

CHAPTER NO. 29

SEWERAGE AND DRAINAGE

Sr. No.	Description	Unit	Plains		Sub-mountainous	
			Labour Rate	Through Rate	Labour Rate	Through Rate
1	2	3	4	5	6	7
29.1	Excavation in open cutting or in streets and lanes for intramural sullage drains, extramural intercepting drains and outfall drains above top of drains cunnetes, storm water channels and other work contingent or incident thereto, to full dimensions and depth as shown on the drawings or as shall be required by Engineer-in-charge including dressing to correct sections and dimensions according to templates and levels, dewatering of rain water, diversion of traffic, Providing and fixing and maintenance of caution boards, night signals, crossing over trenches for access to the houses, watching etc. and of removal of surplus spoil from the site of work including all lift and lead for depths to 2 metre below natural ground level upto 60 metres of length of lead in disposing surplus spoil.					
	i All classes of soil except rocky	cum	95.36	95.36	104.90	104.90
	ii For Ordinary gravel soil involving pick work	cum	119.38	119.38	131.32	131.32
	iii For semi conglomerate or soil of the nature of pick and jumper work	cum	126.49	126.49	139.14	139.14
29.2	Earth work in excavation in Foundations Trenches etc., for storage and sedimentation tanks, high level tanks, filter beds, clear water reservoirs, pump houses, sumps, screening chambers and other similar works to full dimension and depth as shown on the drawings or as shall be required by Engineer-in-charge, including dressing of bottom and sides of trenches, stacking the excavated soil clear from the excavation and subsequent filling around Plinth/structures in 15 cms. layers with compaction including Disposal of surplus spoils as Directed within a lead of 30 Metres.					
A	Not exceeding 1.50 metres depth :-					
	i For all classes of soil except rocky.	cum	84.82	84.82	93.30	93.30

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1	2	3	4	5	6	7
	ii For ordinary gravel soil, involving pick work.	cum	113.43	113.43	124.77	124.77
	iii For semi conglomerate or soil of the nature of pick and jumper work	cum	142.33	142.33	156.56	156.56
B	Extra for every additional depth of 1.50 m or parts thereof:					
	(i) For all classes of soil except rocky.	cum	5.51	5.51	6.06	6.06
	(ii) For ordinary gravel soil, involving pick work.	cum	7.35	7.35	8.09	8.09
	(iii) For semi conglomerate or soil of the nature of pick and jumper work	cum	11.02	11.02	12.12	12.12
29.3	(a) Extra for every 7.5 meters additional lead beyond leads, specified in item No. 29.1 and 29.2 above up to 300 metres.	cum	Rate will be derived from Ch. 5			
	(b) Extra for every 7.5 meters additional lead beyond 300 metres upto 450 metres.	cum	Rate will be derived from Ch. 5			
29.4	Excavation of trenches in a Streets, Lanes or in Open Area for Storm Sewers and Manholes to Full Depths as Shown in Drawings, Including Shoring, Timbering of polling Board Frame System Type, dressing to correct sections and dimensions according to template and dewatering, provision for diversion for traffic, protection of existing services i.e. telephone cables , electric lines, water supply lines and Gas lines etc.,Providing and fixing night signals, profiles, Pegs, Sight rails, boning rods, crossing over trenches for access to the houses, watching, fencing etc.,Providing and fixing and maintenance of caution boards, refilling trenches, watering of refill in 15 cm layers, ramming and restoration of surface to original conditions and removal of Surplus Spoil from the Site of Works, for all Works other than connections to Ventilating Shafts upto a Lead of one Kilometre.					
A	For depth not exceeding 3 metres below ground level.					
	i For all classes of soil except rocky.	cum	209.41	209.41	230.35	230.35
	ii For ordinary gravel soil involving pick work.	cum	241.21	241.21	265.33	265.33

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1	2	3	4	5	6	7
	iii For semi-conglomerate or soil of the nature of pick and jumper Work.	cum	285.91	285.91	314.50	314.50
B	For depth exceeding 3 metres but not exceeding 4.5 metres below natural ground level :-					
	(i) For all classes of soil except rocky.	cum	226.53	226.53	249.18	249.18
	(ii) For ordinary gravel soil involving pick work.	cum	263.89	263.89	290.28	290.28
	(iii) For semi-conglomerate or soil of the nature of pick and jumper Work.	cum	317.88	317.88	349.67	349.67
C	For depth exceeding 4.5 metres but not exceeding 6 metres below natural ground level :-					
	(i) For all classes of soil except rocky.	cum	252.63	252.63	277.89	277.89
	(ii) For ordinary gravel soil involving pick work.	cum	298.83	298.83	328.71	328.71
	(iii) For semi-conglomerate or soil of the nature of pick and jumper Work.	cum	374.60	374.60	412.06	412.06
D	For depth exceeding 6 metres but not exceeding 7.5 metres below natural ground level :-					
	(i) For all classes of soil except rocky.	cum	268.20	268.20	295.02	295.02
	(ii) For ordinary gravel soil involving pick work.	cum	313.88	313.88	345.27	345.27
	(iii) For semi-conglomerate or soil of the nature of pick and jumper Work.	cum	398.49	398.49	438.34	438.34
E	For depth exceeding 7.5 metres but not exceeding 9 metres below natural ground level :-					
	(i) For all classes of soil except rocky.	cum	290.51	290.51	319.56	319.56
	(ii) For ordinary gravel soil involving pick work.	cum	336.71	336.71	370.38	370.38
	(iii) For semi-conglomerate or soil of the nature of pick and jumper Work.	cum	307.10	307.10	337.81	337.81

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			Labour Rate	Through Rate	Labour Rate	Through Rate
1	2	3	4	5	6	7
29.5 A	Excavation of trenches in a Streets, Lanes or in Open Area for Storm Sewers and Manholes to Full Depths as Shown in Drawings, without Shoring, Timbering of polling Board Frame System Type, dressing to correct section and dimension according to template level and dewatering, provision for diversion for traffic, protection of existing services i.e. telephone cable electric lines, water supply lines and Gas lines etc, providing and fixing of night signals, profiles, Pegs, Sight rails, boning rods, crossing over trenches for access to the houses, watching, fencing etc., Providing and fixing and maintenance of caution boards, refilling trenches, watering of refill in 15 cm layers, ramming and restoration of surface to original conditions and removal of Surplus Spoil from the Site of Works, for all Works other than connections to Ventilating Shafts upto a Lead of one Kilometre.					
A	For depth not exceeding 1.5 m below Ground level :-					
	i For all classes of soil except <i>rocky</i> .	cum	130.41	130.41	143.45	143.45
	ii For ordinary gravel soil involving pick work.	cum	162.21	162.21	178.43	178.43
	iii For semi-conglomerate or soil of the nature of pick and jumper Work.	cum	206.92	206.92	227.61	227.61
29.5 B	Earth work in excavation by mechanical means (Hydraulic excavator) over areas (exceeding 30cm in depth. 1.5m in width as well as 10 sqm on plan) including disposal of excavated earth, lead upto 50m and lift upto 1.5m, 3 mtr and 1.5 respectively including shoring tembering d watering ,provision for diversion for traffic, protection of existing services i.e. telephone cable electric lines, water supply lines and Gas lines etc, providing and fixing of night signals, profiles, Pegs, Sight rails, boning rods, crossing over trenches for access to the houses, watching, fencing etc., Providing and fixing and maintenance of caution boards, refilling trenches, watering of refill in 15 cm layers, ramming and restoration of surface to original conditions and removal of Surplus Spoil from the Site of Works, for all Works other than connections to Ventilating Shafts upto a Lead of one Kilometre.					
A	All kinds of soil.					
	i Depth upto 1.50 m	cum	122.88	122.88	135.17	135.17
	ii Depth upto 0 m To 3.00 m	cum	201.88	201.88	222.07	222.07

