



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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12th RTO Office DWc connection

Date	Particulars of work	DETAILS					Content of area	Last measurement		TOTAL TO DATE	
		No			L	B		D	Page		Quantity
		GL	IL	EXL							
	Total Excavation=										
	Deduction of 200mm dia pipe										
	pipe area	1.000		0.785	2.000	0.200	0.200				
	soling									0.063	
	PCC									0.000	
	Murum bedding									0.000	
										0.140	
										0.203	
										Net Qty = A - B	
										1.337	
	DWC - 315 mm Dia (Property Connection)									812.967	
										814.300	
	Width of Trench - For										
	Lift 0 to 1.50m-0.315+0.5=0.815m										
	For Lift 1.5 to 3.00m-										
	0.315+0.5+0.4=1.215m										
	For Lift 3.0 to 4.5m-										
	0.315+0.5+0.4+0.4=1.615m										
	E 19.18.3 TO E 19.18.3.1										
	CH0.00	561.380	559.780	559.680			1.700	1.700			
	CH2.70	561.400	559.800	559.700			1.700	1.700			
	Item No. 1 :- Excavation for foundation/pipe trenches in earth soils, Soft murum etc complete.										
	(a) For Lift 0 to 1.5m	1			1.000	1.215	1.500	1.823		462.942	
	(b) For Lift 1.5m to 3.0m	1			1.000	0.815	0.200	0.163		0.231	
	Item No. 7 :- Filling in plinth and floors/ trenches etc complete.(bedding)	1			1.000	0.815	0.100	0.082		68.669	
										68.750	
	Item No. : 11 Transportation of earth Transportation charges including loading & unloading excavated							0.159		136.280	
										136.439	
	Item No. 13 :- (b)Lowering & Laying of Polyethylene DWc pipe of 315mm Dia	1			1.500			1.500		81.800	
										83.300	
	Item No. 30 :- Refilling the excavated trenches ...										
	Total Excavation=										
	Deduction of 315mm dia pipe									1.986	
	pipe area	1.000		0.785	1.000	0.315	0.315	0.078			
	soling									0.000	
	PCC									0.000	
	Murum bedding									0.082	
										0.159	
										Net Qty = A - B	
										1.826	
	E 19.18.4 TO E 19.18.4.1 (Property Connection)									814.304	
										816.130	
	CH0.00	561.530	559.940	559.840			1.690				
	CH2.20	561.530	559.990	559.890			1.640	1.665			
	Item No. 1 :- Excavation for foundation/pipe trenches in earth soils, Soft murum etc complete.										
	(a) For Lift 0 to 1.5m	1			0.500	1.215	1.500	0.911		464.765	
	(b) For Lift 1.5m to 3.0m	1			0.500	0.815	0.165	0.067		0.394	
	Item No. 7 :- Filling in plinth and floors/ trenches etc complete.(bedding)	1			0.500	0.815	0.100	0.041		68.750	
										68.791	
	Item No. : 11 Transportation of earth Transportation charges including loading & unloading excavated							0.080		136.439	
										136.519	
	Item No. 13 :- (b)Lowering & Laying of Polyethylene DWc pipe of 315mm Dia	1			1.000			1.000		83.300	
										84.300	
	Item No. 30 :- Refilling the excavated trenches ...										
	Total Excavation=									0.978	



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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 CIDCO (Airport) Office.

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11th RTO Office DWC connection

Date	Particulars of work	DETAILS						Content of area	Last measurement		TOTAL TO DATE
		No							Page	Quantity	
		GL	IL	EXL	L	B	D				
	Deduction of 315mm dia pipe										
	pipe area	1.000		0.785	0.500	0.315	0.315	0.039			
	soling							0.000			
	PCC							0.000			
	Murrum bedding							0.041			
								0.080			
	Net Qty = A - B							0.899	816.130	817.029	
	DWC - 200mm Dia (Property Connection)										
	Width of Trench - For										
	Lift 0 to 1.50m-0.200+0.5=0.700m										
	For Lift 1.5 to 3.00m- 0.200+0.5+0.4=1.11m										
	For Lift 3.0 to 4.5m- 0.200+0.5+0.4+0.4=1.50m										
	E 19.18.5 TO E 19.18.5.1										
	CH0.00	561.590	560.190	560.090			1.500	1.495			
	CH3.20	561.600	560.210	560.110			1.490				
	Item No. 1 :- Excavation for foundation/pipe trenches in earth soils, Soft murrum etc complete.										
	(a) For Lift 0 to 1.5m	1			1.500	0.700	1.495	1.570	465.676	467.246	
	Item No. 7 :- Filling in plinth and floors/ trenches etc complete.(bedding)	1			1.500	0.700	0.100	0.105	68.791	68.896	
	Item No. : 11 Transportation of earth Transportation charges including loading & unloading excavated							0.152	136.519	136.671	
	Item No. 13 :- (b)Lowering & Laying of Polyethylene DWC pipe of 200mm Dia	1			2.000			2.000	2.500	4.500	
	Item No. 30 :- Refilling the excavated trenches ...										
	Total Excavation=							1.570			
	Deduction of 200mm dia pipe										
	pipe area	1.000		0.785	1.500	0.200	0.200	0.047			
	soling							0.000			
	PCC							0.000			
	Murrum bedding							0.105			
								0.152			
	Net Qty = A - B							1.418	817.029	818.447	
	DWC - 315 mm Dia (Property Connection)										
	Width of Trench - For										
	Lift 0 to 1.50m-0.315+0.5=0.815m										
	For Lift 1.5 to 3.00m- 0.315+0.5+0.4=1.215m										
	For Lift 3.0 to 4.5m- 0.315+0.5+0.4+0.4=1.615m										
	E 19.18.5 TO E 19.18.5.1a										
	CH0.00	561.590	560.190	560.090			1.500	1.495			
	CH5.20	561.610	560.220	560.120			1.490				
	Item No. 1 :- Excavation for foundation/pipe trenches in earth soils, Soft murrum etc complete.										
	(a) For Lift 0 to 1.5m	1			3.500	0.815	1.495	4.264	467.246	471.510	
	Item No. 7 :- Filling in plinth and floors/ trenches etc complete.(bedding)	1			3.500	0.815	0.100	0.285	68.896	69.181	
	Item No. : 11 Transportation of earth Transportation charges including loading & unloading excavated							0.558	136.671	137.229	



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AURANGABAD MUNICIPAL CORPORATION.

