



# 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 (Kanehanwadi), Banewadi, Siddharth Garden, Zalta, Padegaon, CIDCO (Airport). Construction, Erection, Testing and Commission of Sewage pumping stations at Banewadi, Siddharth Garden, Padegaon, Gabwadi, Zalta, Ward

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Azad Chowk to Siddharth Chowk R 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							
	<b>Item No. 4 :- Excavation for foundation/pipe trenches in soft</b>										
	(a) For Lift 0 to 1.5m	1			0.785	10.240	0.100	0.804		18.854	19.658
	(b) For Lift 1.5m to 3.0m	1			0.785	10.240	0.000	0.000		62.328	62.328
	(c) For Lift 3.0m to 4.5m	1			0.785	10.240	0.000	0.000		2.492	2.492
	<b>ITEM No. 5 :- Excavation for foundation / pipe trenches in laterite rock masses etc complete</b>										
	(a) For Lift 0 to 1.5m	1			0.785	10.240	0.000	0.000		1.608	1.608
	(b) For Lift 1.5m to 3.0m	1			0.785	10.240	0.000	0.000		35.289	35.289
	(c) For Lift 3.0m to 4.5m	1			0.785	10.240	0.000	0.000		4.019	4.019
	<b>Item No. : 11 Transportation of earth Transportation charges</b>							7.050		119.898	126.948
	<b>Item No. 30 :- Refilling the excavated trenches ...</b>										
	<b>Total Excavation=</b>							<b>22.065</b>			
	<b>Deduction</b>										
	Brick work	1		0.785	2.280	2.280	0.495	2.020			
		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			
								7.050			
	<b>Net Qty = A - B</b>							<b>15.016</b>		<b>255.619</b>	<b>270.634</b>



Sd/- Dyengg



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Azad Chowk to Siddharth Chowk R MANHOLE

### 11th R A BILL MEASUREMENTS

#### Sewer at Azad Chowk to Siddharth Chowk

**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 5 M

Sr.No.	Chainage	MH No	MTL	IL	Depth	Depth Difference than 5 m	Total Difference	Rebate/Add for Excess height (per 50 cm)
1	CH 854.70	AS 27	607.300	604.990	2.310	-2.690	-36.185	-72.370
2	CH 883.70	AS 28	607.800	605.290	2.510	-2.490		
3	CH 912.70	AS 29	608.450	606.070	2.380	-2.620		
4	CH 33.70	AS 29.2	609.790	607.190	2.600	-2.400		
5	CH 67.40	AS 29.3	610.200	607.300	2.900	-2.100		
6	CH 105.00	AS 29.4	610.300	607.750	2.550	-2.450		
7	CH 116.90	AS 29.5	610.250	607.860	2.390	-2.610		
8	CH 141.70	AS 29.6	610.330	608.030	2.300	-2.700		
9	CH 174.90	AS 29.7	611.610	608.700	2.910	-2.090		
10	CH 23.80	AS 19.1	605.420	602.950	2.470	-2.530		
11	CH 45.25	AS 19.2	606.850	603.620	3.230	-1.770		
12	CH 59.25	AS 19.3	607.200	604.430	2.770	-2.230		
13	CH 80.75	AS 19.4	607.850	605.220	2.630	-2.370		
14	CH 102.25	AS 19.5	608.350	605.980	2.370	-2.630		
15	CH 138.75	AS 19.6	609.470	606.975	2.495	-2.505		
<b>Total</b>								<b>-72.370</b>

**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 2 M

Sr.No.	Chainage	MH No	MTL	IL	Depth	Depth Difference than 2 m	Total Difference	Rebate/Add for Excess height (per 50 cm)
1	CH 9.70	AS 29.1	608.580	606.760	1.820	-0.180	-1.270	-2.540
2	CH 202.10	AS 29.8	611.000	609.100	1.900	-0.100		
3	CH 236.20	AS 29.9	611.350	609.600	1.750	-0.250		
4	CH 266.50	AS 29.10	611.650	609.880	1.770	-0.230		
5	CH 304.30	AS 29.11	611.790	610.300	1.490	-0.510		
<b>Total</b>								<b>-2.540</b>



*J. J. Sayenyy*



# AURANGABAD MUNICIPAL CORPORATION.

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## Measurement Book

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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 STP for Aurangabad City.