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1	2	3	4	5	6	7
	iii Depth upto 3.00 m To 4.50 m	cum	209.83	209.83	230.81	230.81
Note :- The rates for excavation beyond 4.50 depth are same for manual as well as by mechanical mean						
29.6	Extra over and above the rate of item No. 29.4 (a to e) for lowering sub-soil water level from its natural level, as decided by the Engineer-in-charge, by every 0.30 m depth (Upto requisite depth), including cost of Bore Holes Machinery and carrying out the work in safe manner.					
	a For sewers below 760 mm i/d	m	513.24	513.24	564.56	564.56
	b For Sewer 760mm i/d and above	m	596.21	596.21	655.83	655.83
Note:1	In case of deep excavation for item no 29.2 above the excavation may be done giving appropriate side slope which may be fixed by Engineer-in-charge.					
Note:2	The rates for item No. 29.1 to 29.5 inclusive, cover the cost of removing tree and roots and removal of kankare and other hard material met in the excavation					
Note:-3	The maximum and minimum width of trenches and excavation for which payment shall be admissible to the contractor shall be those laid down in the contract specification					
Note:-4	The depth of spring level below ground level from where the wet sinking of excavation below spring level is to be done will be decided by the Engineer-in-charge and the decision will be final and binding on the contractor. Where ever water is depressed by pumping, rate shall be for wet earth work if actually wet and not for work under standing or flowing water and wetness allowance shall be payable only after obtaining the written approval of the superintending Engineer.					
Note:-5	If the excavation for any sewer shall be carried out by cut and cover i.e. sinking shafts and tunneling in between, the contractor shall be paid for such work as if the trench had been opened the full length, but no extra shall be allowed other than the full measurement of the trench excavation @ of item No. 29.4. it will be intirely be at the discretion of the Engineer-in-charge to permit excavation by cut and cover method. Back filling of shafts and tunnels must be at all times be carried out throughly and to the satisfaction of Engineer-in-charge.					
Note:-6	If any excavation of trenches in which timbering has not been done has to be abandoned due to change of alignment of the sewer necessiated by any obstruction such as pipe line, electric or telephone cables, wired poles comeing in the way of the sewer or for any other cause what so ever the contractor will be paid @ 95.36, 131.32 and 139.14 per cum for all classes of soil, except rocky, gravel solid and conglomerate solid respectively in plain or submountainous area such excavation not with standingthat he may have made arrangments the timbering of such trenches or actually brought it to the site payment for abandoned treanches at the above rate will include for the back filling of the trenches in 15 cm layers, well watered and consolidatated and for the restoration of the site to its original conditio.					
29.7	Extra for Disposal of surplus soil beyond one kilom.		Rate will be derived from Ch. 5			

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1	2	3	4	5	6	7
29.8	Extra over and above the Rate of excavation contained in item 29.4 and 29.5 For providing close board Timbering in place of poling board frame system of timbering per m of sewer Trench for every 3 ms deep Shuttering or part thereof where such timbering is done.	m	483.02	483.02	531.32	531.32
	Example :- Trench depth is 9 ms. Three stage timbering each stage 3 ms has been done. The strata met with from 6 to 9 ms necessitate the provision of close timbering (without driving) and is done. Thus rate per m of effected sewer trench will be paid in plain. In case the close timbering has been done from 3 to 9 ms below G.L., i.e. 2 stages of 3 ms, then payment of two stages per m of affected sewer trench will be pay-able in Plains.					
29.9	Extra rate for shuttering in Confined Earth work as per specifications & desired by Engineer-in-Charge.					
	a For 400 mm dia sewer	sqm	379.48		417.43	
	b For 500 mm dia sewer	sqm	379.89		417.88	
	c For 600 mm dia sewer	sqm	380.31		418.34	
	d For 800 mm dia sewer	sqm	392.24		431.46	
	e For 900 mm dia sewer	sqm	403.75		444.13	
	f For 1000 mm dia sewer	sqm	395.59		435.15	
	g For 1100 mm dia sewer	sqm	396.01		435.61	
	h For 1200 mm dia sewer	sqm	396.47		436.12	
29.10	Blank					
	Dismantling and Demolition					
29.11	Dismantling existing drains of different size cunnetts, section only including recovery of all useable materials, stacking the same near site of dismantled works and disposal of all rubbish off site of works.					

Sr. No.	Description	Unit	Plains		Sub-mountainous	
			Labour Rate	Through Rate	Labour Rate	Through Rate
1	2	3	4	5	6	7
	(a) House connection drains	m	5.33		5.86	
	(b) Type I drain	m	8.21		9.03	
	(c) Type II drain	m	19.15		21.07	
	(d) Type III drain	m	24.36		26.80	
	(e) Type IV drain	m	28.52		31.37	
Brick Flooring and pitching						
(A)	Reimbursements to Drains and flooring in strips					
29.12	Tega 7.5 cm thick formed of first class bricks on end laid in cement sand mortar 1:5 and projecting to a maximum height of not more than 12.5 cm above top of drain along house sides of drains where required for protection of house walls.	m	17.08	57.62	18.79	59.33
29.13	Tega 11.50 cm thick formed of first class bricks on end laid in cement sand Mortar 1:5 as above.	m	21.78	80.97	23.96	83.15
29.14	First class flat brick 7.50 cm thick laid in reimbursements in and on Cement mortar 1:5 on sides of drains and in other work where required over lime concrete or other foundations. All joints to be left completely filled and struck flush.	m	19.29	188.42	21.22	190.35
29.15	First class flat brick 7.5 cms thick laid in reimbursement in and on 1:6 cement sand mortar as above.	m	19.29	188.42	21.22	190.35
29.16	First class flat brick 7.50 cm thick laid in reimbursement in and on 1:5 cement sand mortar as above.	m	19.29	188.42	21.22	190.35
29.17	First class for brick 7.50 cm thick laid in reimbursements in and on 1:4 cement sand mortar as above.	m	19.29	195.17	21.22	197.10
29.18	First class brick on edge 11.50 cm thick laid in reimbursements in and on cement mortar 1:4 on sides of drains and in other work where required over lime concrete or other foundation, all joints to be left complete filled and struck flush.	m	19.29	346.12	21.22	348.05

