
	TOTAL				10,923.92
	Add CPOH @ 15%				1,638.59
	Cost of 30 metre				12,562.51
	Cost of 1 metre				418.75
	Say				418.7

24.2.1.2 350 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 27 metre				
	MATERIAL:				
0020	Hydraulic Excavator (3D) with driver and fuel	day	1.00	7,500.00	7,500.00
0005	Hire charges of Diesel Truck - 9 tonne	day	0.4286	1,600.00	685.76
	Transportation charges for to and fro to site (assume 140m of bore for one shifting) (2 x30)/140				
	Loading, unloading &Errection charges of drilling Rig Machine				
0114	Beldar	day	4.00	247.00	988.00
0130	Mistry	day	1.00	301.00	301.00
7763	Water supply tanker of 5000 litre capacity	each	1.00	600.00	600.00
	Extra labour to assist M/C operator & security				
0114	Beldar	day	2.00	247.00	494.00
0113	Chowkidar	day	1.00	247.00	247.00
	TOTAL				10,815.76
	Add Water Charges @ 1%				108.16
	TOTAL				10,923.92
	Add CPOH @ 15%				1,638.59
	Cost of 27 metre				12,562.51
	Cost of 1 metre				465.28
	Say				465.30

24.2.1.3 400 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 20 metre				
	MATERIAL:				
0020	Hydraulic Excavator (3D) with driver and fuel	day	1.00	7,500.00	7,500.00
0005	Hire charges of Diesel Truck - 9 tonne	day	0.4286	1,600.00	685.76

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Transportation charges for to and fro to site (assume 140m of bore for one shifting) (2 x30)/140				
	Loading, unloading &Errection charges of drilling Rig Machine				
0114	Beldar	day	4.00	247.00	988.00
0130	Mistry	day	1.00	301.00	301.00
7763	Water supply tanker of 5000 litre capacity	each	1.00	600.00	600.00
	Extra labour to assist M/C operator & security				
0114	Beldar	day	2.00	247.00	494.00
0113	Chowkidar	day	1.00	247.00	247.00
	TOTAL				10,815.76
	Add Water Charges @ 1%				108.16
	TOTAL				10,923.92
	Add CPOH @ 15%				1,638.59
	Cost of 20 metre				12,562.51
	Cost of 1 metre				628.13
	Say				628.15

24.2.2 Rocky strata including Boulders

24.2.2.1 300 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 16 metre				
	MATERIAL:				
0020	Hydraulic Excavator (3D) with driver and fuel	day	0.90	7,500.00	6,750.00
	Extra diesel required for boring in rocky strata				
1235	Diesel oil	litre	10.00	41.29	412.90
0005	Hire charges of Diesel Truck - 9 tonne	day	0.4286	1,600.00	685.76
	Transportation charges for to and fro to site (assume 140m of bore for one shifting) (2 x30)/140				
	Loading, unloading &Errection charges of drilling Rig Machine				
0114	Beldar	day	4.00	247.00	988.00
0130	Mistry	day	1.00	301.00	301.00
7763	Water supply tanker of 5000 litre capacity	each	1.00	600.00	600.00
	Extra labour to assist M/C operator & security				
0134	Rock Hole Driller	day	1.00	247.00	247.00
0114	Beldar	day	5.00	247.00	1,235.00
0103	Blacksmith 2nd class	day	0.70	273.00	191.10
0113	Chowkidar	day	1.00	247.00	247.00
	TOTAL				11,657.76
	Add Water Charges @ 1%				116.58
	TOTAL				11,774.34
	Add CPOH @ 15%				1,766.15
	Cost of 16 metre				13,540.49
	Cost of 1 metre				846.28
	Say				846.30

24.2.2.2 350 mm dia.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 16 metre				
	MATERIAL:				
0020	Hydraulic Excavator (3D) with driver and fuel	day	0.90	7,500.00	6,750.00
	Extra diesel required for boring in rocky strata				
1235	Diesel oil	litre	12.00	41.29	495.48
0005	Hire charges of Diesel Truck - 9 tonne	day	0.4286	1,600.00	685.76
	Transportation charges for to and fro to site (assume 140m of bore for one shifting) (2 x30)/140				
	Loading, unloading &Errection charges of drilling Rig Machine				
0114	Beldar	day	4.00	247.00	988.00
0130	Mistry	day	1.00	301.00	301.00
7763	Water supply tanker of 5000 litre capacity	each	1.00	600.00	600.00
	Extra labour to assist M/C operator & security				
0134	Rock Hole Driller	day	1.00	247.00	247.00
0114	Beldar	day	6.00	247.00	1,482.00
0103	Blacksmith 2nd class	day	0.75	273.00	204.75
0113	Chowkidar	day	1.00	247.00	247.00
	TOTAL				12,000.99
	Add Water Charges @ 1%				120.01
	TOTAL				12,121.00
	Add CPOH @ 15%				1,818.15
	Cost of 16 metre				13,939.15
	Cost of 1 metre				871.20
	Say				871.20