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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), Deduction of 315mm dia pipe
 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
 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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13th RTO Office DWC connection

Date	Particulars of work	DETAILS					Content of area	Last measurement		TOTAL TO DATE	
		No			L	B		D	Page		Quantity
		GL	IL	EXL							
	Item No. 13 :- (b) Lowering & Laying of Polyethylene DWC pipe of 315mm Dia	1			4.000		4.000	84.300	88.300		
	Item No. 30 :- Refilling the excavated trenches ...										
	Total Excavation=						4.264				
	Deduction of 315mm dia pipe										
	pipe area	1.000		0.785	3.500	0.315	0.315	0.273			
	soling							0.000			
	PCC							0.000			
	Murrum bedding							0.285			
							0.558				
	Net Qty = A - B						3.707	818.447	822.153		
	DWC - 250 mm Dia (Property Connection)										
	Width of Trench - For										
	Lift 0 to 1.50m-0.250+0.5=0.750m										
	For Lift 1.5 to 3.00m-0.250+0.5+0.4=1.150m										
	For Lift 3.0 to 4.5m-0.250+0.5+0.4+0.4=1.550m										
	E 19.18.6 TO E 19.18.6.1										
	CH0.00	561.590	560.190	560.090			1.500	1.495			
	CH3.20	561.610	560.220	560.120				1.490			
	Item No. 1 :- Excavation for foundation/pipe trenches in earth soils, Soft murrum etc complete.										
	(a) For Lift 0 to 1.5m	1			1.500	0.750	1.495	1.682	471.510	473.192	
	Item No. 7 :- Filling in plinth and floors/ trenches etc complete, (bedding)	1			1.500	0.750	0.100	0.113	69.181	69.294	
	Item No. : 11 Transportation of earth Transportation charges including loading & unloading excavated							0.186	137.229	137.415	
	Item No. 13 :- (b) Lowering & Laying of Polyethylene DWC pipe of 250mm Dia	1			2.000		2.000	0.000	2.000		
	Item No. 30 :- Refilling the excavated trenches ...										
	Total Excavation=							1.682			
	Deduction of 250mm dia pipe										
	pipe area	1.000		0.785	1.500	0.250	0.250	0.074			
	soling							0.000			
	PCC							0.000			
	Murrum bedding							0.113			
								0.186			
	Net Qty = A - B						1.496	822.153	823.649		
	DWC - 315 mm Dia (Property Connection)										
	Width of Trench - For										
	Lift 0 to 1.50m-0.315+0.5=0.815m										
	For Lift 1.5 to 3.00m-0.315+0.5+0.4=1.215m										
	For Lift 3.0 to 4.5m-0.315+0.5+0.4+0.4=1.615m										
	E-19.26 TO E-19.26.1										
	CH0.00	564.610	562.800	562.700			1.910	1.915			
	CH4.00	564.640	562.820	562.720				1.920			
	Item No. 1 :- Excavation for foundation/pipe trenches in earth soils, Soft murrum etc complete.										
	(a) For Lift 0 to 1.5m	1			2.300	1.215	1.500	4.192	473.192	477.384	
	(b) For Lift 1.5m to 3.0m	1			2.300	0.815	0.415	0.778	0.461	1.239	



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Measurement Book

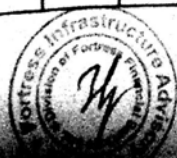
Name of work:- Development of Underground Sewerage Collection system for Zone I to VI and Zone Salim Ali. Constructing, Erecting, Testing and Commissioning of Sewage Treatment Plant based on modern technology at Nakshtrawadi (Kanchanwadi), Banewadi, Siddharth Garden, Zalta, Padegaon, CIDCO (Airport), 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

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12th RTO Office DWC connection