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			Labour Rate	Through Rate	Labour Rate	Through Rate
1	2	3	4	5	6	7
29.19	First class brick on edge 11.50 cm thick laid in reimbursements in and on 1:6 cement sand mortar as above.	m	19.29	269.13	21.22	271.06
29.20	First class brick on edge 11.50 cm thick laid in reimbursements in and on 1:5 cement sand mortar as above.	m	19.29	277.76	21.22	279.69
29.21	First class brick on edge 11.50 cm thick laid in reimbursements in and on 1:4 cement sand mortar as above.	m	19.29	288.12	21.22	290.05
(B) Flooring and Paving						
29.22	First class dry flat brick flooring and paving in ordinary bonded courses or in herring bone or other special courses or bond laid to template over rammed and dressed foundations and to correct longitudinal and cross slopes as shall be required by the Engineer-in-Charge. All joints shall be thoroughly filled with dry sand grouting which shall be applied to a thickness of not less 20mm over the surface of the flooring and brushed into the joints. All joints shall be fully filled with sand.	sqm	24.70	156.80	27.17	159.27
29.23	First class dry brick on edge flooring or paving in ordinary bonded courses or in herring bone or other special courses or bond, laid as described in item no. 29.22.	sqm	28.57	237.96	31.43	240.82
29.24	Blank					
29.25	First class flat brick paving or flooring laid over and in cement sand mortar 1:6 in ordinary bonded courses or in herring bone or other special courses, to templates, over dressed foundation and to correct longitudinal and cross slopes as shall be required by the Engineer-in-charge. All joints shall be filled with mortar and struck flushed as the work proceeds.	sqm	28.68	187.17	31.55	190.04

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			Labour Rate	Through Rate	Labour Rate	Through Rate
1	2	3	4	5	6	7
29.26	First class flat brick paving or flooring laid over and in cement sand mortar 1:5 in ordinary bonded courses or in herring bone or other special courses, to templates, over dressed foundation and to correct longitudinal and cross slopes as shall be required by the Engineer-in-charge. All joints shall be filled with mortar and struck flushed as the work proceeds.	sqm	28.68	190.78	31.55	193.65
29.27	Blank					
29.28	First class brick on edge paving or flooring laid over and in cement sand mortar 1:6 in ordinary bonded courses or in herring bone or other special courses, to templates, over dressed foundation and to correct longitudinal and cross slopes as shall be required by the Engineer-in-charge. All joints shall be filled with mortar and struck flushed as the work proceeds.	sqm	48.54	295.07	53.39	299.92
29.29	First class brick on edge paving or flooring laid over and in cement sand mortar 1:5 in ordinary bonded courses or in herring bone or other special courses, to templates, over dressed foundation and to correct longitudinal and cross slopes as shall be required by the Engineer-in-charge. All joints shall be filled with mortar and struck flushed as the work proceeds.	sqm	47.54	298.25	52.29	303.00
29.30	First class brick on edge paving or flooring laid over and in cement sand mortar 1:4 in ordinary bonded courses or in herring bone or other special courses, to templates, over dressed foundation and to correct longitudinal and cross slopes as shall be required by the Engineer-in-charge. All joints shall be filled with mortar and struck flushed as the work proceeds.	sqm	47.54	303.35	52.29	308.10
29.31	Extra over and above the rates for items No. 29.22 to 29.30 inclusive for pitching on the slope to sullage drains above cunnettes and to storm water channels, etc. where required.	sqm	6.50	6.50	7.15	7.15

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			Labour Rate	Through Rate	Labour Rate	Through Rate
1	2	3	4	5	6	7
29.32	Brick ballast well or over burnt, broken and screened through a 32mm x 32mm square mesh screen laid consolidated and rammed to a finished thickness of 50mm to template and levels to correct longitudinal slopes cross slopes cambers, etc. under paving or flooring.	sqm	11.84	42.95	13.02	44.13
29.33	Brick ballast well or over burnt, broken and screened through a 32mm x 32mm square mesh screen laid consolidated and rammed to a finished thickness of 75mm as above.	sqm	17.75	67.53	19.53	69.31
29.34	Clay concrete, consisting or 100 parts by volume of well burnt or over burnt brick ballast screened through 32mm x 32mm square mesh screen mixed with 33 parts by volume of fine Puddle clay, thoroughly mixed, laid consolidated and rammed to a finished thickness of 50mm to template and levels and to a correct longitudinal slopes, cross slopes, cambers, etc. under paving or flooring as shall be required by the Engineer-in-Charge.	sqm	15.12	46.23	16.63	47.74
29.35	Clay concrete as above but laid consolidated and rammed to a finished thickness of 75mm as above.	Sqm	16.88	63.55	18.57	65.24
29.36	Providing & fixing 560mm, 500mm and 450mm internal Diametre circular or 455 mm x 610mm clear inside opening rectangular cast iron manhole cover and frame ISI marked as per IS12592-2002 including carriage from the stores of the Engineer-in-charge to site of work, loading, unloading including stacking and setting the same to correct lines and levels in 1:2 cement sand mortar over manholes including cement concrete copping (1:2:4)around the frame etc.Dia of steel for lifting hook is 16mm.					
A	Heavy duty					
a	560mm i/d having weight 208 Kg. as per ISI	each	226.70	11085.94	249.37	11108.61

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			Labour Rate	Through Rate	Labour Rate	Through Rate
1	2	3	4	5	6	7
	b 500mm i/d having weight 170 Kg. as per ISI	each	209.06	9251.80	229.97	9272.71
A	Light duty					
	a Rectangular single/double seal pattern 610mm x 610mm clear inside opening (Weight as per I.S.I)	each	183.04	9225.78	201.34	9244.08
	b Rectangular single/double seal pattern 450mm x 450mm clear inside opening (Weight as per I.S.I)	each	183.04	9225.78	201.34	9244.08
	c Circular single/double seal pattern clear circular 500 mm inside opening (Weight as per I.S.I)	each	183.04	9225.78	201.34	9244.08
	d Circular single/double seal pattern clear circular 450 mm inside opening (Weight as per I.S.I)	each	183.04	9225.78	201.34	9244.08
C	R.C.C. Manhole cover					
	a 560mm i/d Extra heavy duty	each	226.70	1990.09	249.37	2012.76
	b 560mm i/d Heavy duty	each	226.70	1789.83	249.37	1812.50
	c 500mm i/d Heavy duty	each	226.70	1731.74	249.37	1754.41
	d 560mm i/d Medium duty	each	226.70	1676.54	249.37	1699.21
	e 500mm i/d Medium duty	each	209.06	1539.01	229.97	1559.92
	f Light duty Rectangular single/double seal pattern 610mm x 610mm clear inside opening	each	87.33	1237.36	96.06	1246.09
	g Light duty Rectangular single/double seal pattern 450mm x 450mm clear inside opening	each	87.33	1155.23	96.06	1163.96
	h Light duty Circular single/double seal pattern clear circular 500 mm inside opening	each	87.33	948.11	96.06	956.84
	i Light duty Circular single/double seal pattern clear circular 450 mm inside opening	each	87.33	1027.07	96.06	1035.80
29.37	Foot Rest for Manhole.					