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Azad Chowk to Siddharth Chowk RBBM Work

### 17th R A BILL MEASUREMENTS OF BBM TRENCH FOR MATA TEMPLE CHOWK

Date	Particulars of work	DETAILS				Content of arrears	Last measurement		Total Upto Date Quantity
		No	L	B	D		Page	Quantity	
1	1.8m x 1.6m x 0.35m thickness RECT MH-01								
	Extra Item :4(a) - Construction of Brick work of 230mm thk. for manhole etc complete.								
	(a) Long Wall	2	1.800	0.350	1.510	1.903	0.000	1.903	
	(b) Short Wall	2	0.900	0.350	1.510	0.951	0.000	0.951	
						2.854	0.000	2.854	
	Extra Item :4(b) - 12mm thk. Internal Plaster for manhole etc complete.								
	(a) Long Wall	2	1.100		1.510	3.322	0.000	3.322	
	(b) Short Wall	2	0.900		1.510	2.718	0.000	2.718	
						6.040	0.000	6.040	
	Extra Item :4(c) - 20mm thk. External Plaster for manhole etc complete.								
	(a) Long Wall	2	1.800		1.510	5.436	0.000	5.436	
	(b) Short Wall	2	1.600		1.510	4.832	0.000	4.832	
						10.268	0.000	10.268	
	Extra Item :4(d) - Providing fine Cement finish 1.5mm thk. for manhole etc complete.								
	(a) Long Wall Internal	2	1.100	0.000	1.510	3.322	0.000	3.322	
	(b) Short Wall Internal	2	0.900	0.000	1.510	2.718	0.000	2.718	
	(c) Long Wall External	2	1.800	0.000	1.510	5.436	0.000	5.436	
	(d) Short Wall External	2	1.600	0.000	1.510	4.832	0.000	4.832	
						16.308	0.000	16.308	
	Extra Item :5(b) - Providing & Casting M15 Grade PCC for manhole etc complete.								
	PCC	1	2.000	1.800	0.150	0.540	0.000	0.540	
2	2m x 1.35m x 0.35m thickness RECT MH-01								
	Extra Item :4(a) - Construction of Brick work of 230mm thk. for manhole etc complete.								
	(a) Long Wall	2	2.000	0.350	1.300	1.820	1.903	3.723	
	(b) Short Wall	2	0.650	0.350	1.300	0.592	0.951	1.543	
						2.412	2.854	5.265	
	Extra Item :4(b) - 12mm thk. Internal Plaster for manhole etc complete.								
	(a) Long Wall	2	1.300		1.300	3.380	3.322	6.702	
	(b) Short Wall	2	0.650		1.300	1.690	2.718	4.408	
						5.070	6.040	11.110	
	Extra Item :4(c) - 20mm thk. External Plaster for manhole etc complete.								
	(a) Long Wall	2	2.000		1.300	5.200	5.436	10.636	
	(b) Short Wall	2	1.350		1.300	3.510	4.832	8.342	
						8.710	10.268	18.978	



*SE & M Engr*



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Azad Chowk to Siddharth Chowk RBBM Work

<b>Extra Item :4(d) - Providing fine Cement finish 1.5mm thk. for manhole etc complete.</b>								
(a) Long Wall Internal	2	1.300	0.000	1.300	3.380		3.322	6.702
(b) Short Wall Internal	2	0.650	0.000	1.300	1.690		2.718	4.408
(c) Long Wall External	2	2.000	0.000	1.300	5.200		5.436	10.636
(d) Short Wall External	2	1.350	0.000	1.300	3.510		4.832	8.342
					13.780		16.308	30.088
<b>Extra Item :5(b) - Providing &amp; Casting M15 Grade PCC for manhole etc complete.</b>								
PCC	1	2.200	1.550	0.150	0.512		0.540	1.052