Date	Particulars of work	DETAILS						Content of area	Last measurement		TOTAL TO DATE
		No			L	B	D		Page	Quantity	
		GL	IL	EX.L							
	Item No. 7 :- Filling in plinth and floors/trenches etc complete.(bedding)	1			2.300	0.815	0.100	0.187		69.294	69.481
	Item No. : 11 Transportation of earth Transportation charges including loading & unloading excavated							0.367		137.415	137.782
	Item No. 13 :- (b)Lowering & Laying of Polyethylene DWC pipe of 315mm Dia	1			2.800			2.800		88.300	91.100
	Item No. 30 :- Refilling the excavated trenches ...							4.970			
	Total Excavation=										
	Deduction of 0.315mm dia pipe										
	pipe area	1.000		0.785	2.300	0.315	0.315	0.179			
	soling							0.000			
	PCC							0.187			
	Murram bedding.							0.367			
	Net Qty = A - B							4.603		823.649	828.252
	DWC - 250 mm Dia (Property Connection)										
	Width of Trench - For Lift 0 to 1.50m-0.250+0.5=0.750m										
	For Lift 1.5 to 3.00m-0.250+0.5+0.4=1.150m										
	For Lift 3.0 to 4.5m-0.250+0.5+0.4+0.4=1.550m										
	E-19.28 TO E-19.28.1							2.100	2.043		
	CH0.00	565.515	563.515	563.415				1.985			
	CH14.00	565.600	563.715	563.615							
	Item No. 1 :- Excavation for foundation/pipe trenches in earth soils, Soft murram etc complete.				12.300	1.150	1.500	21.218		477.384	498.601
	(a) For Lift 0 to 1.5m	1			12.300	0.750	0.543	5.009		1.239	6.248
	(b) For Lift 1.5m to 3.0m	1									
	Item No. 7 :- Filling in plinth and floors/trenches etc complete.(bedding)	1			12.300	0.750	0.100	0.923		69.481	70.404
	Item No. : 11 Transportation of earth Transportation charges including loading & unloading excavated							1.526		137.782	139.308
	Item No. 13 :- (b)Lowering & Laying of Polyethylene DWC pipe of 250mm Dia	1			12.800			12.800		2.000	14.800
	Item No. 30 :- Refilling the excavated trenches ...							26.227			
	Total Excavation=										
	Deduction of 250mm dia pipe										
	pipe area	1.000		0.785	12.300	0.250	0.250	0.603			
	soling							0.000			
	PCC							0.923			
	Murram bedding							1.526			
	Net Qty = A - B							24.701		828.252	852.953
	DWC - 315 mm Dia (Property Connection)										
	Width of Trench - For Lift 0 to 1.50m-0.315+0.5=0.815m										
	For Lift 1.5 to 3.00m-0.315+0.5+0.4=1.215m										
	For Lift 3.0 to 4.5m-0.315+0.5+0.4+0.4=1.615m										
	E-19.30 TO E-19.30.1										



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RTO Office DWC connection

Date	Particulars of work	DETAILS						Content of area	Last measurement Page	Quantity	TOTAL TO DATE
		No	GL	IL	EX.L	L	B				
	CH0.00		566.395	565.595	565.495			0.900	0.892		
	CH3.00		566.395	565.610	565.510			0.885			
	Item No. 1 :- Excavation for foundation/pipe trenches in earth soils, Soft murrum etc complete.										
	(a) For Lift 0 to 1.5m	1				1.300	0.815	0.892	0.945	498.601	499.547
	Item No. 7 :- Filling in plinth and floors/ trenches etc complete.(bedding)	1				1.300	0.815	0.100	0.106	70.404	70.510
	Item No. : 11 Transportation of earth Transportation charges including loading & unloading excavated							0.207		139.308	139.515
	Item No. 13 :- (b)Lowering & Laying of Polyethylene DWC pipe of 315mm Dia	1				1.800			1.800	91.100	92.900
	Item No. 30 :- Refilling the excavated trenches ...										
	Total Excavation=							0.945			
	Deduction of 315mm dia pipe										
	pipe area		1.000								
	soling				0.785	1.300	0.315	0.315	0.101		
	PCC								0.000		
	Murrum bedding								0.000		
									0.106		
									0.207		
	Net Qty = A - B								0.738	852.953	853.691
	DWC - 250 mm Dia (Property Connection)										
	Width of Trench - For										
	Lift 0 to 1.50m-0.250+0.5=0.750m										
	For Lift 1.5 to 3.00m-0.250+0.5+0.4=1.150m										
	For Lift 3.0 to 4.5m-0.250+0.5+0.4+0.4=1.550m										
	E-19.30 TO E-19.30.1										
	CH0.00		566.395	565.200	565.100			1.295	1.290		
	CH2.00		566.395	565.210	565.110			1.285			
	Item No. 1 :- Excavation for foundation/pipe trenches in earth soils, Soft murrum etc complete.										
	(a) For Lift 0 to 1.5m	1				0.300	0.750	1.290	0.290	499.547	499.837
	(b) For Lift 1.5m to 3.0m	1				0.300	0.750	0.000	0.000	6.248	6.248
	Item No. 2 :- Excavation for foundation/pipe trenches in Hard murrum etc complete.										
	(a) For Lift 0 to 1.5m	1				0.300	0.750	0.000	0.000	147.404	147.404
	(b) For Lift 1.5m to 3.0m	1				0.300	0.750	0.000	0.000	142.012	142.012
	Item No. 4 :- Excavation for foundation/pipe trenches in soft rock etc complete.										
	(a) For Lift 0 to 1.5m	1				0.300	0.750	0.000	0.000	62.810	62.810
	(b) For Lift 1.5m to 3.0m	1				0.300	0.750	0.000	0.000	125.936	125.936
	Item No. 7 :- Filling in plinth and floors/ trenches etc complete.(bedding)	1				0.300	0.750	0.100	0.023	70.510	70.532
	Item No. : 11 Transportation of earth Transportation charges including loading & unloading excavated								0.037	139.515	139.552
	Item No. 13 :- (b)Lowering & Laying of Polyethylene DWC pipe of 150mm Dia									1.500	
	Item No. 13 :- (b)Lowering & Laying of Polyethylene DWC pipe of 200mm Dia									4.500	



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

Authority No. AMC/Ward R&C/HDSSMT/2014/184 Date 01/07/2014

12th RTO Office DWC connection

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Date	Particulars of work	DETAILS						Content of area	Last measurement		TOTAL TO DATE
		No			L	B	D		Page	Quantity	
		GL	IL	EX.L							
	Item No. 13 :- (b)Lowering & Laying of Polyethylene DWC pipe of 250mm Dia	1			0.800			0.800		14.800	15.600
	Item No. 13 :- (b)Lowering & Laying of Polyethylene DWC pipe of 315mm Dia									92.900	108.500
	Item No. 30 :- Refilling the excavated trenches ...							0.290			
	Total Excavation=										
	Deduction of 250mm dia pipe			0.785	0.300	0.250	0.250	0.015			
	pipe area	1.000						0.000			
	soling							0.000			
	PCC							0.023			
	Murrum bedding							0.037			
	Net Qty = A - B							0.253		853.691	853.944