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			Labour Rate	Through Rate	Labour Rate	Through Rate
1	2	3	4	5	6	7
	a Providing M.S. foot rests made of 20x20 mm square bar including fixing in manholes with 20x20x10 cm cement concrete blocks 1:2:4 (1 cement: 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) as per standard design.	each	55.58	168.03	61.14	173.59
	b Providing orange colour safety footrest of minimum 6mm thick plastic encapsulated as per IS:10910 on 12mm dia steel bar confirming to IS: 1786 having minimum cross section as 23mm x 25mm and over all minimum length 263mm and width as 165mm with minimum 112mm space between protruted legs having 2mm 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 specification and having manufacturer's permanent identification mark to be visible even after fixing, including fixing in manholes with 30x15x11.5cm cement concrete block 1:2:4 (1 cement: 2 sand: 4 stone aggregate) complete as per design.	each	19.08	116.10	20.99	118.01
	c Replacement of M.S. foot rests made of 20x20 mm square bar in manholes including dismantling concrete blocks and fixing with 20x20x10 cm cement concrete blocks 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size).	each	84.70	197.15	93.17	205.62
29.38	Blank					
29.39	Blank					

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1	2	3	4	5	6	7
29.40	Providing & erection of RCC ventilation column having minimum 200mm internal Diametre and a height of 11 ms above ground level including caps, cowls or wiredomes, etc. complete fixing and setting the same in position and embedding in foundation block including cost of foundation complete.					
	a 11 m. Height	each	11510.33	43360.12	12661.36	44511.15
	b 9 m. Height	each	6944.20	33976.37	7638.62	34670.79
	PAINTING VENT SHAFTS					
29.41	Blank					
29.42	Blank					
29.43	Blank					
29.44	Blank					
29.45	Finishing RCC vent shafts minimum 200mm internal Diametre with exterior decorative cement based paints on new work two coats to give and even finish.					
	a 11 m. Height R.C.C. ventilator shaft	each	270.57	666.78	297.63	693.84
	b 9 m. Height R.C.C. ventilator shaft	each	221.51	545.87	243.66	568.02
29.46	Providing and Finishing RCC vent shafts minimum 200mm internal Diametre with exterior decorative cement based paints on old work one coat to give an even shade.					
	a 11 m. Height R.C.C. ventilator shaft	each	180.30	304.08	198.33	322.11
	b 9 m. Height R.C.C. ventilator shaft	each	147.60	248.93	162.36	263.69
29.47	Construction of pressure type Circular sewer in RCC / Brick complete as per drawing and design(For Low Sub - Soil water conditions) Type I					
	a 760mm i/d P.T. sewer	m	1170.44	5035.18	1287.48	5152.22
	b 840mm i/d P.T. sewer	m	1230.61	5379.42	1353.67	5502.48

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1	2	3	4	5	6	7	
	c	915mm i/d P.T. sewer	m	1292.56	5617.63	1421.82	5746.89
	d	990mm i/d P.T. sewer	m	1389.93	6028.09	1528.92	6167.08
	e	1065mm i/d P.T. sewer	m	1478.57	6391.62	1626.43	6539.48
	f	1145mm i/d P.T. sewer	m	1568.10	6816.56	1724.91	6973.37
	g	1220mm i/d P.T. sewer	m	1657.57	7183.92	1823.33	7349.68
	h	1295mm i/d P.T. sewer	m	1744.28	7536.61	1918.71	7711.04
	i	1370mm i/d P.T. sewer	m	1835.72	7908.95	2019.29	8092.52
	j	1450mm i/d P.T. sewer	m	1920.19	8259.13	2112.21	8451.15
	k	1525mm i/d P.T. sewer	m	2008.41	8625.41	2209.25	8826.25
29.48	Construction of pressure type Circular sewer in RCC / Brick complete as per drawing and design(Under Medium Sub - Soil water conditions) Type II						
	a	760mm i/d P.T. sewer	m	1204.87	5658.20	1325.36	5778.69
	b	840mm i/d P.T. sewer	m	1294.36	6047.26	1423.80	6176.70
	c	915mm i/d P.T. sewer	m	1383.84	6423.05	1522.22	6561.43
	d	990mm i/d P.T. sewer	m	1480.61	6856.68	1628.67	7004.74
	e	1065mm i/d P.T. sewer	m	1573.85	7270.40	1731.24	7427.79
	f	1145mm i/d P.T. sewer	m	1910.09	8943.08	2101.10	9134.09
	g	1220mm i/d P.T. sewer	m	2016.57	9422.03	2218.23	9623.69
	h	1295mm i/d P.T. sewer	m	2105.32	9812.21	2315.85	10022.74
	i	1370mm i/d P.T. sewer	m	2219.46	10297.97	2441.41	10519.92
	j	1450mm i/d P.T. sewer	m	2322.15	10762.26	2554.37	10994.48
	k	1525mm i/d P.T. sewer	m	2425.94	11218.33	2668.53	11460.92
29.49	Construction of pressure type Circular sewer in RCC / Brick complete as per drawing and design(Under High Sub - Soil water conditions) Type III						
	a	760mm i/d P.T. sewer	m	1340.55	6553.10	1474.61	6687.16
	b	840mm i/d P.T. sewer	m	1441.87	7018.90	1586.06	7163.09

Sr. No.	Description	Unit	Plains		Sub-mountainous	
			Labour Rate	Through Rate	Labour Rate	Through Rate
1	2	3	4	5	6	7
	c 915mm i/d P.T. sewer	m	1666.00	8021.09	1832.60	8187.69
	d 990mm i/d P.T. sewer	m	1780.68	8554.97	1958.75	8733.04
	e 1065mm i/d P.T. sewer	m	1890.44	9060.70	2079.48	9249.74
	f 1145mm i/d P.T. sewer	m	2024.35	9919.09	2226.79	10121.53
	g 1220mm i/d P.T. sewer	m	2163.70	10816.80	2380.07	11033.17
	h 1295mm i/d P.T. sewer	m	2276.79	11364.86	2504.47	11592.54
	i 1370mm i/d P.T. sewer	m	2390.97	11920.34	2630.07	12159.44
	j 1450mm i/d P.T. sewer	m	2509.94	12498.95	2760.93	12749.94
	k 1525mm i/d P.T. sewer	m	2622.98	12793.09	2885.28	13055.39
29.47	Blank					
29.48	Blank					
29.49	Blank					
29.50	Blank					
29.51	Blank					
29.52	Blank					
29.53	Blank					
29.54	Blank					
29.55	Blank					
29.56	Blank					
29.57	Blank					
29.58	Blank					
29.59	Blank					