24.2.2.3 400 mm dia.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 14 metre				
	MATERIAL:				
0020	Hydraulic Excavator (3D) with driver and fuel	day	0.95	7,500.00	7,125.00
	Extra diesel required for boring in rocky strata				
1235	Diesel oil	litre	16.00	41.29	660.64
0005	Hire charges of Diesel Truck - 9 tonne	day	0.4286	1,600.00	685.76
	Transportation charges for to and fro to site (assume 140m of bore for one shifting) (2 x30)/140				
	Loading, unloading &Errection charges of drilling Rig Machine				
0114	Beldar	day	4.00	247.00	988.00
0130	Mistry	day	1.00	301.00	301.00
7763	Water supply tanker of 5000 litre capacity	each	1.00	600.00	600.00
	Extra labour to assist M/C operator & security				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0134	Rock Hole Driller	day	1.20	247.00	296.40
0114	Beldar	day	8.00	247.00	1,976.00
0103	Blacksmith 2nd class	day	1.00	273.00	273.00
0113	Chowkidar	day	1.00	247.00	247.00
	TOTAL				13,152.80
	Add Water Charges @ 1%				131.53
	TOTAL				13,284.33
	Add CPOH @ 15%				1,992.65
	Cost of 14 metre				15,276.98
	Cost of 1 metre				1,091.21
	Say				1,091.20

24.3 Supplying, assembling, lowering and fixing in vertical position in bore well, unplasticized PVC medium well casing (CM) pipe of required dia, conforming to IS: 12818, including required hire and labour charges, fittings & accessories etc. all complete, for all depths, as per direction of Engineer –in-charge.

24.3.1 100 mm nominal size dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 metre				
	MATERIAL:				
7758	uPVC blind pipe 100 mm dia as per IS: 12818	metre	100.00	385.00	38,500.00
2321	Carriage of Spun iron S & S pipes 150 mm dia	100 metre	50.00	319.12	159.56
	Qty = 50 to consider 50% of carriage as per 2321				
	LABOUR:				
	for lowering				
0114	Beldar	day	0.50	247.00	123.50
0115	Coolie	day	0.50	247.00	123.50
	TOTAL				38,906.56
	Add Water Charges @ 1%				389.07
	TOTAL				39,295.63
	Add CPOH @ 15%				5,894.34
	Cost of 100 metre				45,189.97
	Cost of 1 metre				451.90
	Say				451.90

24.3.2 150 mm nominal size dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 metre				
	MATERIAL:				
7745	PVC blind pipe 150 mm dia as per IS: 12818	metre	100.00	460.00	46,000.00
2321	Carriage of Spun iron S & S pipes 150 mm dia	100 metre	50.00	319.12	159.56
	Qty = 50 to consider 50% of carriage as per 2321				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	LABOUR:				
	for lowering				
0114	Beldar	day	0.50	247.00	123.50
0115	Coolie	day	0.50	247.00	123.50
9999	Sundries (Adhesive etc.)	L.S.	10.07	1.49	15.00
	TOTAL				46,421.56
	Add Water Charges @ 1%				464.22
	TOTAL				46,885.78
	Add CPOH @ 15%				7,032.87
	Cost of 100 metre				53,918.65
	Cost of 1 metre				539.19
	Say				539.20

24.3.3 200 mm nominal size dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 metre				
	MATERIAL:				
7746	PVC blind pipe 200 mm dia as per IS: 12818	metre	100.00	834.75	83,475.00
2322	Carriage of Spun iron S & S pipes 200 mm dia Qty = 50 to consider 50% of carriage as 2322	100 metre	50.00	519.11	259.56
	LABOUR:				
	for lowering				
0114	Beldar	day	0.50	247.00	123.50
0115	Coolie	day	0.50	247.00	123.50
	TOTAL				83,981.56
	Add Water Charges @ 1%				839.82
	TOTAL				84,821.38
	Add CPOH @ 15%				12,723.21
	Cost of 100 metre				97,544.59
	Cost of 1 metre				975.45
	Say				975.45

24.4 Supplying, assembling, lowering and fixing in vertical position in bore well unplasticized PVC medium well screen (RMS) pipes with ribs, conforming to IS: 12818, including hire & labour charges, fittings & accessories etc. all complete, for all depths, as per direction of Engineer-in-charge.

24.4.1 100 mm nominal size dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 metre				
	MATERIAL:				
7759	uPVC slotted pipe 100 mm dia as per IS: 12818	metre	100.00	390.00	39,000.00
2321	Carriage of Spun iron S & S pipes 150 mm dia Qty = 50 to consider 50% of carriage as per 2321	100 metre	50.00	319.12	159.56

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	LABOUR:				
	for lowering				
0114	Beldar	day	0.50	247.00	123.50
0115	Coolie	day	0.50	247.00	123.50
9999	Sundries (Adhesive etc.)	L.S.	10.07	1.49	15.00
	TOTAL				39,421.56
	Add Water Charges @ 1%				394.22
	TOTAL				39,815.78
	Add CPOH @ 15%				5,972.37
	Cost of 100 metre				45,788.15
	Cost of 1 metre				457.88
	Say				457.90