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11th
11th RTO Office 1.5m MH Excavation

12th RA BILL MEASUREMENTS

BRANCH SEWER "E" AT "RTO Office Back Side to Railway Station"

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 1.50m dia Manhole (upto a depth of 2.0m to 5.0m)- 1.50+0.35+0.35+0.5+0.5=3.20m										
	Breadth for Manhole=3.2*3.2=10.24m										
	E 19.18.1										
	CH19.00	561.130	558.330	558.080			3.050				
	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	10.240	1.350	10.852	0.000	10.852	
	Item No. 2 :- Excavation for foundation/pipe trenches in Hard murrum etc complete.										
	(a) For Lift 0 to 1.5m	1			0.785	10.240	0.300	2.412	0.000	2.412	
	Item No. 4 :- Excavation for foundation/pipe trenches in soft										
	(a) For Lift 0 to 1.5m	1			0.785	10.240	0.150	1.206	0.000	1.206	
	(b) For Lift 1.5m to 3.0m	1			0.785	10.240	1.250	10.048	0.000	10.048	
	Item No. : 11 Transportation of earth Transportation charges							8.294	0.000	8.294	
	Item No. 30 :- Refilling the excavated trenches ...										
	Total Excavation=							24.517			
	Deduction										
	Brick work	1		0.785	2.280	2.280	0.800	3.265			
		1		0.785	1.540	1.540	2.000	3.723			
	PCC	1		0.785	2.580	2.580	0.250	1.306			
	Soling	1		0.785	2.580	2.580	0.000	0.000			
								8.294			
	Net Qty = A - B							16.223	0.000	16.223	
	E 19.18.2										
	CH45.50	561.290	558.600	558.350			2.940				
	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	10.240	1.350	10.852	10.852	21.704	
	Item No. 2 :- Excavation for foundation/pipe trenches in Hard murrum etc complete.										
	(a) For Lift 0 to 1.5m	1			0.785	10.240	0.500	4.019	2.412	6.431	
	Item No. 4 :- Excavation for foundation/pipe trenches in soft										
	(a) For Lift 0 to 1.5m	1			0.785	10.240	0.150	1.206	1.206	2.412	
	(b) For Lift 1.5m to 3.0m	1			0.785	10.240	0.940	7.556	10.048	17.604	
	Item No. : 11 Transportation of earth Transportation charges							7.845	8.294	16.140	
	Item No. 30 :- Refilling the excavated trenches ...										
	Total Excavation=							23.633			
	Deduction										
	Brick work	1		0.785	2.280	2.280	0.690	2.816			
		1		0.785	1.540	1.540	2.000	3.723			
	PCC	1		0.785	2.580	2.580	0.250	1.306			



Handwritten signatures and initials.



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 C.T.D. for Aurangabad City

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11th RTO Office 1.5m MH Excavation

Date	Particulars of work	DETAILS						Content of arrears	Last measurement		Total Upto Date Quantity
		No			L	B	D		Page	Quantity	
		GL	IL	EX.L							
	Soling	1		0.785	2.580	2.580	0.000	0.000			
								7.845			
								15.787	16.223	32.010	
	E 19.18.3										
	CH84.50	561.380	558.950	558.700			2.680				
	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	10.240	1.350	10.852	21.704	32.556	
	Item No. 2 :- Excavation for foundation/pipe trenches in Hard murrum etc complete.										
	(b) For Lift 1.5m to 3.0m	1			0.785	10.240	0.600	4.823	0.000	4.823	
	Item No. 4 :- Excavation for foundation/pipe trenches in soft										
	(a) For Lift 0 to 1.5m	1			0.785	10.240	0.150	1.206	2.412	3.617	
	(b) For Lift 1.5m to 3.0m	1			0.785	10.240	0.580	4.662	17.604	22.266	
	Item No. : 11 Transportation of earth Transportation charges							6.784	16.140	22.924	
	Item No. 30 :- Refilling the excavated trenches ...										
	Total Excavation=							21.543			
	Deduction										
	Brick work	1		0.785	2.280	2.280	0.430	1.755			
		1		0.785	1.540	1.540	2.000	3.723			
	PCC	1		0.785	2.580	2.580	0.250	1.306			
	Soling	1		0.785	2.580	2.580	0.000	0.000			
								6.784			
								14.758	32.010	46.769	
	Excavation of Chamber - For 1.20m dia Manhole (upto a depth of 2.0m)- $1.20+0.23+0.23+0.5+0.5=2.66m$ Breadth for Manhole= $2.66*2.66=7.075m$										
	E 19.18.4						2.470				
	CH125.78	561.530	559.310	559.060							
	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	7.075	0.900	4.998	32.556	37.554	
	Item No. 2 :- Excavation for foundation/pipe trenches in Hard murrum etc complete.										
	(a) For Lift 0 to 1.5m	1			0.785	7.075	0.450	2.499	6.431	8.930	
	(b) For Lift 1.5m to 3.0m	1			0.785	7.075	0.400	2.222	4.823	7.045	
	Item No. 4 :- Excavation for foundation/pipe trenches in soft										
	(a) For Lift 0 to 1.5m	1			0.785	7.075	0.150	0.833	3.617	4.450	
	(b) For Lift 1.5m to 3.0m	1			0.785	7.075	0.570	3.166	22.266	25.432	
	Item No. : 11 Transportation of earth Transportation charges							3.745	22.924	26.669	
	Item No. 30 :- Refilling the excavated trenches ...										
	Total Excavation=							13.718			
	Deduction										
	Brick work	1		0.785	1.310	1.310	2.220	2.991			



Handwritten signatures and initials.



