



AURANGABAD MUNICIPAL CORPORATION.

(From No.52)

Measurement Book

Name of work:- Development of Underground Sewerage Collection system for Zone I to VI and Zone Salim Ali. Constructing, Erecting, Testing and Commissioning of Sewage Treatment Plant based on modern technology at Nakshtrawadi (Kanchanwadi), Banewadi, Siddharth Garden, Zalta, Padegaon, CIDCO (Airport), Construction, Erection, Testing and Commission of Sewage pumping stations at Banewadi, Siddharth Garden, Padegaon, Golwadi, Zalta, Ward No.98 and CIDCO (Airport), Providing, lowering, laying jointing and testing rising main (GRP/DI) nine line from Golwadi SPS to Nakshtrawadi (Kanchanwadi) STP and Ward No.98 to

Book No. :-

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Chikalthan-2 - Meas. SW Pipe

Date	Particulars of work	DETAILS						Content of arrears	Last measurement		Total Upto Date Quantity
		No			L	B	D		Page	Quantity	
		GL	IL	EX.L							
	PCC							0.000			
	Murram bedding							0.681			
								1.030			
								5.206	23.906	29.112	
	Net Qty = A - B										
	CK 5 to CK 6										
	CH54.20	591.385	590.575	590.475			0.910	0.968			
	CH61.50	591.585	590.660	590.560			1.025				
	Item No. 1 :- Excavation for foundation/pipe trenches in earth soils, Soft murram etc complete.										
	(a) For Lift 0 to 1.5m	1			5.300	0.740	0.968	3.795	32.870	36.665	
	Item No. 7 :- Filling in plinth and floors/ trenches etc complete.(bedding)	1			5.900	0.740	0.100	0.437	3.493	3.929	
	Item No. : 11 Transportation of earth Transportation charges including loading & unloading							0.661	5.286	5.947	
	Extra Item 9.2 (c) :-Lowering & Laying of Polyethylene SW pipe of 200mm Dia	1			6.400			6.400	49.700	56.100	
	Item No. 30 :- Refilling the excavated trenches ...										
	Total Excavation=							3.795			
	Deduction										
	pipe area	1		0.785	5.900	0.220	0.220	0.224			
	soling							0.000			
	PCC							0.000			
	Murram bedding							0.437			
								0.661			
	Net Qty = A - B							3.134	29.112	32.246	
	CK 6 to CK 7										
	CH61.50	591.585	590.660	590.560			1.025	1.038			
	CH68.55	591.655	590.705	590.605			1.050				
	Item No. 1 :- Excavation for foundation/pipe trenches in earth soils, Soft murram etc complete.										
	(a) For Lift 0 to 1.5m	1			5.050	0.740	1.038	3.877	36.665	40.542	
	Item No. 7 :- Filling in plinth and floors/ trenches etc complete.(bedding)	1			5.650	0.740	0.100	0.418	3.929	4.348	
	Item No. : 11 Transportation of earth Transportation charges including loading & unloading							0.633	5.947	6.580	
	Extra Item 9.2 (c) :-Lowering & Laying of Polyethylene SW pipe of 200mm Dia	1			6.150			6.150	56.100	62.250	
	Item No. 30 :- Refilling the excavated trenches ...										
	Total Excavation=							3.877			
	Deduction										



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Measurement Book

Name of work: **Development of an underground Sewerage Collection system for Zone 1 to VI and Zone Sahaj Ali, Construction, Fitting, Testing and Commissioning of Sewerage Treatment Plant based on modern technology in Rakhwaswadi, Kambhastadi, Banewadi, Siddharth Garden, Zalta, Padegaon, CIDCO (Airport), Construction, Excavation, Laying and Commissioning of Sewerage pumping stations at Bheulwadi, Siddharth Garden, Padegaon, Gobandi, Zalta, Ward No 98 and CIDCO (Airport) providing sewerage laying, pointing, laying, testing, rising, manholes, etc. in Rakhwaswadi, Kambhastadi, Banewadi, Siddharth Garden, Padegaon, Gobandi, Zalta, Ward No 98 and CIDCO (Airport).**

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Chikalthan-2 - Meas. SW Pipe

Date	Particulars of work	DETAILS						Content of arrears	Last measurement		Total Upto Date Quantity
		No			L	B	D		Page	Quantity	
		GL	IL	EX.L							
	pipe area	1		0.785	5.650	0.220	0.220	0.215			
	soling							0.000			
	PCC							0.000			
	Murrum bedding							0.418			
								0.633			
		Net Qty = A - B						3.244		32.246	35.491
	CK 7 to CK 8										
	CH68.55	591.655	590.705	590.605			1.050	0.970			
	CH78.75	591.505	590.715	590.615			0.890				
	Item No. 1 :- Excavation for foundation/pipe trenches in earth soils, Soft murrum etc complete.										
	(a) For Lift 0 to 1.5m	1			8.200	0.740	0.970	5.886	40.542	46.428	
	Item No. 7 :- Filling in plinth and floors/ trenches etc complete.(bedding)	1			8.800	0.740	0.100	0.651	4.348	4.999	
	Item No. : 11 Transportation of earth Transportation charges including loading & unloading							0.986	6.580	7.565	
	Extra Item 9.2 (c) :- Lowering & Laying of Polyethylene SW pipe of 200mm Dia	1			9.300			9.300	62.250	71.550	
	Item No. 30 :- Refilling the excavated trenches ...										
	Total Excavation=							5.886			
	Deduction										
	pipe area	1		0.785	8.800	0.220	0.220	0.334			
	soling							0.000			
	PCC							0.000			
	Murrum bedding							0.651			
								0.986			
		Net Qty = A - B						4.900		35.491	40.391
	CK 9 to CK 10										
	CH82.35	591.495	590.775	590.675			0.820	0.820			
	CH94.75	591.535	590.815	590.715			0.820				
	Item No. 1 :- Excavation for foundation/pipe trenches in earth soils, Soft murrum etc complete.										
	(a) For Lift 0 to 1.5m	1			10.400	0.740	0.820	6.311	46.428	52.739	
	Item No. 7 :- Filling in plinth and floors/ trenches etc complete.(bedding)	1			11.000	0.740	0.100	0.814	4.999	5.813	
	Item No. : 11 Transportation of earth Transportation charges including loading & unloading							1.232	7.565	8.797	
	Extra Item 9.2 (c) :- Lowering & Laying of Polyethylene SW pipe of 200mm Dia	1			11.500			11.500	71.550	83.050	
	Item No. 30 :- Refilling the excavated trenches ...										