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Azad Chowk to Siddharth Chowk R UCR Work

### 11th R A BILL MEASUREMENTS

#### Mata Temple Chowk

Sr. No.	Descriptions of Items	Nos	L	B	D	Unit	Qty	Total Qty.
<b>900mm Mata Temple Chowk</b>								
1	Item No.: 6 Providing and laying in situ Cement Concrete of trap/ granite / quartzite / gneiss metal for RCC work in foundation like raft, grillage, strip foundation and footing of RCC columns and steel stanchions including normal	1	1.600	1.800	0.150	Cum	0.432	
	"	1	1.350	2.000	0.150		0.405	0.837
<b>Item No. : 28 STEEL REINFORCEMENT</b>								
2	Providing and fixing in position steel bar reinforcement of various diameters for RCC piles caps ,footing foundations, slabs, beams, columns ,canopies, staircases, newels ,chajjas lintels, pardies, copings ,fins arches ,etc. as per detailed designs, drawings and schedules including cutting bending	1				MT	0.112	0.112
3	Extra Item No. 5 b) :- Providing and casting M15 Grade concrete							
	PCC For Wall	1	4.600	0.600	0.150	Cum	0.414	
	"	1	1.500	0.600	0.150	Cum	0.135	
	"	1	1.000	0.600	0.150	Cum	0.090	
	Coping for Wall							
		1	4.600	0.500	0.150	Cum	0.345	
		1	1.500	0.500	0.150	Cum	0.113	
		1	1.000	0.500	0.150	Cum	0.075	1.172
4	Extra Item No. 5 c) :- Construction of UCR Masonry work in 1:6 CM							
		1	4.600	0.500	1.300	Cum	2.990	
		1	1.500	0.500	1.300	Cum	0.975	
	"	1	1.000	0.500	1.300	Cum	0.650	4.615



*See & Verify*

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## Measurement Book

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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

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Azad Chowk to Siddharth Chowk R, BBS For Concrete work

### 11th RA BILL MEASUREMENTS

#### CONCRETE WORK At MATA TEMPLE CHOWK

Sr. No.	Description	Dia of Bar	Spacing	Nos	No of members	Total Nos	cut length	Lap length	overall cutting length	8mm (MT)	10mm (MT)
<b>At MATA TEMPLE CHOWK ( 900mm Dia)</b>											
<b>A</b>	<b>For Manhole 1 (1.8m X 1.6m)</b>										
1	Longitudinal Bars # 10@150mm c/c at T/B	10.00	0.15	12.00	2.00	24.00	1.95	0.00	46.80	0.000	0.029
2	Distribution Bars # 10@150mm c/c at T/B	10.00	0.15	13.00	2.00	26.00	1.75	0.00	45.50	0.000	0.028
<b>B</b>	<b>For Manhole 2 (2m X 1.35m)</b>										
1	Longitudinal Bars # 10@150mm c/c at T/B	10.00	0.15	10.00	2.00	20.00	2.15	0.00	43.00	0.000	0.027
2	Distribution Bars # 10@150mm c/c at T/B	10.00	0.15	15.00	2.00	30.00	1.50	0.00	45.00	0.000	0.028
<b>Sub Total</b>										<b>0.000</b>	<b>0.112</b>
<b>Total</b>										<b>0.000</b>	<b>0.112</b>



S. S. Deshpande



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Azad Chowk to Siddharth Chowk R Quantity Note Abstract