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 G.R.P DI pipe line from Golwadi SPS to Nakshtrawadi (Kanchanwadi) STP and Ward No.98 to

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11th RTO Office 1.5m MH Excavation

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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	EX.L							
		1									
	PCC	1		0.785	1.960	1.960	0.250	0.754			
	Soling	1		0.785	2.580	2.580	0.000	0.000			
								3.745			
								9.974	46.769	56.742	
	E 19.18.5						2.250				
	CH146.98	561.590	559.590	559.340							
	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	7.075	0.950	5.276		37.554	
	Item No. 2 :- Excavation for foundation/pipe trenches in Hard murrum etc complete.										
	(a) For Lift 0 to 1.5m	1			0.785	7.075	0.400	2.222		8.930	
	(b) For Lift 1.5m to 3.0m	1			0.785	7.075	0.200	1.111		7.045	
	Item No. 4 :- Excavation for foundation/pipe trenches in soft										
	(a) For Lift 0 to 1.5m	1			0.785	7.075	0.150	0.833		4.450	
	(b) For Lift 1.5m to 3.0m	1			0.785	7.075	0.550	3.055		25.432	
	Item No. : 11 Transportation of earth Transportation charges							3.448		26.669	
	Item No. 30 :- Refilling the excavated trenches ...							12.496		30.117	
	Total Excavation=										
	Deduction										
	Brick work	1		0.785	1.310	1.310	2.000	2.694			
		1						0.000			
	PCC	1		0.785	1.960	1.960	0.250	0.754			
	Soling	1		0.785	2.580	2.580	0.000	0.000			
								3.448			
								9.048	56.742	65.790	
	E 19.18.6						2.220				
	CH160.68	561.630	559.660	559.410							
	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	7.075	0.600	3.332		42.830	
	Item No. 2 :- Excavation for foundation/pipe trenches in Hard murrum etc complete.										
	(a) For Lift 0 to 1.5m	1			0.785	7.075	0.750	4.165		11.152	
	(b) For Lift 1.5m to 3.0m	1			0.785	7.075	0.720	3.999		8.155	
	Item No. 4 :- Excavation for foundation/pipe trenches in soft										
	(a) For Lift 0 to 1.5m	1			0.785	7.075	0.150	0.833		5.283	
	Item No. : 11 Transportation of earth Transportation charges							3.408		30.117	
	Item No. 30 :- Refilling the excavated trenches ...							12.330		6.117	
	Total Excavation=										
	Deduction										
	Brick work	1		0.785	1.310	1.310	1.970	2.654			
		1						0.000			
	PCC	1		0.785	1.960	1.960	0.250	0.754			
	Soling	1		0.785	2.580	2.580	0.000	0.000			
								3.408			
								8.922	65.790	74.712	



MPC
JW



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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11th RTO Office 1.5m MH Excavation

Date	Particulars of work	DETAILS						Content of arrears	Last measurement Page	Last measurement Quantity	Total Upto Date Quantity
		No			L	B	D				
		GL	IL	EX.L							
E 19.18.7											
CH201.88		561.750	559.840	559.590			2.160				
	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	7.075	0.500	2.777	46.163	48.939	
	Item No. 2 :- Excavation for foundation/pipe trenches in Hard murrum etc complete.										
	(a) For Lift 0 to 1.5m	1			0.785	7.075	0.850	4.721	15.317	20.038	
	(b) For Lift 1.5m to 3.0m	1			0.785	7.075	0.660	3.666	12.154	15.820	
	Item No. 4 :- Excavation for foundation/pipe trenches in soft										
	(a) For Lift 0 to 1.5m	1			0.785	7.075	0.150	0.833	6.117	6.950	
	Item No. : 11 Transportation of earth Transportation charges							3.327	33.525	36.852	
	Item No. 30 :- Refilling the excavated trenches ...										
	Total Excavation=							11.996			
	Deduction										
	Brick work	1		0.785	1.310	1.310	1.910	2.573			
		1						0.000			
	PCC	1		0.785	1.960	1.960	0.250	0.754			
	Soling	1		0.785	2.580	2.580	0.000	0.000			
								3.327			
	Net Qty = A - B							8.669	74.712	83.381	
E 19.18.8											
CH243.08		562.090	560.010	559.760			2.330				
	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	7.075	0.650	3.610	48.939	52.549	
	Item No. 2 :- Excavation for foundation/pipe trenches in Hard murrum etc complete.										
	(a) For Lift 0 to 1.5m	1			0.785	7.075	0.700	3.888	20.038	23.925	
	(b) For Lift 1.5m to 3.0m	1			0.785	7.075	0.400	2.222	15.820	18.041	
	Item No. 4 :- Excavation for foundation/pipe trenches in soft										
	(a) For Lift 0 to 1.5m	1			0.785	7.075	0.150	0.833	6.950	7.783	
	(b) For Lift 1.5m to 3.0m	1			0.785	7.075	0.430	2.388	28.487	30.875	
	Item No. : 11 Transportation of earth Transportation charges							3.556	36.852	40.408	
	Item No. 30 :- Refilling the excavated trenches ...										
	Total Excavation=							12.941			
	Deduction										
	Brick work	1		0.785	1.310	1.310	2.080	2.802			
		1						0.000			
	PCC	1		0.785	1.960	1.960	0.250	0.754			
	Soling	1		0.785	2.580	2.580	0.000	0.000			
								3.556			
	Net Qty = A - B							9.385	83.381	92.766	
E 19.18.9											
CH259.28		562.320	560.080	559.830			2.490				



MM JW



AURANGABAD MUNICIPAL CORPORATION.