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AURANGABAD MUNICIPAL CORPORATION.

(From No.52)

Measurement Book

Name of work:- Development of Underground Sewerage Collection system for Zone I to VI and Zone Salim Ali. Constructing, Erecting, Testing and Commissioning of Sewage Treatment Plant based on modern technology at Nakshtrawadi (Kanchanwadi), Banewadi, Siddharth Garden, Zalta, Padegaon, CIDCO (Airport), Construction, Erection, Testing and Commission of Sewage pumping stations at Banewadi, Siddharth Garden, Padegaon, Golwadi, Zalta, Ward No.98 and CIDCO (Airport), Providing, lowering, laying jointing and testing rising main

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Chikhalthan-2 - Meas.Chamber

19th RA BILL MEASUREMENTS OF CHAMBERS CHIKHALTHANA - 2

Date	Particulars of work	DETAILS						Content of arrears	Last measurement		Total Upto Date Quantity
		No			L	B	D		Page	Quantity	
		GL	IL	EX.L							
	Excavation of Chamber - For 0.75 dia chamber up to 1.5 mt depth - $0.75 \times 0.5 + 0.3 + 0.3 = 1.85m$										
	Bredth for chamber up to 1.5m = $1.85 \times 1.85 = 3.422m$										
	CK 0										
	CH0.00	591.495	590.435	590.185				1.310			
	Item No. 1 :- Excavation for foundation/pipe trenches in earth soils, Soft murrum etc complete.										
	(a) For Lift 0 to 1.5m	1			0.785	3.422	1.240	3.331	0.000	3.331	
	Item No. 4 :- Excavation for foundation/pipe trenches in soft rock etc complete.										
	(a) For Lift 0 to 1.5m	1			0.785	3.422	0.070	0.188	0.000	0.188	
	Item No. : 11 Transportation of earth Transportation charges							1.475	0.000	1.475	
	Item No. 30 :- Refilling the excavated trenches ...										
	Total Excavation(A)=							3.519			
	Deduction										
	Brick work	1		0.785	1.130	1.130	1.060	1.063			
	soling							0.000			
	PCC	1		0.785	1.450	1.450	0.250	0.413			
	Murrum bedding							0.000			
	Total (B)							1.475			
	Net Qty = A - B							2.044	0.000	2.044	
	CK 1										
	CH11.50	591.605	590.575	590.325				1.280			
	Item No. 1 :- Excavation for foundation/pipe trenches in earth soils, Soft murrum etc complete.										
	(a) For Lift 0 to 1.5m	1			0.785	3.422	1.210	3.250	3.331	6.581	
	Item No. 4 :- Excavation for foundation/pipe trenches in soft rock etc complete.										
	(a) For Lift 0 to 1.5m	1			0.785	3.422	0.070	0.188	0.188	0.376	
	Item No. : 11 Transportation of earth Transportation charges							1.445	1.475	2.920	
	Item No. 30 :- Refilling the excavated trenches ...										
	Total Excavation(A)=							3.438			
	Deduction										
	Brick work	1		0.785	1.130	1.130	1.030	1.032			
	soling							0.000			
	PCC	1		0.785	1.450	1.450	0.250	0.413			
	Murrum bedding							0.000			
	Total (B)							1.445			
	Net Qty = A - B							1.993	2.044	4.037	



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MUMBAI MUNICIPAL CORPORATION.

(From No.52)

Measurement Book



Name of work: Construction of underground sewerage collection system for Zone 1 to 7 and Zone Salim Ali. Constructing, testing and Commissioning of Sewage Treatment Plant based on modern technology at Khandanwadi, Parelwadi, Siddharth Garden, Zalta, Padegaon, CIDCO (Airport) and construction, Erection, Testing and Commissioning of Sewage pumping stations at Bheswadi, Siddharth Garden, Palyanwadi, Golwadi, Zalta, Ward No.98 and CIDCO (Airport) including, glassing, laying, jointing, sanding, lining, etc. in Ward No.98 and CIDCO (Airport) and Ward No.98, 10 and 11.