24.4.2 150 mm nominal size dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 metre				
	MATERIAL:				
7751	PVC slotted pipe 150 mm dia as per IS: 12818	metre	100.00	465.00	46,500.00
2321	Carriage of Spun iron S & S pipes 150 mm dia	100 metre	50.00	319.12	159.56
	Qty = 50 to consider 50% of carriage as per 2321				
	LABOUR:				
	for lowering				
0114	Beldar	day	0.50	247.00	123.50
0115	Coolie	day	0.50	247.00	123.50
9999	Sundries (Adhesive etc.)	L.S.	10.07	1.49	15.00
	TOTAL				46,921.56
	Add Water Charges @ 1%				469.22
	TOTAL				47,390.78
	Add CPOH @ 15%				7,108.62
	Cost of 100 metre				54,499.40
	Cost of 1 metre				544.99
	Say				545.00

24.4.3 200 mm nominal size dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 metre				
	MATERIAL:				
7752	PVC slotted pipe 200 mm dia as per IS: 12818	metre	100.00	840.00	84,000.00
2322	Carriage of Spun iron S & S pipes 200 mm dia	100 metre	50.00	519.11	259.56
	Qty = 50 to consider 50% of carriage as per 2322				
	LABOUR:				
	for lowering				
0114	Beldar	day	0.50	247.00	123.50

Code	Description	Unit	Quantity	Rate	Amount
0115	Coolie	day	0.50	247.00	123.50
9999	Sundries (Adhesive etc.)	L.S.	13.42	1.49	20.00
	TOTAL				84,526.56
	Add Water Charges @ 1%				845.27
	TOTAL				85,371.83
	Add CPOH @ 15%				12,805.77
	Cost of 100 metre				98,177.60
	Cost of 1 metre				981.78
	Say				981.80

24.5 Supplying, filling, spreading & leveling stone boulders of size range 5 cm to 20 cm, in recharge pit, in the required thickness, for all leads & lifts, all complete as per direction of Engineer-in-charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum				
	MATERIAL:				
7753	Boulder 50 mm to 200 mm including carriage	cum	1.00	332.00	332.00
0114	Beldar	day	0.25	247.00	61.75
9999	Sundries	L.S.	1.00	1.49	1.49
	TOTAL				395.24
	Add Water Charges @ 1%				3.95
	TOTAL				399.19
	Add CPOH @ 15%				59.88
	Cost of 1 cum				459.07
	Say				459.05

24.6 Supplying, filling, spreading & leveling gravels of size range 5 mm to 10 mm, in the recharge pit, over the existing layer of boulders, in required thickness, for all leads & lifts, all complete as per direction of Engineer-in-charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum				
	MATERIAL:				
7754	Gravel 5 mm to 10 mm including carriage	cum	1.00	650.00	650.00
0114	Beldar	day	0.25	247.00	61.75
9999	Sundries	L.S.	1.00	1.49	1.49
	TOTAL				713.24
	Add Water Charges @ 1%				7.13
	TOTAL				720.37
	Add CPOH @ 15%				108.06
	Cost of 1 cum				828.43
	Say				828.45

24.7 Supplying, filling, spreading & leveling coarse sand of size range 1.5 mm to 2 mm in recharge pit, in required thickness over gravel layer, for all leads & lifts, all complete as per direction of Engineer –in-charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum				
	MATERIAL:				
7755	Gravel 1.5 mm to 2 mm including carriage	cum	1.00	625.00	625.00
0114	Beldar	day	0.25	247.00	61.75
9999	Sundries	L.S.	1.00	1.49	1.49
	TOTAL				688.24
	Add Water Charges @ 1%				6.88
	TOTAL				695.12
	Add CPOH @ 15%				104.27
	Cost of 1 cum				799.39
	Say				799.40

24.8 Gravel packing in tubewell construction in accordance with IS: 4097, including providing gravel fine/ medium/ coarse, in required grading & sizes as per actual requirement, all complete as per direction of Engineer-in-charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum				
	MATERIAL:				
7772	Pea Gravel including carriage	cum	1.00	650.00	650.00
0114	Beldar	day	0.30	247.00	74.10
9999	Sundries	L.S.	1.00	1.49	1.49
	TOTAL				725.59
	Add Water Charges @ 1%				7.26
	TOTAL				732.85
	Add CPOH @ 15%				109.93
	Cost of 1 cum				842.78
	Say				842.80

24.9 Providing and fixing factory made precast RCC perforated drain covers, having concrete of strength not less than M-25, of size 1000 x 450x50 mm, reinforced with 8 mm dia four nos longitudinal & 9 nos cross sectional T.M.T. hoop bars, including providing 50 mm dia perforations @ 100 to 125 mm c/c, including providing edge binding with M.S. flats of size 50 mm x 1.6 mm complete, all as per direction of Engineer-in-charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 No. RCC drain cover				
	MATERIAL:				
7762	Precast R.C.C. perforated slab	each	1.00	750.00	750.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Carriage and fixing charges	L.S.	15.00	1.49	22.35
	TOTAL				772.35
	Add Water Charges @ 1%				7.72
	TOTAL				780.07
	Add CPOH @ 15%				117.01
	Cost of each				897.08
	Say				897.10

24.10 Supplying, assembling, lowering and fixing in vertical position in bore well, ERW (Electric Resistance Welded) FE 410 mild steel screwed and socketed/ plain ended casing pipes of required dia, conforming to IS: 4270, of reputed & approved make, including painted with outside surface with two coats of anticorrosive paint of approved brand and manufacture, including required hire & labour charges, fittings & accessories, all complete, for all depths, as per direction of Engineer-in-charge.