(From No. 52)

Measurement Book

Name of work: Development of underground Sewerage Collection system for Zone V and Zone Sahar. Also, Construction, Erecting, Testing and Commissioning of Sewage Treatment Plant based on modern technology at Saharwadi (Kancharwadi), Ramewadi, Saharwadi Garden, Zilla, Peddapur, 30th St., Kambet, Construction, Erecting, Testing and Commissioning of sewage pumping station at Ramewadi, Saharwadi Garden, Phalgawan, Godwadi, Zilla, Ward No. 10 and 11. Also, Erecting, Provisioning, Erecting, Testing and Commissioning main supply lines for water supply to 40th St., Saharwadi (Kancharwadi) STP and Ward No. 10 and 11. Also, Erecting, Provisioning, Erecting, Testing and Commissioning main supply lines for water supply to 40th St., Saharwadi (Kancharwadi) STP and Ward No. 10 and 11.

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13th BTD Office 1, 6th MH Distribution

Date	Particulars of work	DETAILS						Cubres of masonry	Last measurement Page	Total Quantity	Total Up-to Date Quantity
		No			L	B	D				
		GL	IL	EXL							
	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	7.075	0.700	3.888	52.140	56.437	
	Item No. 2 - Excavation for foundation/pipe trenches in Hard murrum etc complete.										
	(a) For Lift 0 to 1.5m	1			0.785	7.075	0.650	3.610	23.923	27.333	
	(b) For Lift 1.5m to 3.0m	1			0.785	7.075	0.500	2.777	18.041	20.810	
	Item No. 4 - Excavation for foundation/pipe trenches in soft										
	(a) For Lift 0 to 1.5m	1			0.785	7.075	0.150	0.833	7.783	8.616	
	(b) For Lift 1.5m to 3.0m	1			0.785	7.075	0.490	2.721	20.875	23.596	
	Item No. 11 Transportation of earth Transportation charges							3.772	40.408	44.179	
	Item No. 30 - Refilling the excavated trenches ...										
	Total Excavation=							13.029			
	Deduction										
	Brick work	1			0.785	1.310	1.310	2.240	3.018		
		1							0.000		
	PCC	1			0.785	1.960	1.960	0.250	0.754		
	Soling	1			0.785	2.580	2.580	0.000	0.000		
								3.772			
	Net Qty = A - B							10.058	92.766	102.824	
	E 19.18.10										
	CH275.48	562.360	560.540	560.290			2.070				
	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	7.075	1.350	7.498	56.437	63.935	
	Item No. 2 - Excavation for foundation/pipe trenches in Hard murrum etc complete.										
	(b) For Lift 1.5m to 3.0m	1			0.785	7.075	0.570	3.166	20.818	23.984	
	Item No. 4 - Excavation for foundation/pipe trenches in soft										
	(a) For Lift 0 to 1.5m	1			0.785	7.075	0.150	0.833	8.616	9.449	
	Item No. 11 Transportation of earth Transportation charges							3.206	44.179	47.385	
	Item No. 30 - Refilling the excavated trenches ...										
	Total Excavation=							11.497			
	Deduction										
	Brick work	1			0.785	1.310	1.310	1.820	2.452		
		1							0.000		
	PCC	1			0.785	1.960	1.960	0.250	0.754		
	Soling	1			0.785	2.580	2.580	0.000	0.000		
								3.206			
	Net Qty = A - B							8.291	102.824	111.115	
	E 19.18.11										
	CH289.08	562.450	561.090	560.840			1.610				
	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	7.075	0.900	4.998	63.935	68.933	



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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 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 Nakshrawadi (Kanchanwadi) STP and Ward No.98 to

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12th RTO Office 0.9m MH Excavation

12th RA BILL MEASUREMENTS (Excavation of Manhole)

BRANCH SEWER "E" AT "RTO Office Back Side to Railway Station"

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 0.9 mt.dia chamber up to Depth of 1.5 mt.-0.9+0.5+0.3+0.3=2.0m Bredth for chamber up to Depth of 1.5m= 2 * 2=4m E 19.18.12										
	CH301.58	562.250	561.100	560.850			1.400				
	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	4.000	1.100	3.454	68.933	72.387	
	Item No. 2 :- Excavation for foundation/pipe trenches in Hard murrum etc complete.										
	(a) For Lift 0 to 1.5m	1			0.785	4.000	0.300	0.942	29.479	30.421	
	Item No. : 11 Transportation of earth Transportation charges including loading & unloading							1.692	49.971	51.663	
	Item No. 30 :- Refilling the excavated trenches ...										
	Total Excavation(A)=							4.396			
	Deduction										
	Brick work	1.00		0.785	1.16	1.16	1.150	1.21			
	PCC	1.00		0.785	1.56	1.56	0.25	0.48			
	Soling							0.00			
								1.69			
								Net Qty = A - B	2.704	117.470	
	E 19.18.13										
	CH312.38	562.280	561.140	560.890			1.390				
	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	4.000	1.000	3.140	72.387	75.527	
	Item No. 2 :- Excavation for foundation/pipe trenches in Hard murrum etc complete.										
	(a) For Lift 0 to 1.5m	1			0.785	4.000	0.390	1.225	30.421	31.646	
	Item No. : 11 Transportation of earth Transportation charges including loading & unloading							1.682	51.663	53.345	
	Item No. 30 :- Refilling the excavated trenches ...										
	Total Excavation(A)=							4.365			
	Deduction										
	Brick work	1.00		0.785	1.16	1.16	1.140	1.20			
	PCC	1.00		0.785	1.56	1.56	0.25	0.48			
	Soling							0.00			
								1.68			
								Net Qty = A - B	2.683	120.174	
	E 19.18.14										
	CH325.78	562.310	561.200	560.950			1.360				
	Item No. 1 :- Excavation for foundation/pipe trenches in earth soils, Soft murrum etc complete.										