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Chikalthan-2 - Meas.Chamber

Date	Particulars of work	DETAILS						Content of arrears	Last measurement		Total Upto Date Quantity
		GL	No IL	EX.L	L	B	D		Page	Quantity	
CK 2											
CH20.00		591.545	590.575	590.325			1.220				
	Item No. 1 :- Excavation for foundation/pipe trenches in earth soils, Soft murrum etc complete.										
	(a) For Lift 0 to 1.5m	1			0.785	3.422	1.150	3.089		6.581	9.671
	Item No. 4 :- Excavation for foundation/pipe trenches in soft rock etc complete.										
	(a) For Lift 0 to 1.5m	1			0.785	3.422	0.070	0.188		0.376	0.564
	Item No. : 11 Transportation of earth Transportation charges							1.385		2.920	4.305
	Item No. 30 :- Refilling the excavated trenches ...										
	Total Excavation(A)=							3.277			
	Deduction										
	Brick work	1		0.785	1.130	1.130	0.970	0.972			
	soling							0.000			
	PCC	1		0.785	1.450	1.450	0.250	0.413			
	Murrum bedding							0.000			
	Total (B)							1.385			
	Net Qty = A - B							1.892		4.037	5.930
CK 3											
CH35.50		591.455	590.575	590.325			1.130				
	Item No. 1 :- Excavation for foundation/pipe trenches in earth soils, Soft murrum etc complete.										
	(a) For Lift 0 to 1.5m	1			0.785	3.422	1.060	2.847		9.671	12.518
	Item No. 4 :- Excavation for foundation/pipe trenches in soft rock etc complete.										
	(a) For Lift 0 to 1.5m	1			0.785	3.422	0.070	0.188		0.564	0.752
	Item No. : 11 Transportation of earth Transportation charges							1.295		4.305	5.600
	Item No. 30 :- Refilling the excavated trenches ...										
	Total Excavation(A)=							3.035			
	Deduction										
	Brick work	1		0.785	1.130	1.130	0.880	0.882			
	soling							0.000			
	PCC	1		0.785	1.450	1.450	0.250	0.413			
	Murrum bedding							0.000			
	Total (B)							1.295			
	Net Qty = A - B							1.741		5.930	7.670
CK 4											
CH43.60		591.525	590.575	590.325			1.200				
	Item No. 1 :- Excavation for foundation/pipe trenches in earth soils, Soft murrum etc complete.										
	(a) For Lift 0 to 1.5m	1			0.785	3.422	1.200	3.224		12.518	15.742
	Item No. : 11 Transportation of earth Transportation charges							1.365		5.600	6.965



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AURANGABAD MUNICIPAL CORPORATION.

(From No.52)

Measurement Book

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Chikalthan-2 - Meas.Chamber

Date	Particulars of work	DETAILS						Content of arrears	Last measurement		Total Upto Date Quantity
		GL	No		L	B	D		Page	Quantity	
			IL	EX.L							
	Item No. 30 :- Refilling the excavated trenches ...										
	Total Excavation(A)=						3.224				
	Deduction										
	Brick work	1		0.785	1.130	1.130	0.952				
	soling						0.000				
	PCC	1		0.785	1.450	1.450	0.413				
	Murram bedding						0.000				
	Total (B)						1.365				
	Net Qty = A - B						1.859	7.670	9.529		
	CK 5										
	CH54.20	591.385	590.575	590.325			1.060				
	Item No. 1 :- Excavation for foundation/pipe trenches in earth soils, Soft murrum etc complete.										
	(a) For Lift 0 to 1.5m	1			0.785	3.422	1.060	2.847	15.742	18.589	
	Item No. : 11 Transportation of earth Transportation charges							1.225	6.965	8.189	
	Item No. 30 :- Refilling the excavated trenches ...										
	Total Excavation(A)=						2.847				
	Deduction										
	Brick work	1		0.785	1.130	1.130	0.812				
	soling						0.000				
	PCC	1		0.785	1.450	1.450	0.413				
	Murram bedding						0.000				
	Total (B)						1.225				
	Net Qty = A - B						1.623	9.529	11.152		
	Excavation of Chamber - For 0.60 dia chamber up to 1.5 mt depth - 0.6+0.5+0.3+0.3=1.7m										
	Bredth for chember up to 1.5m=1.7 X 1.7=2.89m										
	CK 6										
	CH61.50	591.585	590.660	590.410			1.175				
	Item No. 1 :- Excavation for foundation/pipe trenches in earth soils, Soft murrum etc complete.										
	(a) For Lift 0 to 1.5m	1			0.785	2.890	1.175	2.666	18.589	21.255	
	Item No. : 11 Transportation of earth Transportation charges							1.132	8.189	9.321	
	Item No. 30 :- Refilling the excavated trenches ...										
	Total Excavation(A)=						2.666				
	Deduction										
	Brick work	1		0.785	1.050	1.050	0.801				
	soling						0.000				
	PCC	1		0.785	1.300	1.300	0.332				
	Murram bedding						0.000				
	Total (B)						1.132				
	Net Qty = A - B						1.533	11.152	12.685		
	CK 7										
	CH68.55	591.655	590.705	590.455			1.200				



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AURANGABAD MUNICIPAL CORPORATION.

(From No.52)

Measurement Book

Name of work:- Development of Underground Sewerage Collection system for Zone I to VI and Zone Salim Ali, Constructing, Erecting, Testing and Commissioning of Sewage Treatment Plant based on modern technology at Nakshtrawadi (Kanchanwadi), Banewadi, Siddharth Garden, Zalta, Padegaon, CIDCO (Airport), Construction, Erection, Testing and Commission of Sewage pumping stations at Banewadi, Siddharth Garden, Padegaon, Golwadi, Zalta, Ward No.98 and CIDCO (Airport), Providing, lowering, laying jointing and testing rising main GRP DI pipe line from Golwadi SPS to Nakshtrawadi (Kanchanwadi) STP and Ward No.98 to STP for Aurangabad City.

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Name of Agency:- M's Khilari Infrastructure Pvt.Ltd. & GECPL (Joint Venture)

Authority No. AMC/Ward B&C/UIDSSMT/2014/184 Date 01.07.2014

Details						Last Measurement	Total up to
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Chikalthan-2 - Meas.Chamber