Sr. No.	Description	Unit	Plains		Sub-mountainous	
			Labour Rate	Through Rate	Labour Rate	Through Rate
1	2	3	4	5	6	7
29.60	Blank					
29.61	Blank					
29.62	Blank					
Salt Glazed Stone ware Pipes sewers and Drains						
29.63	Providing, lowering, cutting & jointing salt Glazed Stone ware Pipes and Specials ISI marked as per IS 651-2007 class Sp-1 into Trenches for all depths and Laying out the same to correct alignment, Gradients, levels etc., In Trenches including all dressing and trimming of bed and sides of trenches, if required trimming and cutting of concrete beds and joints holes, supporting the pipes and specials, in correct position in a suitable rigid manner while the same are being jointed and until the surrounding benching, haunching and envelopes are completed. The sewer shall rest on the bed at every point through-out its length and to ensure this, it shall be grouted in without extra charge by the contractor with 1:3 cement sand mortar including jointing of pipes and specials in trenches, using cement sand mortar 1:1 and best white italian spun yarn, finishing and trowelling of each joint at an angle of 45degree with the longitudinal axes of pipe, watering, keeping the joint covered and wetted till the same are cured, testing the sewerage line for leakage and making all leakages and defects good as laid in the contract specification, chipping and finishing the cut surface to uniform finish to the entire satisfaction of engineer-in-charge Including all cartage etc.					
	a 100mm i/d pipe	m	71.79	164.31	78.97	171.49
	b 150mm i/d pipe	m	95.03	265.65	104.53	275.15
	c 200mm i/d pipe	m	103.69	309.15	114.06	319.52
	d 250mm i/d pipe	m	183.32	500.53	201.65	518.86
	e 300mm i/d pipe	m	211.75	692.37	232.93	713.55
	f 400mm i/d pipe	m	233.42	1587.56	256.76	1610.90
	g 450mm i/d pipe	m	318.07	2854.13	349.88	2885.94

Sr. No.	Description	Unit	Plains		Sub-mountainous	
			Labour Rate	Through Rate	Labour Rate	Through Rate
1	2	3	4	5	6	7
	h 500mm i/d pipe	m	375.13	2436.08	412.64	2473.59
	i 550mm i/d pipe	m	409.56	4002.18	450.52	4043.14
	j 600mm i/d pipe	m	334.62	4771.93	368.08	4805.39
29.64	Providing, Lowering, jointing and cutting of Plain and Reinforced Cement Concrete spigot and socketed Pipes and Specials with inside H.D.P.E. lining ISI markd as per IS code IS 458-2003 into Trenches for all Depths and Laying out the same to correct alignment, gradients, levels etc. including all dressing and trimming and cutting of concrete beds and joints holes, supporting the pipes and specials in correct position in a suitable rigid manner while the same are being jointed and until the surrounding benchings, haunches and envelopes are completed. The pipes shall rest on the beds at all joints through their lengths and to ensure this, they shall be grouted in where necessary including jointing the socketed pipe with cement sand mortar 1:1 after stretching and fixing of rubber ring, facing, troweling and finishing the joints at an angle of 45 degree, keeping the joint covered and wetted till the same are cured, testing the pipes for leakage and making good the same leakage and all defects to the entire satisfaction of the Engineer-in-charge including all cartage etc.					
A	R.C.C. pipe with inside H.D.P.E. lining class- NP-3					
	a 400mm i/d pipe with inside H.D.P.E. lining	m	244.07	1565.77	268.48	1590.18
	b 450mm i/d pipe with inside H.D.P.E. lining	m	289.92	2320.53	318.91	2349.52
	c 500mm i/d pipe with inside H.D.P.E. lining	m	324.20	2660.01	356.62	2692.43
	d 600mm i/d pipe with inside H.D.P.E. lining	m	399.17	3288.89	439.09	3328.81
	e 700mm i/d pipe with inside H.D.P.E. lining	m	452.81	4435.94	498.09	4481.22
	f 800mm i/d pipe with inside H.D.P.E. lining	m	557.93	5370.12	613.72	5425.91
	g 900mm i/d pipe with inside H.D.P.E. lining	m	673.42	6260.61	740.76	6327.95
	h 1000mm i/d pipe with inside H.D.P.E. lining	m	743.69	7147.93	818.06	7222.30
	i 1100mm i/d pipe with inside H.D.P.E. lining	m	906.00	8716.05	996.60	8806.65
	j 1200mm i/d pipe with inside H.D.P.E. lining	m	988.47	9579.53	1087.32	9678.38
B	R.C.C. pipe with inside H.D.P.E. lining class- NP-4					
	a 400mm i/d pipe with inside H.D.P.E. lining	m	244.07	1625.85	268.48	1650.26
	b 450mm i/d pipe with inside H.D.P.E. lining	m	289.92	2524.80	318.91	2553.79
	c 500mm i/d pipe with inside H.D.P.E. lining	m	324.20	2901.52	356.62	2933.94
	d 600mm i/d pipe with inside H.D.P.E. lining	m	399.17	3577.26	439.09	3617.18
	e 700mm i/d pipe with inside H.D.P.E. lining	m	452.81	4832.45	498.09	4877.73
	f 800mm i/d pipe with inside H.D.P.E. lining	m	557.93	6085.04	613.72	6140.83
	g 900mm i/d pipe with inside H.D.P.E. lining	m	673.42	7077.66	740.76	7145.00
	h 1000mm i/d pipe with inside H.D.P.E. lining	m	743.69	8085.14	818.06	8159.51
	i 1100mm i/d pipe with inside H.D.P.E. lining	m	906.00	9887.56	996.60	9978.16
	j 1200mm i/d pipe with inside H.D.P.E. lining	m	988.47	10871.19	1087.32	10970.04

Sr. No.	Description	Unit	Plains		Sub-mountainous	
			Labour Rate	Through Rate	Labour Rate	Through Rate
1	2	3	4	5	6	7
29.65	Providing, Stringing out U.P.V.C. Pipes casting as per IS:15328-2003 class-SN-8 along the trenches and laying the same in Trenches to correct alignment and gradients, cutting and jointing including cost of specials complete as per specifications.					
	a 110mm o/d pipe	m	9.40	309.79	10.34	310.73
	b 125mm o/d pipe	m	9.49	395.19	10.44	396.14
	c 160mm o/d pipe	m	12.54	632.54	13.79	633.79
	d 200mm o/d pipe	m	18.03	987.68	19.83	989.48
	e 250mm o/d pipe	m	22.25	1532.59	24.48	1534.82
	f 315mm o/d pipe	m	28.57	2491.74	31.43	2494.60
29.66	Blank					
29.67	Blank					
29.68	Blank					
	Plain and Reinforced Concrete Pipes					
29.69	Providing, Lowering, jointing and cutting of Plain and Reinforced Cement Concrete spigot and socketed Pipes and Specials with rubber ring ISI marekd as per IS code IS 458-2003 into Trenches for all Depths and Laying out the same to correct alignment, gradients, levels etc. including all dressing and trimming and cutting of concrete beds and joints holes, supporting the pipes and specials in correct position in a suitable rigid manner while the same are being jointed and until the surrounding benchings, haunches and envelopes are completed. The pipes shall rest on the beds at all joints through their lengths and to ensure this, they shall be grouted in where necessary including jointing the socketed pipe with cement sand mortar 1:1 after stretching and fixing of rubber ring, facing, troweling and finishing the joints at an angle of 45 degree, keeping the joint covered and wetted till the same are cured, testing the pipes for leakage and making good the same leakage and all defects to the entire satisfaction of the Engineer-in-charge including all cartage etc.					
A	R.C.C. Pipe P -1					
	a 100mm i/d pipe	m	23.00	353.43	25.30	355.73