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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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12th RTO Office 0.9m MH Excavation

Date	Particulars of work	DETAILS						Content of arrears	Last measurement		Total Upto Date Quantity
		GL	No IL	EX.L	L	B	D		Page	Quantity	
	(a) For Lift 0 to 1.5m	1			0.785	4.000	1.100	3.454		75.527	78.981
	Item No. 2 :- Excavation for foundation/pipe trenches in Hard murrum etc complete.										
	(a) For Lift 0 to 1.5m	1			0.785	4.000	0.260	0.816		31.646	32.462
	Item No. : 11 Transportation of earth Transportation charges including loading & unloading							1.650		53.345	54.995
	Item No. 30 :- Refilling the excavated trenches ...										
	Total Excavation(A)=							4.270			
	Deduction										
	Brick work	1.00		0.785	1.16	1.16	1.110	1.17			
	PCC	1.00		0.785	1.56	1.56	0.25	0.48			
	Soling							0.00			
								1.65			
	Net Qty = A - B							2.620		122.857	125.477
	E 19.18.15										
	CH333.78	562.350	561.250	561.000				1.350			
	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	4.000	1.000	3.140		78.981	82.121
	Item No. 2 :- Excavation for foundation/pipe trenches in Hard murrum etc complete.										
	(a) For Lift 0 to 1.5m	1			0.785	4.000	0.350	1.099		32.462	33.561
	Item No. : 11 Transportation of earth Transportation charges including loading & unloading							1.640		54.995	56.635
	Item No. 30 :- Refilling the excavated trenches ...										
	Total Excavation(A)=							4.239			
	Deduction										
	Brick work	1.00		0.785	1.16	1.16	1.100	1.16			
	PCC	1.00		0.785	1.56	1.56	0.25	0.48			
	Soling							0.00			
								1.64			
	Net Qty = A - B							2.599		125.477	128.077
	E 19.18.16										
	CH341.28	562.370	561.290	561.040				1.330			
	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	4.000	1.000	3.140		82.121	85.261
	Item No. 2 :- Excavation for foundation/pipe trenches in Hard murrum etc complete.										
	(a) For Lift 0 to 1.5m	1			0.785	4.000	0.330	1.036		33.561	34.598
	Item No. : 11 Transportation of earth Transportation charges including loading & unloading							1.618		56.635	58.253
	Item No. 30 :- Refilling the excavated trenches ...										
	Total Excavation(A)=							4.176			
	Deduction										
	Brick work	1.00		0.785	1.16	1.16	1.080	1.14			
	PCC	1.00		0.785	1.56	1.56	0.25	0.48			

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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

Book No. :- 087
Page No. :-

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12th RTO Office 0.9m MH Excavation

Date	Particulars of work	DETAILS						Content of arrears	Last measurement		Total Up to Date Quantity
		No			L	B	D		Page	Quantity	
		GL	IL	EX.L							
	Soling							0.00			
								1.62			
		Net Qty = A - B						2.558	128.077	130.634	
E 19.18.17	CH353.48	562.390	561.330	561.080			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	4.000	1.000	3.140	85.261	88.401	
	Item No. 2 :- Excavation for foundation/pipe trenches in Hard murrum etc complete.										
	(a) For Lift 0 to 1.5m	1			0.785	4.000	0.310	0.973	34.598	35.571	
	Item No. : 11 Transportation of earth Transportation charges including loading & unloading							1.597	58.253	59.850	
	Item No. 30 :- Refilling the excavated trenches ...										
	Total Excavation(A)=							4.113			
	Deduction										
	Brick work	1.00		0.785	1.16	1.16	1.060	1.12			
	PCC	1.00		0.785	1.56	1.56	0.25	0.48			
	Soling							0.00			
								1.60			
		Net Qty = A - B						2.516	130.634	133.150	
E 19.18.18	CH358.28	562.430	561.350	561.100			1.330				
	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	4.000	0.900	2.826	88.401	91.227	
	Item No. 2 :- Excavation for foundation/pipe trenches in Hard murrum etc complete.										
	(a) For Lift 0 to 1.5m	1			0.785	4.000	0.430	1.350	35.571	36.921	
	Item No. 30 :- Refilling the excavated trenches ...										
	Total Excavation(A)=							4.176			
	Deduction										
	Brick work	1.00		0.785	1.16	1.16	1.080	1.14			
	PCC	1.00		0.785	1.56	1.56	0.25	0.48			
	Soling							0.00			
								1.62			
		Net Qty = A - B						2.558	133.150	135.708	
E 19.18.12.1	CH2.70	562.260	561.110	560.860			1.400				
	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	4.000	1.000	3.140	91.227	94.367	
	Item No. 2 :- Excavation for foundation/pipe trenches in Hard murrum etc complete.										
	(a) For Lift 0 to 1.5m	1			0.785	4.000	0.400	1.256	36.921	38.177	
	Item No. : 11 Transportation of earth Transportation charges including loading & unloading							1.692	61.469	63.161	



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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

Book No. :- 081

Page No. :-

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18th RTO Office 0.9m MH Excavation