24.10.1 100 mm nominal size dia having minimum wall thickness 5.00 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 30 metre				
	MATERIAL:				
7757	M.S. pipe 100 mm dia casing pipe	metre	30.00	750.00	22,500.00
7764	M.S. socket 100 mm dia	each	5.00	165.00	825.00
2343	Carriage of Ductile Iron pipes (k7) 100 mm dia including loading and unloading	100 metre	30.00	191.48	57.44
	Painting with Anticorrosive Paint 3.14 x.11 x30.00=15.07 sqm.				
13.65.1	Rate as per Item Number 13.65.1 of SH: Finishing	sqm	10.36	44.55	461.54 (A)
	LABOUR:				
0114	Beldar	day	1.35	247.00	333.45
0130	Mistry	day	0.50	301.00	150.50
	TOTAL				24,327.93
	Add Water Charges @ 1% except on A i.e on (24,327.93 - 461.54 =) 23,866.39				238.66
	TOTAL				24,566.59
	Add CPOH @ 15% except on A i.e on (24,566.59 - 461.54 =) 24,105.05				3,615.76
	Cost of 30 metre				28,182.35
	Cost of 1 metre				939.41
	Say				939.40

24.10.2 150 mm nominal size dia having minimum wall thickness 5.00 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 30 metre				
	MATERIAL:				
7743	M.S. pipe 150 mm dia casing pipe	metre	30.00	1,042.00	31,260.00
7765	M.S. socket 150 mm dia	each	5.00	200.00	1,000.00
2344	Carriage of Cast iron pipes 150 mm dia including loading and unloading	100 metre	30.00	319.12	95.74

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Painting with Anticorrosive Paint 3.14 x.160 x30.00=15.07 sqm.				
13.65.1	Rate as per Item Number 13.65.1 of SH: Finishing	sqm	15.07	44.55	671.37 (A)
	LABOUR:				
0114	Beldar	day	1.40	247.00	345.80
0130	Mistry	day	0.50	301.00	150.50
	TOTAL				33,523.41
	Add Water Charges @ 1% except on A i.e on (33,523.41 - 671.37 =) 32,852.04				328.52
	TOTAL				33,851.93
	Add CPOH @ 15% except on A i.e on (33,851.93 - 671.37 =) 33,180.56				4,977.08
	Cost of 30 metre				38,829.01
	Cost of 1 metre				1,294.30
	Say				1,294.30

24.10.3 200 mm nominal size dia having minimum wall thickness 5.40 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 30 metre				
	MATERIAL:				
7744	M.S. pipe 200 mm dia casing pipe	metre	30.00	1,250.00	37,500.00
7766	M.S. socket 200 mm dia	each	5.00	250.00	1,250.00
2345	Carriage of Cast iron ptpes 200 mm dia including loading and unloading	100 metre	30.00	519.11	155.73
	Painting with Anticorrosive Paint 3.14 x.210 x30.00=20.25 sqm.				
13.65.1	Rate as per Item Number 13.65.1 of SH: Finishing	sqm	20.25	44.55	902.14 (A)
	LABOUR:				
0114	Beldar	day	1.35	247.00	333.45
0130	Mistry	day	0.50	301.00	150.50
	TOTAL				40,291.82
	Add Water Charges @ 1% except on A i.e on (40,291.82 - 902.14 =) 39,389.68				393.90
	TOTAL				40,685.72
	Add CPOH @ 15% except on A i.e on (40,685.72 - 902.14 =) 39,783.58				5,967.54
	Cost of 30 metre				46,653.26
	Cost of 1 metre				1,555.11
	Say				1,555.10

24.11 Supplying, assembling, lowering and fixing in vertical position in bore well, ERW (Electric Resistance Welded) FE 410 plain slotted (having slot of size 1.6/ 3.2 mm) mild steel threaded and socketed / plain bevel ended pipe (type A) of required dia, conforming to IS: 8110, of reputed and approved make, having wall thickness not less than 5.40 mm, including painted with outside surface with two coats of anticorrosive bitumestic paint of approved brand and manufacture, including hire & labour charges, fittings & accessories, all complete, for all depths, as per direction of Engineer –in-charge.

24.11.1 100 mm nominal size dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 30 metre				
	MATERIAL:				
7757	M.S. pipe 100 mm dia casing pipe	metre	30.00	750.00	22,500.00
7764	M.S. socket 100 mm dia	each	5.00	165.00	825.00
9999	Extra for making slots	L.S.	906.04	1.49	1,350.00
2343	Carriage of Ductile Iron pipes (k7) 100 mm dia including loading and unloading	100 metre	30.00	191.48	57.44
	Painting with Anticorrosive Paint 3.14 x.11 x30.00=10.36 sqm.				
13.65.1	Rate as per Item Number 13.65.1 of SH: Finishing	sqm	10.36	44.55	461.54 (A)
	LABOUR:				
0114	Beldar	day	1.35	247.00	333.45
0130	Mistry	day	0.50	301.00	150.50
	TOTAL				25,677.93
	Add Water Charges @ 1% except on A i.e on (25,677.93 - 461.54 =) 25,216.39				252.16
	TOTAL				25,930.09
	Add CPOH @ 15% except on A i.e on (25,930.09 - 461.54 =) 25,468.55				3,820.28
	Cost of 30 metre				29,750.37
	Cost of 1 metre				991.68
	Say				991.70