Date	Particulars of work	DETAILS					Content of arrears	Last measurement		Total Upto Date Quantity
		GL	IL	EX.L	L	B		D	Page	
CK 11										
	CH115.05	591.535	590.845	590.595			0.940			
	Item No. 1 :- Excavation for foundation/pipe trenches in earth soils, Soft murrum etc complete.									
	(a) For Lift 0 to 1.5m	1			0.785	2.890	0.940	2.133	28.378	30.511
	Item No. : 11 Transportation of earth Transportation charges							0.929	12.385	13.314
	Item No. 30 :- Refilling the excavated trenches ...									
	Total Excavation(A)=							2.133		
	Deduction									
	Brick work	1		0.785	1.050	1.050	0.690	0.597		
	soling							0.000		
	PCC	1		0.785	1.300	1.300	0.250	0.332		
	Murrum bedding							0.000		
	Total (B)							0.929		
					Net Qty = A - B			1.204	16.746	17.949
CK 13										
	CH133.85	591.675	590.985	590.735			0.940			
	Item No. 1 :- Excavation for foundation/pipe trenches in earth soils, Soft murrum etc complete.									
	(a) For Lift 0 to 1.5m	1			0.785	2.890	0.940	2.133	30.511	32.643
	Item No. 4 :- Excavation for foundation/pipe trenches in soft rock etc complete.									
	(a) For Lift 0 to 1.5m	1			0.785	2.890	0.000	0.000	0.752	0.752
	Item No. : 11 Transportation of earth Transportation charges							0.929	13.314	14.243
	Item No. 30 :- Refilling the excavated trenches ...									
	Total Excavation(A)=							2.133		
	Deduction									
	Brick work	1		0.785	1.050	1.050	0.690	0.597		
	soling							0.000		
	PCC	1		0.785	1.300	1.300	0.250	0.332		
	Murrum bedding							0.000		
	Total (B)							0.929		
					Net Qty = A - B			1.204	17.949	19.153



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AURANGABAD MUNICIPAL CORPORATION.

(From No.52)

Measurement Book

Name of work:- Development of Underground Sewerage Collection system for Zone 1 to VI and Zone Salim Ali, Constructing, Erecting, Testing and Commissioning of Sewage Treatment Plant based on modern technology at Nakshtrawadi (Kanchanwadi), Banewadi, Siddharth Garden, Zalta, Padegaon, CIDCO (Airport), Construction, Erection, Testing and Commission of Sewage pumping stations at Banewadi, Siddharth Garden, Padegaon, Golwadi, Zalta, Ward No.98 and CIDCO (Airport). Providing, lowering, laying jointing and testing rising main GRP DI pipe line from Golwadi SPS to Nakshtrawadi (Kanchanwadi) STP and Ward No.98 to STP for Aurangabad City.

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Chikalthan-288M

11th RA BILL MEASUREMENTS OF BBM TRENCH CHIKHALTHANA - 2

Date	Particulars of work	DETAILS					Content of arrears	Last measurement		Total Upto Date Quantity
		No		L	B	D		Page	Quantity	
		GL	IL							
A	Bricks Work for Manhole 0.7 M Dia									
	CK 0									
	CH0.00	591.495	590.435			1.060				
	Extra Item :4(a) - Construction of Brick work of 230mm thk. for manhole etc complete.									
		1		2.685	0.230	1.060	0.655	0.000	0.655	
	Extra Item :4(b) - 12mm thk. Internal Plaster for manhole etc complete.									
	(a) Wall	1		1.963		1.060	2.080	0.000	2.080	
	Extra Item :4(c) - 20mm thk. External Plaster for manhole etc complete.									
	(a) Wall	1		3.407		1.060	3.611	0.000	3.611	
	Extra Item :4(d) - Providing fine Cement finish 1.5mm thk. for manhole etc complete.									
	(a) For Internal Wall	1		1.963		1.060	2.080	0.000	2.080	
	Extra Item :4 (e) I- Providing and Fixing in position SFRC manhole cover with frame of circular manhole						1.000	0.000	1.000	
	Extra Item :5(b) - Providing and casting M15 Grade concrete									
		1	0.785	1.450	1.450	0.250	0.413	0.000	0.413	
	CK 1									
	CH11.50	591.605	590.575			1.030				
	Extra Item :4(a) - Construction of Brick work of 230mm thk. for manhole etc complete.									
		1		2.685	0.230	1.030	0.636	0.655	1.291	
	Extra Item :4(b) - 12mm thk. Internal Plaster for manhole etc complete.									
	(a) Wall	1		1.963		1.030	2.021	2.080	4.102	
	Extra Item :4(c) - 20mm thk. External Plaster for manhole etc complete.									
	(a) Wall	1		3.407		1.030	3.509	3.611	7.120	
	Extra Item :4(d) - Providing fine Cement finish 1.5mm thk. for manhole etc complete.									
	(a) For Internal Wall	1		1.963		1.030	2.021	2.080	4.102	
	Extra Item :4 (e) I- Providing and Fixing in position SFRC manhole cover with frame of circular manhole						1.000	1.000	2.000	
		1								



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(From No.52)

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Chikalthan-288M

Date	Particulars of work	DETAILS					Content of arrears	Last measurement		Total Upto Date Quantity
		No		L	B	D		Page	Quantity	
		GL	IL							
	Extra Item :5(b) - Providing and casting M15 Grade concrete									
		1	0.785	1.450	1.450	0.250	0.413		0.413	0.825
	CK 2									
	CH20.00	591.545	590.575			0.970				
	Extra Item :4(a) - Construction of Brick work of 230mm thk. for manhole etc complete.									
		1		2.685	0.230	0.970	0.599		1.291	1.889
	Extra Item :4(b) - 12mm thk. Internal Plaster for manhole etc complete.									
	(a) Wall	1		1.963		0.970	1.904		4.102	6.005
	Extra Item :4(c) - 20mm thk. External Plaster for manhole etc complete.									
	(a) Wall	1		3.407		0.970	3.305		7.120	10.425
	Extra Item :4(d) - Providing fine Cement finish 1.5mm thk. for manhole etc complete.									
	(a) For Internal Wall	1		1.963		0.970	1.904		4.102	6.005
	Extra Item :4 (e) i- Providing and Fixing in position SFRC manhole cover with frame of circular manhole						1.000		2.000	3.000
	Extra Item :5(b) - Providing and casting M15 Grade concrete									
		1	0.785	1.450	1.450	0.250	0.413		0.825	1.238
	CK 3									
	CH35.50	591.455	590.575			0.880				
	Extra Item :4(a) - Construction of Brick work of 230mm thk. for manhole etc complete.									
		1		2.685	0.230	0.880	0.543		1.889	2.433
	Extra Item :4(b) - 12mm thk. Internal Plaster for manhole etc complete.									
	(a) Wall	1		1.963		0.880	1.727		6.005	7.732
	Extra Item :4(c) - 20mm thk. External Plaster for manhole etc complete.									
	(a) Wall	1		3.407		0.880	2.998		10.425	13.423
	Extra Item :4(d) - Providing fine Cement finish 1.5mm thk. for manhole etc complete.									
	(a) For Internal Wall	1		1.963		0.880	1.727		6.005	7.732
	Extra Item :4 (e) i- Providing and Fixing in position SFRC manhole cover with frame of circular manhole						1.000		3.000	4.000



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AURANGABAD MUNICIPAL CORPORATION.