### 12th R A BILL MEASUREMENTS

Branch Sewer - Azad Chowk to Siddharth Chowk

SR NO	Description	ITEM 1		ITEM 2		ITEM 3		ITEM 4			ITEM 5			ITEM 6	ITEM 7	ITEM 11	ITEM 12	ITEM 13	ITEM 17	
		0-1.5	1.5-3.0	0-1.5	1.5-3.0	0-1.5	1.5-3.0	0-1.5	1.5-3.0	3-4.5	0-1.5	1.5-3.0	3-4.5							
1	For Pipe	440.187	32.220	545.836	198.465	198.465	59.400	92.745	102.553		5.328	41.945		79.672	193.841	299.860	299.860	299.860	95.000	62.000
2	For Manhole	65.243	9.013	136.010	61.923			19.658	62.328	2.492	1.608	35.289	4.019	0.837	126.948					
<b>Total</b>		<b>505.430</b>	<b>41.233</b>	<b>681.846</b>	<b>260.388</b>	<b>59.400</b>	<b>112.403</b>	<b>154.891</b>	<b>2.492</b>	<b>6.936</b>	<b>77.233</b>	<b>4.019</b>	<b>0.837</b>	<b>79.672</b>	<b>320.789</b>	<b>299.860</b>	<b>299.860</b>	<b>95.000</b>	<b>62.000</b>	

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**Measurement Book**

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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

Azad Chowk to Siddharth Chowk R Quantity Node Abstract

**12th R A BILL MEASUREMENTS**

Branch Sewer - Azad Chowk to Siddharth Chowk

SR NO	Description	MIS/PC	ITEM 21 upto 2 m Full Rate	ITEM 21.1 Rebate	ITEM 23 2-6 m	ITEM 23.1 Rebate	ITEM 28	ITEM 30	EIRL 4				EIRL 5		EIRL 9.1		EIRL 9.2		EIRL 9.3		EIRL 9.4		
									a	b	c	d	b	c	150mm	150mm	150mm	300mm	150mm	300mm	150mm	300mm	150mm
1	For Pipe		5,000	(2,540)	15.00	(72.370)	0.112	1,352.01								23.200	23.200	23.200	23.200	130.000	130.000	130.000	130.000
2	For Manhole		5,000	(2,540)	15.00	(72.370)	0.112	270.634	5.265	11.110	18.978	30.088	2.223	4.615		23.200	23.200	23.200	23.200	130.000	130.000	130.000	130.000
	<b>Total</b>							1,622.65	5,265	11,110	18,978	30,088	2,223	4,615	23,200	23,200	23,200	23,200	130,000	130,000	130,000	130,000	

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Total up to Date

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Botanical Garden (Azad Chowk) - Pipe Measurement

### 14th RA BILL MEASUREMENTS SW PIPE BOTNICAL GARDEN (AZAD CHOWK)

Date	Particulars of work	DETAILS						Content of arrears	Last measurement		Total Upto Date Quantity
		No			L	B	D		Page	Quantity	
		GL	IL	EX.L							
	<b>SW PIPE - 250 mm Dia</b>										
	Width of Trench - For Lift 0 to 1.50m- 0.250+0.02+0.02+0.5=0.79m										
	For Lift 1.5 to 3.00m- 0.250+0.02+0.02+0.5+0.4=1.19 m										
	For Lift 3.0 to 4.5m- 0.250+0.5+0.02+0.02+0.4+0.4=1.59m										
	<b>BG 1 to BG 2</b>										
	<b>CH0.00</b>	592.230	591.150	591.050			1.180	1.105			
	<b>CH15.50</b>	592.180	591.250	591.150			1.030				
	<b>Item No. 1 :-</b> Excavation for foundation/pipe trenches in earth soils, Soft murrum etc complete.										
	(a) For Lift 0 to 1.5m	1			13.500	0.790	1.105	11.785	0.000	11.785	
	<b>Item No. 7 :-</b> Filling in plinth and floors/ trenches etc complete.(bedding)	1			14.100	0.790	0.100	1.114	0.000	1.114	
	<b>Item No. : 11</b> Transportation of earth Transportation charges including loading & unloading							1.921	0.000	1.921	
	<b>Extra Item 9.2 (d) :-</b> Lowering & Laying of Polyethylene SW pipe of 250mm Dia	1			14.600			14.600	0.000	14.600	
	<b>Item No. 30 :-</b> Refilling the excavated trenches ...										
	<b>Total Excavation=</b>							11.785			
	<b>Deduction</b>										
	pipe area	1		0.785	14.100	0.270	0.270	0.807			
	soling							0.000			
	PCC							0.000			
	Murrum bedding							1.114			
								1.921			
								9.864	0.000	9.864	
	<b>Net Qty = A - B</b>										
	<b>BG 2 to BG 3</b>										
	<b>CH15.50</b>	592.180	591.250	591.150			1.030	1.025			
	<b>CH24.20</b>	592.220	591.300	591.200			1.020				
	<b>Item No. 1 :-</b> Excavation for foundation/pipe trenches in earth soils, Soft murrum etc complete.										
	(a) For Lift 0 to 1.5m	1			6.700	0.790	1.025	5.425	11.785	17.210	
	<b>Item No. 7 :-</b> Filling in plinth and floors/ trenches etc complete.(bedding)	1			7.300	0.790	0.100	0.577	1.114	1.691	
	<b>Item No. : 11</b> Transportation of earth Transportation charges including loading & unloading							0.994	1.921	2.915	