24.11.2 150 mm nominal size dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 30 metre				
	MATERIAL:				
7743	M.S. pipe 150 mm dia casing pipe	metre	30.00	1,042.00	31,260.00
9999	Extra for making slots	L.S.	1,208.05	1.49	1,799.99
7765	M.S. socket 150 mm dia	each	5.00	200.00	1,000.00
2344	Carriage of Cast iron pipes 150 mm dia including loading and unloading	100 metre	30.00	319.12	95.74
	Painting with Anticorrosive Paint 3.14 x.160 x30.00=15.07 sqm.				
13.65.1	Rate as per Item Number 13.65.1 of SH: Finishing	sqm	15.07	44.55	671.37 (A)
	LABOUR:				
0114	Beldar	day	1.40	247.00	345.80
0130	Mistry	day	0.50	301.00	150.50
	TOTAL				35,323.40
	Add Water Charges @ 1% except on A i.e on (35,323.40 - 671.37 =) 34,652.03				346.52
	TOTAL				35,669.92
	Add CPOH @ 15% except on A i.e on (35,669.92 - 671.37 =) 34,998.55				5,249.78
	Cost of 30 metre				40,919.70
	Cost of 1 metre				1,363.99
	Say				1,364.00

24.11.3 200 mm nominal size dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 30 metre				
	MATERIAL:				
7744	M.S. pipe 200 mm dia casing pipe	metre	30.00	1,250.00	37,500.00
9999	Extra for making slots	L.S.	1,208.05	1.49	1,799.99
7766	M.S. socket 200 mm dia	each	5.00	250.00	1,250.00
2345	Carriage of Cast iron ptpes 200 mm dia including loading and unloading	100 metre	30.00	519.11	155.73
	Painting with Anticorrosive Paint 3.14 x 0.210 x30.00=20.25 sqm.				
13.65.1	Rate as per Item Number 13.65.1 of SH: Finishing	sqm	20.25	44.55	902.14 (A)
	LABOUR:				
0114	Beldar	day	1.40	247.00	345.80
0123	Mason (brick layer) 1 st class	day	0.50	301.00	150.50
	TOTAL				42,104.16
	Add Water Charges @ 1% except on A i.e on (42,104.16 - 902.14 =) 41,202.02				412.02
	TOTAL				42,516.18
	Add CPOH @ 15% except on A i.e on (42,516.18 - 902.14 =) 41,614.04				6,242.11
	Cost of 30 metre				48,758.29
	Cost of 1 metre				1,625.28
	Say				1,625.30

24.12 Development of tube well in accordance with IS : 2800 (part I) and IS: 11189, to establish maximum rate of usable water yield without sand content (beyond permissible limit), with required capacity air compressor, running the compressor for required time till well is fully developed, measuring yield of well by "V" notch method or any other approved method, measuring static level & draw down etc. by step draw down method, collecting water samples & getting tested in approved laboratory, i/c disinfection of tubewell, all complete, including hire & labour charges of air compressor, tools & accessories etc., all as per requirement and direction of Engineer-in-charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 8 hrs				
	MATERIAL:				
0040	Air compressor 250 cfm with two leads for pneumatic cutters / hammers	day	1.00	1,800.00	1,800.00
1235	Diesel oil	litre	48.00	41.29	1,981.92
	TOTAL				3,781.92
	Add Water Charges @ 1%				37.82
	TOTAL				3,819.74
	Add CPOH @ 15%				572.96
	Cost of 8 hour				4,392.70
	Cost of 1 hour				549.09
	Say				549.10

24.13 Providing and fixing suitable size threaded mild steel cap or spot welded plate to the top of bore well housing/ casing pipe, removable as per requirement, all complete for borewell of:

24.13.1 100 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for				
	MATERIAL:				
	100mm dia MS screwed cap with locking arrangement				
7760	M.S. cap 100 mm dia	each	1.00	120.00	120.00 (X)
	Add 5% labour facor on X				
	120 x 5 % = 120 x 5 / 100				6.00
	TOTAL				126.00
	Add Water Charges @ 1%				1.26
	TOTAL				127.26
	Add CPOH @ 15%				19.09
	Cost of each				146.35
	Say				146.35

24.13.2 150 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for each				
	MATERIAL:				
	100mm dia MS screwed cap with locking arrangement				
7747	M.S. cap 150 mm dia	each	1.00	150.00	150.00 (X)
	Add 5% labour facor on X				
	150 x 5 % = 150 x 5 / 100				7.50
	TOTAL				157.50
	Add Water Charges @ 1%				1.58
	TOTAL				159.08
	Add CPOH @ 15%				23.86
	Cost of each				182.94
	Say				182.95

24.13.3 200 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for each				
	MATERIAL:				
	100mm dia MS screwed cap with locking arrangement				
7748	M.S. cap 200 mm dia	each	1.00	180.00	180.00 (X)
	Add 5% labour facor on X				
	180 x 5 % = 180 x 5 / 100				9.00
	TOTAL				189.00
	Add Water Charges @ 1%				1.89
	TOTAL				190.89
	Add CPOH @ 15%				28.63
	Cost of each				219.52
	Say				219.50

24.14 Providing and fixing M.S. clamp of required dia to the top of casing/ housing pipe of tubewell as per IS: 2800 (part I), including necessary bolts & nuts of required size complete.