(From No.52)

Measurement Book

Name of work:- Development of Underground Sewerage Collection system for Zone I to VI and Zone Salim Ali. Constructing, Erecting, Testing and Commissioning of Sewage Treatment Plant based on modern technology at Nakshtrawadi (Kanchanwadi), Banewadi, Siddharth Garden, Zalta, Padegaon, CIDCO (Airport), Construction, Erection, Testing and Commission of Sewage pumping stations at Banewadi, Siddharth Garden, Padegaon, Golwadi, Zalta, Ward No.98 and CIDCO (Airport). Providing, lowering, laying jointing and testing rising main GRP/DI pipe line from Golwadi SPS to Nakshtrawadi (Kanchanwadi) STP and Ward No.98 to SH

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Date	Particulars of work	DETAILS					Content of arrears	Last measurement		Total Upto Date Quantity
		No		L	B	D		Page	Quantity	
		GL	IL							
	Extra Item :5(b) - Providing and casting M15 Grade concrete									
		1	0.785	1.450	1.450	0.250	0.413		1.238	1.650
	CK 4									
	CH43.60	591.525	590.575			0.950				
	Extra Item :4(a) - Construction of Brick work of 230mm thk. for manhole etc complete.									
		1		2.685	0.230	0.950	0.587		2.433	3.019
	Extra Item :4(b) - 12mm thk. Internal Plaster for manhole etc complete.									
	(a) Wall	1		1.963		0.950	1.864		7.732	9.597
	Extra Item :4(c) - 20mm thk. External Plaster for manhole etc complete.									
	(a) Wall	1		3.407		0.950	3.237		13.423	16.660
	Extra Item :4(d) - Providing fine Cement finish 1.5mm thk. for manhole etc complete.									
	(a) For Internal Wall	1		1.963		0.950	1.864		7.732	9.597
	Extra Item :4 (e) I- Providing and Fixing in position SFRC manhole cover with frame of circular manhole						1.000		4.000	5.000
	Extra Item :5(b) - Providing and casting M15 Grade concrete									
		1	0.785	1.450	1.450	0.250	0.413		1.650	2.063
	CK 5									
	CH54.20	591.385	590.575			0.810				
	Extra Item :4(a) - Construction of Brick work of 230mm thk. for manhole etc complete.									
		1		2.685	0.230	0.810	0.500		3.019	3.520
	Extra Item :4(b) - 12mm thk. Internal Plaster for manhole etc complete.									
	(a) Wall	1		1.963		0.810	1.590		9.597	11.186
	Extra Item :4(c) - 20mm thk. External Plaster for manhole etc complete.									
	(a) Wall	1		3.407		0.810	2.760		16.660	19.419
	Extra Item :4(d) - Providing fine Cement finish 1.5mm thk. for manhole etc complete.									
	(a) For Internal Wall	1		1.963		0.810	1.590		9.597	11.186
	Extra Item :4 (e) I- Providing and Fixing in position SFRC manhole cover with frame of circular manhole						1.000		5.000	6.000



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AURANGABAD MUNICIPAL CORPORATION.

(From No.52)

Measurement Book

Name of work:- Development of Underground Sewerage Collection system for Zone I to VI and Zone Salim Ali, Constructing, Erecting, Testing and Commissioning of Sewage Treatment Plant based on modern technology at Nakshtrawadi (Kanchanwadi), Banewadi, Siddharth Garden, Zalta, Padegaon, CIDCO (Airport), Construction, Erection, Testing and Commissioning of Sewage pumping stations at Banewadi, Siddharth Garden, Padegaon, Golwadi, Zalta, Ward No.98 and CIDCO (Airport), Providing, lowering, laying, jointing, and testing rising main GRP DI pipe line from Golwadi SPS to Nakshtrawadi (Kanchanwadi) STP and Ward No.98 to STP for Aurangabad City.

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Date	Particulars of work	DETAILS					Content of arrears	Last measurement		Total Upto Date Quantity
		No		L	B	D		Page	Quantity	
		GL	IL							
	Extra Item :5(b) - Providing and casting M15 Grade concrete									
		1	0.785	1.450	1.450	0.250	0.413		2.063	2.476
	CK 6									
	CH61.50	591.585	590.660			0.925				
	Extra Item :4(a) - Construction of Brick work of 230mm thk. for manhole etc complete.									
		1		2.449	0.230	0.925	0.521		3.520	4.041
	Extra Item :4(b) - 12mm thk. Internal Plaster for manhole etc complete.									
	(a) Wall	1		1.727		0.925	1.597		11.186	12.784
	Extra Item :4(c) - 20mm thk. External Plaster for manhole etc complete.									
	(a) Wall	1		3.171		0.925	2.934		19.419	22.353
	Extra Item :4(d) - Providing fine Cement finish 1.5mm thk. for manhole etc complete.									
	(a) For Internal Wall	1		1.727		0.925	1.597		11.186	12.784
	Extra Item :4 (e) I- Providing and Fixing in position SFRC manhole cover with frame of circular manhole						1.000		6.000	7.000
	Extra Item :5(b) - Providing and casting M15 Grade concrete									
		1	0.785	1.300	1.300	0.250	0.332		2.476	2.807
	CK 7									
	CH68.55	591.655	590.705			0.950				
	Extra Item :4(a) - Construction of Brick work of 230mm thk. for manhole etc complete									
		1		2.449	0.230	0.950	0.535		4.041	4.576
	Extra Item :4(b) - 12mm thk. Internal Plaster for manhole etc complete.									
	(a) Wall	1		1.727		0.950	1.641		12.784	14.424
	Extra Item :4(c) - 20mm thk. External Plaster for manhole etc complete.									
	(a) Wall	1		3.171		0.950	3.013		22.353	25.366
	Extra Item :4(d) - Providing fine Cement finish 1.5mm thk. for manhole etc complete.									
	(a) For Internal Wall	1		1.727		0.950	1.641		12.784	14.424
	Extra Item :4 (e) I- Providing and Fixing in position SFRC manhole cover with frame of circular manhole						1.000		7.000	8.000