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

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Botnical Garden (Azad Chowk) - Pipe Measurement

Date	Particulars of work	DETAILS					Content of arrears	Last measurement		Total Upto Date Quantity	
		No			L	B		D	Page		Quantity
		GL	IL	EX.L							
	<b>Extra Item 9.2 (d) :-</b> Lowering & Laying of Polyethylene.SW pipe of 250mm Dia	1			7.800			7.800		14.600	22.400
	<b>Item No. 30 :-</b> Refilling the excavated trenches ...										
	<b>Total Excavation=</b>							5.425			
	<b>Deduction</b>										
	pipe area	1		0.785	7.300	0.270	0.270	0.418			
	soling							0.000			
	PCC							0.000			
	Murrum bedding							0.577			
								0.994			
								<b>Net Qty = A - B</b>		9.864	14.295
	<b>BG 3 to BG 4</b>										
	<b>CH24.20</b>	592.220	591.300	591.200			1.020	1.073			
	<b>CH33.60</b>	592.415	591.390	591.290			1.125				
	<b>Item No. 1 :-</b> Excavation for foundation/pipe trenches in earth soils, Soft murrum etc complete.										
	(a) For Lift 0 to 1.5m	1			7.400	0.790	1.073	6.273		17.210	23.483
	<b>Item No. 7 :-</b> Filling in plinth and floors/ trenches etc complete.(bedding)	1			8.000	0.790	0.100	0.632		1.691	2.323
	<b>Item No. : 11</b> Transportation of earth Transportation charges including loading & unloading							1.090		2.915	4.005
	<b>Extra Item 9.2 (d) :-</b> Lowering & Laying of Polyethylene SW pipe of 250mm Dia	1			8.500			8.500		22.400	30.900
	<b>Item No. 30 :-</b> Refilling the excavated trenches ...										
	<b>Total Excavation=</b>							6.273			
	<b>Deduction</b>										
	pipe area	1		0.785	8.000	0.270	0.270	0.458			
	soling							0.000			
	PCC							0.000			
	Murrum bedding							0.632			
								1.090			
								<b>Net Qty = A - B</b>		14.295	19.478
	<b>BG 4 to BG 5</b>										
	<b>CH33.60</b>	592.415	591.390	591.290			1.125	1.038			
	<b>CH43.60</b>	592.400	591.550	591.450			0.950				
	<b>Item No. 1 :-</b> Excavation for foundation/pipe trenches in earth soils, Soft murrum etc complete.										
	(a) For Lift 0 to 1.5m	1			8.000	0.790	1.038	6.560		23.483	30.043
	<b>Item No. 7 :-</b> Filling in plinth and floors/ trenches etc complete.(bedding)	1			8.600	0.790	0.100	0.679		2.323	3.002



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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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067