Date	Particulars of work	DETAILS						Content of arrears	Last measurement		Total Upto Date Quantity
		GL	No IL	EX.L	L	B	D		Page	Quantity	
	Item No. 30 :- Refilling the excavated trenches ...										
	Total Excavation(A)=						4.396				
	Deduction										
	Brick work	1.00		0.785	1.16	1.16	1.150	1.21			
	PCC	1.00		0.785	1.56	1.56	0.25	0.48			
	Soling							0.00			
							1.69				
	Net Qty = A - B						2.704	135.708	138.412		
	E 19.18.12.2										
	CH5.30	562.270	561.130	560.880			1.390				
	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	4.000	1.100	3.454	94.367	97.821	
	Item No. 2 :- Excavation for foundation/pipe trenches in Hard murrum etc complete.										
	(a) For Lift 0 to 1.5m	1			0.785	4.000	0.290	0.911	38.177	39.088	
	Item No. : 11 Transportation of earth Transportation charges including loading & unloading							1.682	63.161	64.843	
	Item No. 30 :- Refilling the excavated trenches ...							4.365			
	Total Excavation(A)=										
	Deduction										
	Brick work	1.00		0.785	1.16	1.16	1.140	1.20			
	PCC	1.00		0.785	1.56	1.56	0.25	0.48			
	Soling							0.00			
							1.68				
	Net Qty = A - B						2.683	138.412	141.095		
	E 19.18.12.3										
	CH13.70	562.280	561.190	560.940			1.340				
	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	4.000	1.000	3.140	97.821	100.961	
	Item No. 2 :- Excavation for foundation/pipe trenches in Hard murrum etc complete.										
	(a) For Lift 0 to 1.5m	1			0.785	4.000	0.340	1.068	39.088	40.159	
	(b) For Lift 1.5 to 3.0m	1			0.785	4.000	0.000	0.000	24.595	24.595	
	Item No. 4 :- Excavation for foundation/pipe trenches in soft rock etc complete.										
	(a) For Lift 0 to 1.5m	1			0.785	4.000	0.000	0.000	10.837	10.837	
	(b) For Lift 1.5 to 3.0m	1			0.785	4.000	0.000	0.000	33.596	33.596	
	Item No. : 11 Transportation of earth Transportation charges including loading & unloading							1.629	64.843	66.472	
	Item No. 30 :- Refilling the excavated trenches ...							4.208			
	Total Excavation(A)=										
	Deduction										
	Brick work	1.00		0.785	1.16	1.16	1.090	1.15			
	PCC	1.00		0.785	1.56	1.56	0.25	0.48			
	Soling							0.00			
							1.63				
	Net Qty = A - B						2.579	141.095	143.679		



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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

Book No. :- 082
Page No. :-

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

Authority No. AMC/Ward B&C/UDSSM1/2014/184 Date 01.07.2014

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11th RTO Office MANHOLE

11 th RA BILL MEASUREMENTS										
BRANCH SEWER "E" AT "RTO Office Back Side to Railway Station"										
Item No. : 23 Providing and constructing on sewer BBM manhole 1.5 m dia at bottom and 0.5 m dia at top and up to a depth of 2 to 5.0 M										
Sr.No.	MB/ Page No	Chainage	MH No	MTL	IL	Depth	Depth Difference than 5 m	Total Difference	Rebate/Add for Excess height (per 50 cm)	
1		19.00	E 19.18.1	561.130	558.330	2.80	-2.20	-7.08	-14.160	
2		45.50	E 19.18.2	561.290	558.600	2.69	-2.31			
3		84.50	E 19.18.3	561.380	558.950	2.43	-2.57			
Item No. : 21 Providing and constructing on sewer BBM manhole 1.2 m dia at bottom and 0.5 m dia at top and up to a depth of 2m										
Sr.No.	MB/ Page No	Chainage	MH No	MTL	IL	Depth	Depth Difference than 2 m	Total Difference	Rebate/Add for Excess height (per 50 cm)	
1		125.78	E 19.18.4	561.530	559.310	2.22	0.22	-0.40	-0.800	
2		146.98	E 19.18.5	561.590	559.590	2.00	0.00			
3		160.68	E 19.18.6	561.630	559.660	1.97	-0.03			
4		201.88	E 19.18.7	561.750	559.840	1.91	-0.09			
5		243.08	E 19.18.8	562.090	560.010	2.08	0.08			
6		259.28	E 19.18.9	562.320	560.080	2.24	0.24			
7		275.48	E 19.18.10	562.360	560.540	1.82	-0.18			
8		289.08	E 19.18.11	562.450	561.090	1.36	-0.64			
Extra Item. No.02: Providing and constructing on sewer.BBM manhole 0.9 m dia at bottom and 0.5 m dia at top and up to a depth of 1.5 M etc., complete										
Sr.No.	MB/ Page No	Chainage	MH No	MTL	IL	Depth	Depth Difference than 1.5 m	Total Difference	Rebate/Add for Excess height (per 30 cm)	
1		301.58	E 19.18.12	562.250	561.100	1.15	-0.35	-3.900	-13.000	
2		312.38	E 19.18.13	562.280	561.140	1.14	-0.36			
3		325.78	E 19.18.14	562.310	561.200	1.11	-0.39			
4		333.78	E 19.18.15	562.350	561.250	1.10	-0.40			
5		341.28	E 19.18.16	562.370	561.290	1.08	-0.42			
6		353.48	E 19.18.17	562.390	561.330	1.06	-0.44			
7		358.28	E 19.18.18	562.430	561.350	1.08	-0.42			
8		2.70	E 19.18.12.1	562.260	561.110	1.15	-0.35			
9		5.30	E 19.18.12.2	562.270	561.130	1.14	-0.36			
10		13.70	E 19.18.12.3	562.280	561.190	1.09	-0.41			



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