Sr. No.	Description	Unit	Plains		Sub-mountainous		
			Labour Rate	Through Rate	Labour Rate	Through Rate	
1	2	3	4	5	6	7	
	b	150mm i/d pipe	m	30.51	390.97	33.56	394.02
	c	200mm i/d pipe	m	39.05	459.59	42.96	463.50
	d	225mm i/d pipe	m	47.28	527.90	52.01	532.63
	e	250mm i/d pipe	m	45.57	544.21	50.13	548.77
	f	300mm i/d pipe	m	53.84	678.64	59.22	684.02
	g	350mm i/d pipe	m	60.13	811.10	66.14	817.11
	h	400mm i/d pipe	m	154.43	995.51	169.87	1010.95
	i	450mm i/d pipe	m	175.86	1197.17	193.45	1214.76
	j	500mm i/d pipe	m	197.26	1482.92	216.99	1502.65
	k	600mm i/d pipe	m	235.75	1977.99	259.33	2001.57
	l	700mm i/d pipe	m	286.93	2533.82	315.62	2562.51
	m	800mm i/d pipe	m	352.43	3164.05	387.67	3199.29
	n	900mm i/d pipe	m	412.20	3884.67	453.42	3925.89
	o	1000mm i/d pipe	m	502.09	4755.56	552.30	4805.77
	p	1100mm i/d pipe	m	590.39	5132.24	649.43	5191.28
	q	1200mm i/d pipe	m	676.37	6804.26	744.01	6871.90
B	R.C.C. Pipe NP -2						
	a	100mm i/d pipe	m	23.00	307.77	25.30	310.07
	b	150mm i/d pipe	m	30.51	348.92	33.56	351.97
	c	200mm i/d pipe	m	39.05	399.51	42.96	403.42
	d	225mm i/d pipe	m	47.28	467.82	52.01	472.55
	e	250mm i/d pipe	m	45.57	496.15	50.13	500.71
	f	300mm i/d pipe	m	55.17	583.85	60.69	589.37

Sr. No.	Description	Unit	Plains		Sub-mountainous	
			Labour Rate	Through Rate	Labour Rate	Through Rate
1	2	3	4	5	6	7
	g 350mm i/d pipe	m	60.13	720.98	66.14	726.99
	h 400mm i/d pipe	m	154.43	851.33	169.87	866.77
	i 450mm i/d pipe	m	175.86	1000.12	193.45	1017.71
	j 500mm i/d pipe	m	197.26	1211.37	216.99	1231.10
	k 600mm i/d pipe	m	235.75	1630.75	259.33	1654.33
	l 700mm i/d pipe	m	286.93	1935.45	315.62	1964.14
	m 800mm i/d pipe	m	352.43	2634.17	387.67	2669.41
	n 900mm i/d pipe	m	412.20	3200.99	453.42	3242.21
	o 1000mm i/d pipe	m	502.09	3987.78	552.30	4037.99
	p 1100mm i/d pipe	m	590.39	4646.81	649.43	4705.85
	q 1200mm i/d pipe	m	676.37	5113.68	744.01	5181.32
C	R.C.C. Pipe NP -3					
	a 100mm i/d pipe	m	23.00	383.46	25.30	385.76
	b 150mm i/d pipe	m	30.51	421.01	33.56	424.06
	c 200mm i/d pipe	m	39.05	579.75	42.96	583.66
	d 225mm i/d pipe	m	47.28	618.02	52.01	622.75
	e 250mm i/d pipe	m	45.57	646.34	50.13	650.90
	f 300mm i/d pipe	m	55.17	800.13	60.69	805.65
	g 350mm i/d pipe	m	68.39	1269.94	75.23	1276.78
	h 400mm i/d pipe	m	240.13	1561.83	264.14	1585.84
	i 450mm i/d pipe	m	273.00	1835.01	300.30	1862.31
	j 500mm i/d pipe	m	305.82	2102.13	336.40	2132.71
	k 600mm i/d pipe	m	378.59	2541.37	416.45	2579.23
	l 700mm i/d pipe	m	429.77	3469.68	472.75	3512.66

Sr. No.	Description		Unit	Plains		Sub-mountainous	
				Labour Rate	Through Rate	Labour Rate	Through Rate
1	2		3	4	5	6	7
	m	800mm i/d pipe	m	535.26	4236.02	588.79	4289.55
	n	900mm i/d pipe	m	652.17	4947.70	717.39	5012.92
	o	1000mm i/d pipe	m	719.21	5645.55	791.13	5717.47
	p	1100mm i/d pipe	m	887.50	6895.23	976.25	6983.98
	q	1200mm i/d pipe	m	967.77	7576.28	1064.55	7673.06
D	R.C.C. Pipe NP -4						
	a	100mm i/d pipe	m	23.00	413.50	25.30	415.80
	b	150mm i/d pipe	m	30.51	451.05	33.56	454.10
	c	200mm i/d pipe	m	39.05	639.82	42.96	643.73
	d	225mm i/d pipe	m	47.28	678.09	52.01	682.82
	e	250mm i/d pipe	m	45.57	706.42	50.13	710.98
	f	300mm i/d pipe	m	55.17	872.22	60.69	877.74
	g	350mm i/d pipe	m	68.39	1299.98	75.23	1306.82
	h	400mm i/d pipe	m	240.13	1621.91	264.14	1645.92
	i	450mm i/d pipe	m	273.00	1955.17	300.30	1982.47
	j	500mm i/d pipe	m	305.82	2288.37	336.40	2318.95
	k	600mm i/d pipe	m	378.59	2781.68	416.45	2819.54
	l	700mm i/d pipe	m	429.77	3800.11	472.75	3843.09
	m	800mm i/d pipe	m	535.26	4440.29	588.79	4493.82
	n	900mm i/d pipe	m	652.17	5578.51	717.39	5643.73
	o	1000mm i/d pipe	m	719.21	6366.48	791.13	6438.40
	p	1100mm i/d pipe	m	887.50	7796.39	976.25	7885.14
	q	1200mm i/d pipe	m	967.77	8567.55	1064.55	8664.33