24.14.1 100 mm clamp

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for each MATERIAL: Clamps made of MS flat of size 100x10mm thick 1x2mt.x7.80 kg per mt.=15.60 kg.				
10.1	Rate as per Item Number 10.1 of SH: Steel work	kg	15.60	59.90	934.44 (A)
9999	Sundries, nuts and bolts etc.	L.S.	25.00	1.49	37.25
	TOTAL				971.69
	Add Water Charges @ 1% except on A i.e on (971.69 - 934.44 =) 37.25				0.37
	TOTAL				972.06
	Add CPOH @ 15% except on A i.e on (972.06 - 934.44 =) 37.62				5.64
	Cost of each				977.70
	Say				977.70

24.14.2 150 mm clamp

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for each MATERIAL: Clamps made of MS flat of size 100x10mm thick 1x2.10 mt.x7.80 kg per mt.=16.38 kg.				
10.1	Rate as per Item Number 10.1 of SH: Steel work	kg	16.38	59.90	981.16 (A)
9999	Sundries, nuts and bolts etc.	L.S.	30.00	1.49	44.70
	TOTAL				1,025.86
	Add Water Charges @ 1% except on A i.e on (1,025.86 - 981.16 =) 44.70				0.45
	TOTAL				1,026.31
	Add CPOH @ 15% except on A i.e on (1,026.31 - 981.16 =) 45.15				6.77
	Cost of each				1,033.08
	Say				1,033.10

24.14.3 200 mm clamp

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for each MATERIAL: Clamps made of MS flat of size 100x10mm thick 1x2.40 mt.x7.80 kg per mt.=18.72 kg.				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
10.1	Rate as per Item Number 10.1 of SH: Steel work	kg	18.72	59.90	1,121.33 (A)
9999	Sundries, nuts and bolts etc.	L.S.	30.00	1.49	44.70
	TOTAL				1,166.03
	Add Water Charges @ 1% except on A i.e on (1,166.03 - 1,121.33 =) 44.70				0.45
	TOTAL				1,166.48
	Add CPOH @ 15% except on A i.e on (1,166.48 - 1,121.33 =) 45.15				6.77
	Cost of each				1,173.25
	Say				1,173.25

24.15 Providing and fixing Bail plug/ Bottom plug of required dia to the bottom of pipe assembly of tubewell as per IS:2800 (part I).

24.15.1 100 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 No.				
	MATERIAL:				
7761	M.S. bail plug 100 mm dia	each	1.00	140.00	140.00
9999	Sundries	L.S.	5.00	1.49	7.45
	TOTAL				147.45
	Add Water Charges @ 1%				1.47
	TOTAL				148.92
	Add CPOH @ 15%				22.34
	Cost of each				171.26
	Say				171.25

24.15.2 150 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 No.				
	MATERIAL:				
7749	M.S bail plug 150 mm dia	each	1.00	170.00	170.00
9999	Sundries	L.S.	5.00	1.49	7.45
	TOTAL				177.45
	Add Water Charges @ 1%				1.77
	TOTAL				179.22
	Add CPOH @ 15%				26.88
	Cost of each				206.10
	Say				206.10

24.15.3 200 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 No.				
	MATERIAL:				
7750	M.S bail plug 200 mm dia	each	1.00	200.00	200.00
9999	Sundries	L.S.	5.00	1.49	7.45
	TOTAL				207.45
	Add Water Charges @ 1%				2.07
	TOTAL				209.52
	Add CPOH @ 15%				31.43
	Cost of each				240.95
	Say				240.95

SUB HEAD : 25

CONSERVATION OF HERITAGE BUILDINGS

25.1 Raking out joints of stone masonry surface to the required width and depth, with due care and precaution, by mechanical / manual means, including preparing and cleaning the surface for re-pointing/ refilling of joints, including disposal of rubbish to the dumping ground within 50 metre lead.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	LABOUR:				
0114	Beldar	day	0.53	247.00	130.91
0115	Coolie	day	0.08	247.00	19.76
0101	Bhisti	day	0.07	260.00	18.20
9999	Sundries	L.S.	1.43	1.49	2.13
	TOTAL				171.00
	Add Water Charges @ 1%				1.71
	TOTAL				172.71
	Add CPOH @ 15%				25.91
	Cost of 10 sqm				198.62
	Cost of 1 sqm				19.86
	Say				19.85