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

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

Botnical Garden (Azad Chowk) - Pipe Measurement

3 of 3

Date	Particulars of work	DETAILS					Content of arrears	Last measurment		Total Upto Date Quantity	
		No			L	B		D	Page		Quantity
		GL	IL	EX.L							
	Item No. : 11 Transportation of earth Transportation charges including loading & unloading						1.172		4.005	5.177	
	Extra Item 9.2 (d) :-Lowering & Laying of Polyethylene SW pipe of 250mm Dia	1			9.100		9.100		30.900	40.000	
	Item No. 30 :- Refilling the excavated trenches ...						6.560				
	<b>Total Excavation=</b>										
	<b>Deduction</b>						0.492				
	pipe area	1		0.785	8.600	0.270	0.270				
	soling						0.000				
	PCC						0.679				
	Murrum bedding						1.172				
							5.389		19.478	24.866	
							Net Qty = A - B				



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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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Page No. :-

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

1 of 2

Botnical Garden (Azad Chowk) - Meas.Chember

### 19th RA BILL MEASUREMENTS OF CHEMBERS BOTNICAL GARDEN (AZAD CHOWK)

Date	Particulars of work	DETAILS					Content of arrears	Last measurment		Total Upto Date Quantity	
		No			L	B		D	Page		Quantity
		GL	IL	EX.L							
	Excavation of Chamber - For 0.9 dia chamber up to 1.5 mt depth - 0.9+0.5+0.3+0.3=2m										
	Bredth for chamber up to 1.5m=2 X 2=4m										
	<b>BG 1</b>										
	<b>CH0.00</b>	592.230	591.150	590.900			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	1.330	4.176	0.000	4.176	
	Item No. : 11 Transportation of earth Transportation charges							1.618	0.000	1.618	
	Item No. 30 :- Refilling the excavated trenches ...										
	<b>Total Excavation(A)=</b>							4.176			
	<b>Deduction</b>										
	Brick work	1		0.785	1.160	1.160	1.080	1.141			
	soling							0.000			
	PCC	1		0.785	1.560	1.560	0.250	0.478			
	Murrum bedding							0.000			
	<b>Total (B)</b>							1.618			
	<b>Net Qty = A - B</b>							2.558	0.000	2.558	
	<b>BG 2</b>										
	<b>CH15.50</b>	592.180	591.250	591.000			1.180				
	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	1.180	3.705	4.176	7.881	
	Item No. : 11 Transportation of earth Transportation charges							1.460	1.618	3.078	
	Item No. 30 :- Refilling the excavated trenches ...										
	<b>Total Excavation(A)=</b>							3.705			
	<b>Deduction</b>										
	Brick work	1		0.785	1.160	1.160	0.930	0.982			
	soling							0.000			
	PCC	1		0.785	1.560	1.560	0.250	0.478			
	Murrum bedding							0.000			
	<b>Total (B)</b>							1.460			
	<b>Net Qty = A - B</b>							2.245	2.558	4.803	
	<b>BG 3</b>										
	<b>CH24.20</b>	592.220	591.300	591.050			1.170				
	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	1.170	3.674	7.881	11.555	



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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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Page No. :-

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

Botnical Garden (Azad Chowk) - Meas.Chember

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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							
	Item No. : 11 Transportation of earth Transportation charges						1.449		3.078	4.528	
	Item No. 30 :- Refilling the excavated trenches ...						3.674				
	<b>Total Excavation(A)=</b>										
	<b>Deduction</b>						0.972				
	Brick work	1		0.785	1.160	1.160	0.920				
	soling						0.000				
	PCC	1		0.785	1.560	1.560	0.250				
	Murrum bedding						0.000				
	<b>Total (B)</b>						<b>1.449</b>				
							<b>2.224</b>		<b>4.803</b>	<b>7.027</b>	
	<b>Net Qty = A - B</b>										
	<b>BG 4</b>										
	CH33.60	592.415	591.390	591.140			1.275				
	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	1.275	4.004	11.555	15.559	
	Item No. : 11 Transportation of earth Transportation charges							1.560	4.528	6.088	
	Item No. 30 :- Refilling the excavated trenches ...							4.004			
	<b>Total Excavation(A)=</b>										
	<b>Deduction</b>						1.083				
	Brick work	1		0.785	1.160	1.160	1.025				
	soling						0.000				
	PCC	1		0.785	1.560	1.560	0.250				
	Murrum bedding						0.478				
	<b>Total (B)</b>						<b>1.560</b>				
							<b>2.443</b>		<b>7.027</b>	<b>9.471</b>	
	<b>Net Qty = A - B</b>										
	<b>BG 5</b>										
	CH43.60	592.400	591.550	591.300			1.100				
	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	15.559	19.013	
	Item No. : 11 Transportation of earth Transportation charges							1.375	6.088	7.463	
	Item No. 30 :- Refilling the excavated trenches ...							3.454			
	<b>Total Excavation(A)=</b>										
	<b>Deduction</b>						0.898				
	Brick work	1		0.785	1.160	1.160	0.850				
	soling						0.000				
	PCC	1		0.785	1.560	1.560	0.250				
	Murrum bedding						0.478				
	<b>Total (B)</b>						<b>1.375</b>				
							<b>2.079</b>		<b>9.471</b>	<b>11.549</b>	
	<b>Net Qty = A - B</b>										