Sr. No.	Description	Unit	Plains		Sub-mountainous	
			Labour Rate	Through Rate	Labour Rate	Through Rate
1	2	3	4	5	6	7
29.70	Making soak pit 2.5 m Diameter 3.0 m deep with 45 x 45 cm dry brick honey comb shaft with bricks of class designation 75 and S.W. drain pipe 100 mm Diameter, 1.8 m long complete as per standard design.					
	With F.P.S. bricks	1 Soak Pit	1510.20	19869.62	1661.22	20020.64
29.71	Constructing soak pit 1.20x1.20x1.20m filled with brickbats including S.W. drain pipe 100 mm Diameter and 1.20 m long complete as per standard design.	1 Soak Pit	104.09	2627.62	114.50	2638.03
29.72	Blank					
29.73	Blank					
29.74	Providing & Fixing of road gully grating and frame Fixing and erecting the same in position to correct lines and levels in 1:2 cement sand mortar complete as per drawing /specifications and to the entire satisfaction of Engineer-in-Charge.					
	a Fibre Reinforced Road Gully grating & frame 610mmx457mm	each	144.01	1059.48	158.41	1073.88
	b C.I. Road Gully grating & frame having weight 77 Kg.610mmx457mm	each	144.01	5078.36	158.41	5092.76
29.75	Blank					
29.76	Blank					
29.77	Blank					
29.78	Constructing Punjab Standard Drain, type house connection complete consisting of cement concrete drain moulded and laid over lime concrete foundation, rendered and finished smooth with 6mm thick rendering concrete to be of 1:2½:5 parts by volume of cement :sand: stone bajri and rendering to be 1:1 cement sand mortar.	m	45.04	98.04	49.54	102.54
29.79	Constructing Punjab standard drain type I as above.	m	69.48	143.19	76.43	150.14
29.80	Constructing Punjab standard drain type II as above.	m	120.49	315.52	132.54	327.57

Sr. No.	Description	Unit	Plains		Sub-mountainous	
			Labour Rate	Through Rate	Labour Rate	Through Rate
1	2	3	4	5	6	7
29.81	Constructing Punjab standard drain type III as above.	m	156.72	390.75	172.39	406.42
29.82	Constructing Punjab standard drain type IV as above.	m	191.90	467.48	211.09	486.67
29.83	Blank					
29.84	Constructing brick masonry manhole in cement mortar 1:5 (1 cement : 5 coarse sand) R.C.C. top slab with 1:2:4 mix (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), foundation concrete 1:4:8 mix (1 cement: 4 coarse sand : 8 graded stone aggregate 40mm nominal size) inside plastering 12mm thick with cement mortar 1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement and making benching in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) finished with a floating coat of neat cement, Orange coloured PVC steps including FRCC cover with frame (light duty) 455x610 mm internal dimensions.complete as per standard design.					
	a Inside size 75x120 cm and 120 cm deep	each	2018.91	12870.14	2220.80	13072.03
	b Inside size 90x150 cm and 120 cm deep	each	2500.02	15430.10	2750.02	15680.10
	c Inside size 120x180 cm and 120 cm deep	each	3076.47	17027.97	3384.12	17335.62
	d Inside size 150x180 cm and 120 cm deep	each	3464.11	19219.68	3810.52	19566.09
29.85	Constructing brick masonry manhole in cement mortar 1:5 (1 cement : 5 coarse sand) with RCC core wall between masonry, R.C.C. top slab with 1:2:4 mix (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), foundation concrete 1:4:8 mix (1 cement: 4 coarse sand : 8 graded stone aggregate 40mm nominal size) inside plastering 12mm thick with cement mortar 1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement and making benching in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) finished with a floating coat of neat cement, Orange coloured PVC steps including FRCC cover with frame (light duty) 455x610 mm internal dimensions.complete as per standard design. (In water logged area).					
	a Inside size 75x120 cm and 120 cm deep	each	3807.60	24167.45	4188.36	24548.21
	b Inside size 90x150 cm and 120 cm deep	each	4467.34	27751.30	4914.07	28198.03
	c Inside size 120x180 cm and 120 cm deep	each	5394.84	32780.47	5934.32	33319.95
	d Inside size 150x180 cm and 120 cm deep	each	6075.46	36601.66	6683.01	37209.21

The size and specification for manholes having corewall depends upon the starata of soil and depth of sewer so it is not possible to have standard size of MH hence deleted.

Sr. No.	Description	Unit	Plains		Sub-mountainous	
			Labour Rate	Through Rate	Labour Rate	Through Rate
1	2	3	4	5	6	7
29.86	Extra cost for every additional depth of 0.300 m. 1.80 m depth for manholes with RCC core wall between masonry, in water logged area.					
			Deleted as mentioned in item No.29.85.			
	a Inside size 75x120 cm	each Depth of 0.30 m.	540.82	3180.35	594.90	3234.43
	b Inside size 90x150 cm	each Depth of 0.30 m.	620.33	3590.93	682.36	3652.96
	c Inside size 120x180 cm	each Depth of 0.30 m.	752.06	4356.49	827.27	4431.70
	d Inside size 150x180 cm	each Depth of 0.30 m.	812.44	4673.01	893.68	4754.25
29.87	Extra cost for every additional depth of 0.300 m. upto 1.80 m depth for manholes.					
	a Inside size 75x120 cm	each Depth of 0.30 m.	213.86	1136.87	235.25	1158.26
	b Inside size 90x150 cm	each Depth of 0.30 m.	253.02	1329.69	278.32	1354.99
	c Inside size 120x180 cm	each Depth of 0.30 m.	308.80	1613.22	339.68	1644.10
	d Inside size 150x180 cm	each Depth of 0.30 m.	334.92	1741.76	368.41	1775.25
29.88	Extra cost for every additional depth of 0.300 m. From 1.80 m. upto 3.60 m depth for manholes					
	a Inside size 75x120 cm	each Depth of 0.30 m.	224.60	1216.25	247.06	1238.71
	b Inside size 90x150 cm	each Depth of 0.30 m.	267.36	1435.53	294.10	1462.27

Sr. No.	Description		Unit	Plains		Sub-mountainous	
				Labour Rate	Through Rate	Labour Rate	Through Rate
1	2		3	4	5	6	7
	c	Inside size 120x180 cm	each Depth of 0.30 m.	319.56	1692.60	351.52	1724.56
	d	Inside size 150x180 cm	each Depth of 0.30 m.	345.66	1821.14	380.23	1855.71
29.89	Construction of brick masonry inspection chambers size as given below upto 0.60 m average depth in 1:5 cement sand mortar, lime concrete with 40 per cent lime mortar 2:3 in foundation, cement concrete 1:2:4 benching 12.50mm thick cement plaster 1:2 with a floating coat of 1mm thick of neat cement, R.C.C. 1:2:4 slabs 100mm thick cement concrete topping 50mm thick with 455mm x 455mm, 455mm x 610mm inside light duty C.I. inspection chamber cover and frame (Weight as per I.S.I specifications) painted with 3 coats of black bitumastic paint conforming to I.S.I complete as per standard design.						
	(a)	Size 450mm x 450mm inside with RCC 455mm x 455mm cover and frame light duty double seal	each	711.46	5397.99	782.61	5469.14
	(b)	450mm x 600mm inside with 455mm x 610mm cover and frame light duty double seal	each	941.65	6220.86	1035.82	6315.03
	(c)	600mm x 900mm inside with 455mm x 455mm cover and frame light duty double seal	each	1221.33	7444.55	1343.46	7566.68
29.90	Extra for every 0.30 m depth of inspection chamber.						
	(a)	450mm x 450mm	each Depth of 0.30 m.	136.48	593.78	150.13	607.43
	(b)	450mm x 600mm	each Depth of 0.30 m.	154.30	662.05	169.73	677.48
	(c)	600mm x 900mm	each Depth of 0.30 m.	213.91	895.73	235.30	917.12