25.2 Providing and fixing double scaffolding system (cup lock type) on the exterior side of building/structure, upto 25 metre height, above ground level, including additional rows of scaffolding in stepped manner as per requirement of site, made with 40 mm dia M.S. tube, placed 1.5 metre centre to centre, horizontal & vertical tubes joint with cup & lock system with M.S. Tubes, M.S. tube challis, M.S. clamps and staircase system in the scaffolding for working platform etc. and maintaining it in a serviceable condition for execution of work of cleaning and/ or pointing and/ or applying chemical and removing it thereafter. The scaffolding system shall be stiffened with bracings, runners, connecting with the building etc, wherever required, if feasible, for inspection of work at required locations with essential safety features for the workmen etc., complete as per directions and approval of Engineer-in-charge. Note:- (1) The elevational area of the scaffolding shall be mesured for payment purpose. (2) The payment will be made once only for execution of all items of such works.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for area 22.5x9.0=202.50sqm				
	MATERIAL:				
	Assuming shuttering material will become unserviceable after use of 40 times				
	Adding for maintenance @ 10% of cost				
	Taking slvage value after full use of material @ 25% of cost				
7397	Base Jack	each	0.30	180.00	54.00
	Qty taken for cost of using once=14x0.85/40=0.2975				
4009	Mild steel tubes hot finished welded type 40mm dia Mild steel tubes	kilogram	80.02	48.00	3,840.96
	Vertical standard 2.5m length=7x2x9x2.5= 315.00 m				
	Side support 6.00m length=3x2x6.00=36.00m				
	Horizonatal support 3.00m				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	length=18x3x3.00=162.00m Total=1026.00m @ 3.67 kg/m =3765.42 kg Qty taken for cost of using once= 3765.42x0.85/40=80.02kg				
7387	Spigot for standard jointing 7x2x9=126 nos x 0.40m length =50.40m 50.40m@2.46kg /m=123.98kg Qty taken for cost of using once= 123.98x0.85/40=2.63kg	kilogram	2.63	45.00	118.35
1034	Bolts and nuts up to 300 mm in length for spigot 2x7x2x9=252 nos @ 0.15 kg each=37.80 kg =0.378q Qty taken for cost of using once= 0.378x0.85/40=0.008q	quintal	0.008	5,400.00	43.20
7346	Double coupler Clamp coupler for fixing MS tube with scafolding 2x3x2+2x18x3=120 nos Qty taken for cost of using once= 120x0.85/40=2.55 nos	each	2.55	55.00	140.25
7398	Challies 3 nos x 18 lines=54 nos Two level plate challies=2x18 lines=36 nos Total=90 nos Qty taken for cost of using once=90x0.85/40=1.9125 nos	each	1.91	800.00	1,528.00
7399	Cup locks For Vertical standards= (5x7x2x9=630 nos) +(2x18x19=694 nos) Total=1314 nos Qty taken for cost of using once= 1314x0.85/40=27.92	each	27.92	75.00	2,094.00
2205	Carriage of steel 40mm dia MS pipe=3765.42kg 25mm spigot=123.98kg Nuts & bolts=37.80kg clamp=120 nos@1.00kg each=120.00kg Challies=90 nos @ 15.00kg each=1350.00kg Cup locks=1314 nos @ 0.50kg each= 657.00kg Total=6054.20kg=6.054 tonne	tonne	6.054	77.87	471.42
0116	Fitter (grade 1)	day	15.50	301.00	4,665.50
0114	Beldar	day	31.00	247.00	7,657.00
9999	Sundries	L.S.	1,035.00	1.49	1,542.15
	TOTAL				22,154.83
	Add Water Charges @ 1%				221.55
	TOTAL				22,376.38
	Add CPOH @ 15%				3,356.46
	Cost of 202.5 sqm				25,732.84
	Cost of 1 sqm				127.08
	Say				127.10

25.3 Cleaning the sand stone surface and removing dirt, dust, bird dropping, grease, oil, algae, fungus, monkey beats, vegetable growth etc., including providing, applying and washing the surface with liquid Ammonia Chemical of 5% solution and other chemical cleaning agent as approved by Archaeological Survey of India/ Engineer-in-charge, of approved brand and manufacturer, with the help of required scrubbers and also cleaning with machine operated water jet mixed with desired quantity of fine silica where ever required, without causing any scratching/ damage to the stone surface and finally washing the surface with clean water with the help of pressure jet machine, complete in all respect, including taking all precautions to safeguard ventilators, windows, doors etc. by suitable covering so as to avoid any damage to the building/ structure, all as per direction of Engineer-in-charge (The rate is inclusive of all materials & labours involved except scaffolding).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
7767	Stone cleaning chemical approved by ASI 1 kg teepal of 3% solution for 10 sqm area cost for 10sqm 0.10 kg @ Rs.164.01	litre	0.10	164.01	16.40
7771	Liquid Amonia 5%	litre	0.17	160.80	27.34
	LABOUR:				
	(for applying the camical Salution)				
0103	Blacksmith 2nd class	day	0.20	273.00	54.60
0114	Beldar	day	0.20	247.00	49.40
0128	Mate	day	0.10	260.00	26.00
9999	(a)Cleaning T & P & its manitinance cost (Jet Pump, electrice cable, horse pipe, waler pipe, Nozel safety belt Rope & mantance cost and safety machine for window etc.)	L.S.	1.00	1.49	1.49
6501	Sand zone V (Jamuna)	cum	0.0283	500.00	14.15
	Labour (for pressure cleaning)				
0103	Blacksmith 2nd class	day	0.40 2	73.00	109.20
0114	Beldar	day	0.80	247.00	197.60
0128	Mate	day	0.10	260.00	26.00
	TOTAL				522.18
	Add Water Charges @ 1%				5.22
	TOTAL				527.40
	Add CPOH @ 15%				79.11
	Cost of 10 sqm				606.51
	Cost of 1 sqm				60.65
	Say				60.65