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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)

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Botanical Garden (Azad Chowk) - Manhole Details

11th R A BILL MEASUREMENTS								
Branch Sewer at BOTNICAL GARDEN (AZAD CHOWK)								
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								
Sr.No.	Chainage	MH No	MTL	IL	Depth	Depth Difference than 1.5 m	Total Difference	Rebate/Add for Excess height (per 30 cm)
1	CH 0.00	BG 1	592.230	591.150	1.080	-0.420	-2.695	-8.983
2	CH 15.50	BG 2	592.180	591.250	0.930	-0.570		
3	CH 24.20	BG 3	592.220	591.300	0.920	-0.580		
4	CH 33.60	BG 4	592.415	591.390	1.025	-0.475		
5	CH 43.60	BG 5	592.400	591.550	0.850	-0.650		
Total								-8.983



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# AURANGABAD MUNICIPAL CORPORATION.

(From No.52)

## Measurement Book

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

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Shidharth nagar , Measurement MB

### 11th RA BILL MEASUREMENTS DWC PIPE SHIDHARTH NAGAR

Date	Particulars of work	DETAILS						Content of arrears	Last measurement		Total Upto Date Quantity
		No			L	B	D		Page	Qty.	
		GL	IL	EXL							
	RCC 300mm Dia										
	Width of Trench - For Bottom Lift 0.00-1.50m- 0.3+0.08+0.08+0.5=0.96m										
	From Bottom Lift 1.50m-3.00m- 0.3+0.08+0.08+0.5+0.4=1.36m										
	From Bottom Lift 3.00m-4.50m- 0.3+0.08+0.08+0.5+0.4+0.4 = 1.76m										
	SHN.1										
	CH0.00	565.554	564.254	564.054			1.500				
	CH13.70	565.804	564.304	564.104			1.700	1.600			
	Item No. 2 :- Excavation for foundation/pipe trenches in Hard murrum etc complete.										
	(a) For Lift 0 to 1.5m	1			11.7	1.360	1.050	16.708	0.000	16.708	
	Item No. 4 :- Excavation for foundation/pipe trenches in soft rock etc complete.										
	(a) For Lift 0 to 1.5m	1			11.7	1.360	0.450	7.160	0.000	7.160	
	(b) For Lift 1.5m to 3.0m	1			11.7	0.960	0.100	1.123	0.000	1.123	
	Item No. 7 :- Filling in plinth and floors/ trenches etc complete.(bedding)	1			12.0	0.960	0.200	2.304	0.000	2.304	
	Item No. : 11 Transportation of earth Transportation charges including loading & unloading excavated							3.664	0.000	3.664	
	Extra Item No. 9.4 :- Lowering & Laying RCC NP3 class pipe of 300mm Dia	1			12.50			12.500	0.000	12.500	
	Item No. 30 :- Refilling the excavated trenches ...										
	<b>Total Excavation=</b>							<b>23.868</b>			
	<b>Deduction of 300mm dia pipe</b>										
	pipe area	1.00		0.785	12.00	0.380	0.380	1.36			
	soling							0.00			
	PCC							0.00			
	Murrum bedding							2.30			
								3.66			
								<b>Net Qty = A - B</b>			
	SHN.2							20.20	0.00	20.20	
	CH13.70	565.804	564.304	564.104							
	CH37.40	566.694	564.394	564.194			1.700	2.100			
	Item No. 2 :- Excavation for foundation/pipe trenches in Hard murrum etc complete.										
	(a) For Lift 0 to 1.5m	1			21.4	1.360	1.250	36.380	16.708	53.088	
	(b) For Lift 1.5m to 3.0m	1			21.4	0.960	0.100	2.054	0.000	2.054	
	Item No. 4 :- Excavation for foundation/pipe trenches in soft rock etc complete.										
	(a) For Lift 0 to 1.5m	1			21.4	1.360	0.250	7.276	7.160	14.436	
	(b) For Lift 1.5m to 3.0m	1			21.4	0.960	0.500	10.272	1.123	11.395	