Sr. No.	Description	Unit	Plains		Sub-mountainous	
			Labour Rate	Through Rate	Labour Rate	Through Rate
1	2	3	4	5	6	7
29.91	Constructing Brick masonry ventilating chambers as per standard drawing including dressing of beds and sides of chamber to exact profiles 15cm. Lime concrete 16:24:100 (as specified in item No. 10.3) in foundation, first class brick work laid in cement sand mortar 1:5, cement concrete 1:2:4 for reinforced concrete work in slab, 12.5mm thick cement plaster 1:2 rendered with a floating coat of neat cement 1mm thick over exposed brick tablet and inside walls, lime pointing 2:3 on outside complete and as required by the Engineer-In-Charge.	each	1,642.65	6,872.97	1,806.92	7,037.24
29.92	Constructing brick masonry road gully chambers as per standard drawings (as per sizes given below) including dressing of beds and sides of chambers to exact profiles, 15cm thick lime concrete 16:24:100 (as per specified in item No. 10.3) in foundation, first class brick work laid in cement sand mortar 1:5, 40mm thick cement concrete 1:2:4 topping inside the chamber with a floating coat of 1.5mm thick neat cement laid in one operation to the topping, the entire inner surface of the chamber rendered with neat cement not less than 12.50mm in thickness of 1:2 cement sand plaster and finished with a floating coat of neat cement 1mm thick left absolutely smooth polished and correct to templates including labour for fixing the C.I. road gully grating and frame including paint with coal tar (as specified in item No. 29.74) complete and to the requirement of the Engineer-In-Charge.					
A	Single road gully chamber :-					
a	Size 610mm x 457mm x 800mm	each	566.28	3284.21	622.91	3340.84
b	Size 610mm x 457mm x 1105mm	each	684.05	3910.46	752.46	3978.87
B	Double road gully chamber :-					
a	Size 1448mm. x 457mm. x 800mm.	each	1030.12	5861.53	1133.13	5964.54
b	Size 1448mm. x 457mm. x 1105mm.	each	1227.17	6888.89	1349.89	7011.61
29.93	Reduction for every 7.50cm depth of road gully chamber from the rate of item No. 29.92 above :-					
(a)	Single road gully chamber.	each	29.66	157.91	32.63	160.88
(b)	Double road gully chamber.	each	49.77	259.73	54.75	264.71

Sr. No.	Description	Unit	Plains		Sub-mountainous	
			Labour Rate	Through Rate	Labour Rate	Through Rate
1	2	3	4	5	6	7
29.94	Making connection of drain or sewer line with existing manhole including breaking into and making good the walls, floors with cement concrete 1:2:4 mix (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) cement plastered on both sides with cement mortar 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement and making necessary channels for the drain etc. complete.					
	a For pipes 100 to 200 mm Diametre	One connection	114.73	146.92	126.20	158.39
	b For pipes 250 to 450 mm Diametre	One connection	152.29	207.36	167.52	222.59
29.95	Making connection of sewer line with existing manhole including breaking into and making good the walls, floors with cement concrete 1:2:4 mix (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) cement plastered on both sides with cement mortar 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement and making necessary channels for the drain etc. complete.					
	a For pipes 760 mm Diametre	One connection	4674.81	6431.29	5142.29	6898.77
29.96	Dismantling of manhole including R.C.C. top slab, C.I. cover with frame including stacking of useful materials near the site including disposal of unserviceable material within 100 m. as desired by Engineer-in-charge.					
	a Rectangular manhole 75x120 cm and 45 cm deep	each	648.68	648.68	648.68	648.68
	b Rectangular manhole 90x150 cm and 45 cm deep	each	871.72	871.72	871.72	871.72
	c Rectangular manhole 120x180 cm and 45 cm deep	each	1139.53	1139.53	1139.53	1139.53
	d Rectangular manhole 150x180 cm and 45 cm deep	each	1301.04	1301.04	1301.04	1301.04
29.97	Extra for depth of manholes dismantled for additional depth of 0.300 m. including disposal of dismantled material within 100 m. as desired by Engineer-in-charge.					
	a Rectangular manhole 75x120 cm	each	82.09	82.09	82.09	82.09
	b Rectangular manhole 90x150 cm	each	97.02	97.02	97.02	97.02
	c Rectangular manhole 120x180 cm	each	119.41	119.41	119.41	119.41

Sr. No.	Description	Unit	Plains		Sub-mountainous	
			Labour Rate	Through Rate	Labour Rate	Through Rate
1	2	3	4	5	6	7
	d Rectangular manhole 150x180 cm	each	129.37	129.37	129.37	129.37
29.98	Raising manhole cover and frame slab to required level including dismantling existing slab and making good the damage as required including disposal of dismantled material within 100 m. as desired by Engineer-in-charge (Raising depth of manhole to be paid separately).					
	a Inside size 75x120 cm	each	839.47	3205.27	923.42	3289.22
	b Inside size 90x150 cm	each	1152.70	4378.88	1267.97	4494.15
	c Inside size 120x180 cm	each	1695.42	6435.57	1864.96	6605.11
	d Inside size 150x180 cm	each	2031.45	7651.87	2234.60	7855.02
29.99	Dismantling of old S.W. pipes including breaking of joints and bed concrete stacking of useful materials and disposal of unserviceable materials within 100 m. as desired by Engineer-in-Charge.					
	a 100 mm Diameter	m	17.69	17.69	19.46	19.46
	b 150 mm Diameter	m	19.57	19.57	21.53	21.53
	c 200 mm Diameter	m	20.82	20.82	22.90	22.90
	d 230 mm Diameter	m	21.44	21.44	23.58	23.58
	e 250 mm Diameter	m	22.07	22.07	24.28	24.28
	f 300 mm Diameter	m	23.31	23.31	25.64	25.64
	g 350 mm Diameter	m	26.85	26.85	29.54	29.54
	h 400 mm Diameter	m	29.35	29.35	32.29	32.29
	i 450 mm Diameter	m	30.60	30.60	33.66	33.66
29.100	Disilting of main sewerage line of size 760mm dia to onwards by silt clearing machine.	m	325.44	325.44	357.98	357.98
29.101	Disilting of sewerage sludge from manhole including rehandling of sludge within 50 m.					
	a Depth upto 3 m.	cum	671.39	671.39	738.53	738.53

Sr. No.	Description	Unit	Plains		Sub-mountainous		
			Labour Rate	Through Rate	Labour Rate	Through Rate	
1	2	3	4	5	6	7	
	b	Depth above 3 m.	cum	895.17	895.17	984.69	984.69
29.102	Rate for making sewer connection of 12" & 16" i/d newly laid sewer with existing manhole of 30" i/d & above P/T sewer including cost of plugging & desilting of Manholes.	One Connection	---	3797.15	---	3797.15	
29.103	Rate for making sewer connection of 8" & 10" i/d newly laid pipe sewer with existing manhole including cost of plugging & desilting of Manholes.	One Connection	---	495.50	---	495.50	