25.4 Providing and applying antifungal wash treatment using 3% solution of sodium pentachlorophenate, of reputed brand and manufacturer, on cleaned sand stone surface at desired locations as per direction of Engineer-in-charge (The rate is inclusive of all materials & labours involved except scaffolding).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
7775	Sodium pentachlorophenate	kilogram	0.10	630.00	63.00
	LABOUR:				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0103	Blacksmith 2nd class	day	0.25	273.00	68.25
0114	Beldar	day	0.25	247.00	61.75
0128	Mate	day	0.125	260.00	32.50
	TOTAL				225.50
	Add Water Charges @ 1%				2.26
	TOTAL				227.76
	Add CPOH @ 15%				34.16
	Cost of 10 sqm				261.92
	Cost of 1 sqm				26.19
	Say				26.20

25.5 Ruled /Flush pointing on Red sand stone masonry surface with lime, surkhi and marble dust mortar in the ratio of 1:1.5:1/2 {One lime: 1.5 surkhi (50% red and 50% light yellow surkhi):1/2 marble dust}. (The rate is inclusive of all materials & labours involved except scaffolding).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
3.19	Rate as per Item Number 3.19 of SH: Mortar	day	0.023	2,004.20	46.10
	LABOUR:				
0155	Mason (average)	day	0.92	287.00	264.04
0115	Coolie	day	1.37	247.00	338.39
0101	Bhisti	day	0.93	260.00	241.80
9999	Sundries	L.S.	4.03	1.49	6.00
	TOTAL				896.33
	Add Water Charges @ 1%				8.96
	TOTAL				905.29
	Add CPOH @ 15%				135.79
	Cost of 10 sqm				1,041.08
	Cost of 1 sqm				104.11
	Say				104.10

25.6 Ruled/ Flush pointing on White sand stone masonry surface with lime, surkhi and marble dust mortar in the ratio of 1:1.5:1/2 {One lime:1.5 surkhi (15% dark red and 85% light yellow surkhi):1/2 marble dust}. (The rate is inclusive of all materials & labours involved except scaffolding).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL:				
3.19	Rate as per Item Number 3.19 of SH: Mortar	day	0.023	2,004.20	46.10
	LABOUR:				
0155	Mason (average)	day	0.92 2	87.00	264.04
0115	Coolie	day	1.37	247.00	338.39
0101	Bhisti	day	0.93	260.00	241.80
9999	Sundries	L.S.	4.03	1.49	6.00
	TOTAL				896.33
	Add Water Charges @ 1%				8.96
	TOTAL				905.29
	Add CPOH @ 15%				135.79
	Cost of 10 sqm				1,041.08
	Cost of 1 sqm				104.11
	Say				104.10

25.7 Applying two or more coat of Ethyl Silicate chemical as approved by Archaeological Survey of India/ Engineer-in-charge, of approved brand and manufacturer, with brush or spray on the existing stone masonry surface till there is no further absorption of chemical by stone surface, including protecting the applied surface from direct sunlight by suitable means during application, all complete as per direction of the Engineer-in-Charge (The rate is inclusive of all materials & labours involved except scaffolding).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 5 sqm				
	MATERIAL:				
7769	Stone surface strengthening chemical approved by ASI	litre	1.00	1,017.17	1,017.17
	LABOUR:				
0131	Painter	day	0.15	273.00	40.95
0114	Beldar	day	0.15	247.00	37.05
9999	Sundries	L.S.	6.00	1.49	8.94
	TOTAL				1,104.11
	Add Water Charges @ 1%				11.04
	TOTAL				1,115.15
	Add CPOH @ 15%				167.27
	Cost of 5 sqm				1,282.42
	Cost of 1 sqm				256.48
	Say				256.50

25.8 Applying breathable, non-reactive, antifungal, and water repellant Silane/ Siloxane chemical as approved by Archaeological Survey of India/ Engineer-in-charge, of approved brand and manufacture, diluted with solvent mineral Turpentine oil in the ratio of 1:12 (One part of approved chemical :12 Part of Turpentine oil), on the existing sand stone masonry surface with two or more coats to give uniform application of chemical on the surface, all complete as per direction of Engineer-In-charge (The rate is inclusive of all materials & labours involved except scaffolding).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 45 sqm				
	Detail for coverage area 45 sqm				
7768	Water repallent chemical approved by ASI	litre	1.00	1,586.25	1,586.25
7770	Turpentine oil	litre	12.00	67.50	810.00
0131	Painter	day	1.00	273.00	273.00
0114	Beldar	day	1.00	247.00	247.00
9999	Handling / Transportation charges	L.S.	6.00	1.49	8.94
	TOTAL				2,925.19
	Add Water Charges @ 1%				29.25
	TOTAL				2,954.44
	Add CPOH @ 15%				443.17
	Cost of 45 sqm				3,397.61
	Cost of 1 sqm				75.50
	Say				75.50

S.NO.	Correction Slip No.	Reference No.	Contents in Brief

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