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# AURANGABAD MUNICIPAL CORPORATION.

(From No.52)

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

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Shidharth nagar , Measurement MB

Date	Particulars of work	DETAILS						Content of arrears	Last measurement		Total Upto Date Quantity
		No			L	B	D		Page	Qty.	
		GL	IL	EX.L							
	Item No. 7 :- Filling in plinth and floors/ trenches etc complete.(bedding)	1			22.0	0.960	0.200	4.224		2.304	6.528
	Item No. : 11 Transportation of earth Transportation charges including loading & unloading excavated							6.718		3.664	10.382
	Extra Item No. 9.4 :- Lowering & Laying RCC NP3 class pipe of 300mm Dia	1			22.50			22.500		12.500	35.000
	Item No. 30 :- Refilling the excavated trenches ...										
	<b>Total Excavation=</b>							<b>45.710</b>			
	<b>Deduction of 300mm dia pipe</b>										
	pipe area	1.00		0.785	22.00	0.380	0.380	2.49			
	soling							0.00			
	PCC							0.00			
	Murum bedding							4.22			
								6.72			
								<b>38.99</b>		<b>20.20</b>	<b>59.20</b>
	<b>SHN.3</b>										
	<b>CH37.40</b>	566.694	564.694	564.494			2.200	2.200			
	<b>CH61.10</b>	566.784	564.784	564.584			2.200				
	Item No. 2 :- Excavation for foundation/pipe trenches in Hard murrum etc complete.										
	(a) For Lift 0 to 1.5m	1			21.4	1.360	1.250	36.380		53.088	89.468
	(b) For Lift 1.5m to 3.0m	1			21.4	0.960	0.500	10.272		2.054	12.326
	Item No. 4 :- Excavation for foundation/pipe trenches in soft rock etc complete.										
	(a) For Lift 0 to 1.5m	1			21.4	1.360	0.250	7.276		14.436	21.712
	(b) For Lift 1.5m to 3.0m	1			21.4	0.960	0.200	4.109		11.395	15.504
	Item No. 7 :- Filling in plinth and floors/ trenches etc complete.(bedding)	1			22.0	0.960	0.200	4.224		6.528	10.752
	Item No. : 11 Transportation of earth Transportation charges including loading & unloading excavated							6.718		10.382	17.100
	Extra Item No. 9.4 :- Lowering & Laying RCC NP3 class pipe of 300mm Dia	1			22.50			22.500		35.000	57.500
	Item No. 30 :- Refilling the excavated trenches ...										
	<b>Total Excavation=</b>							<b>53.928</b>			
	<b>Deduction of 300mm dia pipe</b>										
	pipe area	1.00		0.785	22.00	0.380	0.380	2.49			
	soling							0.00			
	PCC							0.00			
	Murum bedding							4.22			
								6.72			
								<b>47.21</b>		<b>59.20</b>	<b>106.41</b>
	<b>SHN.4</b>										
	<b>CH61.10</b>	566.784	565.184	564.984			1.800	1.700			
	<b>CH82.30</b>	566.664	565.264	565.064			1.600				



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