AURANGABAD MUNICIPAL CORPORATION.

(From No.52)

Measurement Book

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Date	Particulars of work	DETAILS					Content of arrears	Last measurement		Total Upto Date Quantity
		No		L	B	D		Page	Quantity	
		GL	IL							
	Extra Item :5(b) - Providing and casting M15 Grade concrete									
		1	0.785	1.300	1.300	0.250	0.332		2.807	3.139
	CK 9									
	CH82.35	591.495	590.775			0.720				
	Extra Item :4(a) - Construction of Brick work of 230mm thk. for manhole etc complete.									
		1		2.449	0.230	0.720	0.406		4.576	4.981
	Extra Item :4(b) - 12mm thk. Internal Plaster for manhole etc complete.									
	(a) Wall	1		1.727		0.720	1.243		14.424	15.668
	Extra Item :4(c) - 20mm thk. External Plaster for manhole etc complete.									
	(a) Wall	1		3.171		0.720	2.283		25.366	27.649
	Extra Item :4(d) - Providing fine Cement finish 1.5mm thk. for manhole etc complete.									
	(a) For Internal Wall	1		1.727		0.720	1.243		14.424	15.668
	Extra Item :4 (e) i- Providing and Fixing in position SFRC manhole cover with frame of circular manhole						1.000		8.000	9.000
	Extra Item :5(b) - Providing and casting M15 Grade concrete									
		1	0.785	1.300	1.300	0.250	0.332		3.139	3.471
	CK 10									
	CH94.75	591.535	590.815			0.720				
	Extra Item :4(a) - Construction of Brick work of 230mm thk. for manhole etc complete.									
		1		2.449	0.230	0.720	0.406		4.981	5.387
	Extra Item :4(b) - 12mm thk. Internal Plaster for manhole etc complete.									
	(a) Wall	1		1.727		0.720	1.243		15.668	16.911
	Extra Item :4(c) - 20mm thk. External Plaster for manhole etc complete.									
	(a) Wall	1		3.171		0.720	2.283		27.649	29.933
	Extra Item :4(d) - Providing fine Cement finish 1.5mm thk. for manhole etc complete.									
	(a) For Internal Wall	1		1.727		0.720	1.243		15.668	16.911
	Extra Item :4 (e) i- Providing and Fixing in position SFRC manhole cover with frame of circular manhole						1.000		9.000	10.000



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AURANGABAD MUNICIPAL CORPORATION.

(From No.52)

Measurement Book

Name of work:- Development of Underground Sewerage Collection system for Zone I to VI and Zone Salim Ali. Constructing, Erecting, Testing and Commissioning of Sewage Treatment Plant based on modern technology at Nakshtrawadi (Kanchanwadi), Banewadi, Siddharth Garden, Zalta, Padegaon, CIDCO (Airport), Construction, Erection, Testing and Commission of Sewage pumping stations at Banewadi, Siddharth Garden, Padegaon, Golwadi, Zalta, Ward No.98 and CIDCO (Airport). Providing, lowering, laying jointing and testing rising main GRP DI pipe line from Golwadi SPS to Nakshtrawadi (Kanchanwadi) STP and Ward No.98 to STP

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Date	Particulars of work	DETAILS					Content of arrears	Last measurement		Total Upto Date Quantity
		No		L	B	D		Page	Quantity	
		GL	IL							
	Extra Item :5(b) - Providing and casting M15 Grade concrete									
		1	0.785	1.300	1.300	0.250	0.332		3.471	3.802
	CK 11									
	CH115.05	591.535	590.845			0.690				
	Extra Item :4(a) - Construction of Brick work of 230mm thk. for manhole etc complete.									
		1		2.449	0.230	0.690	0.389		5.387	5.776
	Extra Item :4(b) - 12mm thk. Internal Plaster for manhole etc complete.									
	(a) Wall	1		1.727		0.690	1.192		16.911	18.103
	Extra Item :4(c) - 20mm thk. External Plaster for manhole etc complete.									
	(a) Wall	1		3.171		0.690	2.188		29.933	32.121
	Extra Item :4(d) - Providing fine Cement finish 1.5mm thk. for manhole etc complete.									
	(a) For Internal Wall	1		1.727		0.690	1.192		16.911	18.103
	Extra Item :4 (e) i- Providing and Fixing in position SFRC manhole cover with frame of circular manhole						1.000		10.000	11.000
	Extra Item :5(b) - Providing and casting M15 Grade concrete									
		1	0.785	1.300	1.300	0.250	0.332		3.802	4.134
	CK 13									
	CH133.85	591.675	590.985			0.690				
	Extra Item :4(a) - Construction of Brick work of 230mm thk. for manhole etc complete.									
		1		2.449	0.230	0.690	0.389		5.776	6.164
	Extra Item :4(b) - 12mm thk. Internal Plaster for manhole etc complete.									
	(a) Wall	1		1.727		0.690	1.192		18.103	19.295
	Extra Item :4(c) - 20mm thk. External Plaster for manhole etc complete.									
	(a) Wall	1		3.171		0.690	2.188		32.121	34.309
	Extra Item :4(d) - Providing fine Cement finish 1.5mm thk. for manhole etc complete.									
	(a) For Internal Wall	1		1.727		0.690	1.192		18.103	19.295
	Extra Item :4 (e) i- Providing and Fixing in position SFRC manhole cover with frame of						1.000		11.000	12.000
	Extra Item :5(b) - Providing and casting M15 Grade									
		1	0.785	1.300	1.300	0.250	0.332		4.134	4.466



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AURANGABAD MUNICIPAL CORPORATION

(From No.52)

Measurement Book



Name of work:- Development of Underground Sewerage Collection system for Zone I to VI and Zone Salim Ali. Constructing, Erecting, Testing and Commissioning of Sewage Treatment Plant based on modern technology at Nakshtrawadi (Kanchanwadi), Banewadi, Siddharth Garden, Zalta, Padegaon, CIDCO (Airport), Construction, Erection, Testing and Commission of Sewage pumping stations at Banewadi, Siddharth Garden, Padegaon, Golwadi, Zalta, Ward No.98 and CIDCO (Airport). Providing, lowering, laying jointing and testing rising main GRP DI pipe line from Golwadi SPS to Nakshtrawadi (Kanchanwadi) STP and Ward No.98 to STP for Aurangabad City.

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Name of Agency:- M/s Khilari Infrastructure Pvt.Ltd. & GECPL (Joint Venture)

Authority No. AMC/Ward B&C/UIDSSMT/2014/184 Date 01.07.2014

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Chikalthan-2 Quantity Node Abstract

12th R A BILL MEASUREMENTS
Branch Sewer at CHIKHALTHANA - 2

SR NO	Description	MB/PG	ITEM 4		ITEM 7	ITEM 11	ITEM 30	EIRL 4			EIRL 5	EIRL 9.1		EIRL 9.2			
			0-1.5	1.528				a	b	c		d	e-f) (0.9 m Dia)		b	200mm	200mm
1	For Pipe		66.503	1.528	7.648	11.575	56.457										
2	For Manhole		32.643	0.752		14.243	19.153	6.164	19.295	34.309	19.295	12.000	4.466	108.850	108.850		
	Total		99.146	2.280	7.648	25.817	75.610	6.164	19.295	34.309	19.295	12.000	4.466	108.850	108.850		

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AURANGABAD MUNICIPAL CORPORATION.

(From No.52)

Measurement Book

Name of work:- Development of Underground Sewerage Collection system for Zone 1 to VI and Zone Salim Ali. Constructing, Erecting, Testing and Commissioning of Sewage Treatment Plant based on modern technology at Nakshtrawadi (Kanchanwadi), Banewadi, Siddharth Garden, Zalta, Padegaon, CIDCO (Airport), Construction, Erection, Testing and Commission of Sewage pumping stations at Banewadi, Siddharth Garden, Padegaon, Golwadi, Zalta, Ward No.98 and CIDCO (Airport), Providing, lowering, laying jointing and testing rising main (GRP/DI) pipe line from Golwadi SPS to Nakshtrawadi (Kanchanwadi) STP and Ward No.98 to STP for Aurangabad City.

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Masnatpur-05 - Mease. DWC Pipe

11th R A BILL MEASUREMENTS PIPE MASNATPUR - 05

Date	Particulars of work	DETAILS						Content of arrears	Last measurement		Total Upto Date Quantity
		No			L	B	D		Page	Quantity	
		GL	IL	EX.L							
	DWC PIPE - 250 mm Dia										
	Width of Trench - For Lift 0 to 1.50m- 0.250+0.5=0.75m										
	For Lift 1.5 to 3.00m- 0.250+0.5+0.4=1.15m										
	For Lift 3.0 to 4.5m- 0.250+0.5+0.4+0.4=1.55m										
	MH 8.16 to MH 8.16.1										
	CH0.00	578.335	577.315	577.215			1.120	1.085			
	CH8.00	578.545	577.595	577.495			1.050				
	Item No. 1 :- Excavation for foundation/pipe trenches in earth soils, Soft murrum etc complete.										
	(a) For Lift 0 to 1.5m	1			6.300	0.750	1.085	5.127	0.000	5.127	
	Item No. 7 :- Filling in plinth and floors/ trenches etc complete.(bedding)	1			6.600	0.750	0.100	0.495	0.000	0.495	
	Item No. : 11 Transportation of earth Transportation charges including loading & unloading							0.819	0.000	0.819	
	Item 13 (c) :-Lowering & Laying of Polyethylene DWC pipe of 250mm Dia	1			7.100			7.100	0.000	7.100	
	Item No. 30 :- Refilling the excavated trenches ...							5.127			
	Total Excavation=							5.127			
	Deduction										
	pipe area	1		0.785	6.600	0.250	0.250	0.324			
	soling							0.000			
	PCC							0.000			
	Murrum bedding							0.495			
								0.819			
	Net Qty = A - B							4.308	0.000	4.308	
	MH 8.16.1 to MH 8.16.2										
	CH8.00	578.545	577.595	577.495			1.050	1.005			
	CH18.40	578.660	577.800	577.700			0.960				
	Item No. 1 :- Excavation for foundation/pipe trenches in earth soils, Soft murrum etc complete.										
	(a) For Lift 0 to 1.5m	1			8.400	0.750	1.005	6.331	5.127	11.458	
	Item No. 7 :- Filling in plinth and floors/ trenches etc complete.(bedding)	1			9.000	0.750	0.100	0.675	0.495	1.170	
	Item No. : 11 Transportation of earth Transportation charges including loading & unloading							1.117	0.819	1.935	



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AURANGABAD MUNICIPAL CORPORATION.

(From No.52)

Measurement Book

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Masnatpur-05 - Mease. DWC Pipe

Date	Particulars of work	DETAILS						Content of arrears	Last measurement		Total Upto Date Quantity
		GL	No		L	B	D		Page	Quantity	
			IL	EX.L							
	Item 13 (c) :-Lowering & Laying of Polyethylene DWC pipe of 250mm Dia	1			9.500			9.500		7.100	16.600
	Item No. 30 :- Refilling the excavated trenches ...										
	Total Excavation=							6.331			
	Deduction										
	pipe area	1		0.785	9.000	0.250	0.250	0.442			
	soling							0.000			
	PCC							0.000			
	Murum bedding							0.675			
								1.117			
								Net Qty = A - B			
	MH 8.16.2 to MH 8.16.3							5.215	4.308	9.523	
	CH18.40	578.660	577.800	577.700							
	CH27.50	578.825	577.915	577.815				0.960			
								1.010			
	Item No. 1 :- Excavation for foundation/pipe trenches in earth soils, Soft murrum etc complete.										
	(a) For Lift 0 to 1.5m	1			7.100	0.750	0.985	5.245		11.458	16.703
	Item No. 7 :- Filling in plinth and floors/ trenches etc complete.(bedding)	1			7.700	0.750	0.100	0.578		1.170	1.748
	Item No. : 11 Transportation of earth Transportation charges including loading & unloading							0.955		1.935	2.891
	Item 13 (c) :-Lowering & Laying of Polyethylene DWC pipe of 250mm Dia	1			8.200			8.200		16.600	24.800
	Item No. 30 :- Refilling the excavated trenches ...										
	Total Excavation=							5.245			
	Deduction										
	pipe area	1		0.785	7.700	0.250	0.250	0.378			
	soling							0.000			
	PCC							0.000			
	Murum bedding							0.578			
								0.955			
								Net Qty = A - B			
	MH 8.16.3 to MH 8.16.4							4.290	9.523	13.813	
	CH27.50	578.825	577.915	577.815							
	CH31.30	578.995	578.015	577.915				1.010			
								1.080			
	Item No. 1 :- Excavation for foundation/pipe trenches in earth soils, Soft murrum etc complete.										
	(a) For Lift 0 to 1.5m	1			1.800	0.750	1.045	1.411		16.703	18.114
	Item No. 7 :- Filling in plinth and floors/ trenches etc complete.(bedding)	1			2.400	0.750	0.100	0.180		1.748	1.928
	Item No. : 11 Transportation of earth Transportation charges including loading & unloading							0.298		2.891	3.188



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AURANGABAD MUNICIPAL CORPORATION.

(From No.52)

Measurement Book

Name of work:- Development of Underground Sewerage Collection system for Zone I to VI and Zone Salim Ali. Constructing, Erecting, Testing and Commissioning of Sewage Treatment Plant based on modern technology at Nakshtrawadi (Kanchanwadi), Banewadi, Siddharth Garden, Zalta, Padegaon, CIDCO (Airport). Construction, Erection, Testing and Commission of Sewage pumping stations at Banewadi, Siddharth Garden, Padegaon, Golwadi, Zalta, Ward No.98 and CIDCO (Airport). Providing, lowering, laying jointing and testing rising main GRP/DI pipe line from Golwadi SPS to Nakshtrawadi (Kanchanwadi) STP and Ward No.98 to STP for Aurangabad City.

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Name of Agency:- M/s Khilari Infrastructure Pvt.Ltd. & GECPL (Joint Vencture)

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Masnatpur-05 - Mease. DWC Pipe

Date	Particulars of work	DETAILS						Content of arrears	Last measurement		Total Upto Date Quantity
		No			L	B	D		Page	Quantity	
		GL	IL	EX.L							
	Item 13 (c) :-Lowering & Laying of Polyethylene DWC pipe of 250mm Dia	1			2.900			2.900		24.800	27.700
	Item No. 30 :- Refilling the excavated trenches ...										
	Total Excavation=							1.411			
	Deduction										
	pipe area	1		0.785	2.400	0.250	0.250	0.118			
	soling							0.000			
	PCC							0.180			
	Murram bedding							0.298			
								1.113		13.813	14.926
	Net Qty = A - B										
	MH 8.16.4 to MH 8.16.5										
	CH31.30	578.995	578.015	577.915			1.080	1.055			
	CH36.80	578.975	578.045	577.945			1.030				
	Item No. 1 :- Excavation for foundation/pipe trenches in earth soils, Soft murram etc complete.										
	(a) For Lift 0 to 1.5m	1			3.500	0.750	1.055	2.769		18.114	20.883
	Item No. 7 :- Filling in plinth and floors/ trenches etc complete.(bedding)	1			4.100	0.750	0.100	0.308		1.928	2.235
	Item No. : 11 Transportation of earth Transportation charges including loading & unloading							0.509		3.188	3.697
	Item 13 (c) :-Lowering & Laying of Polyethylene DWC pipe of 250mm Dia	1			4.600			4.600		27.700	32.300
	Item No. 30 :- Refilling the excavated trenches ...										
	Total Excavation=							2.769			
	Deduction										
	pipe area	1		0.785	4.100	0.250	0.250	0.201			
	soling							0.000			
	PCC							0.000			
	Murram bedding							0.308			
								0.509			
								2.261		14.926	17.186
	Net Qty = A - B										
	DWC PIPE - 200 mm Dia										
	Width of Trench -										
	For Lift 0 to 1.50m- 0.200+0.5=0.70m										
	For Lift 1.5 to 3.00m- 0.200+0.5+0.4=1.10m										
	For Lift 3.0 to 4.5m- 0.200+0.5+0.4+0.4=1.50m										
	MH 8.16.2 to MH 8.16.2.1										
	CH0.00	578.660	577.800	577.700			0.960	0.835			
	CH7.25	578.945	578.335	578.235			0.710				



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