



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. 02 and CIDCO (Airport). Providing, Laying, Joining, Testing and Commissioning of

Book No. :- 133
Page No. :-

11th RA BILL MEASUREMENTS

Sewer "B"

Date	Particulars of work	DETAILS					Content of arrears	Last measurement		Total Upto Date Quantity	
		No			L	B		D	Page		Quantity
		GL	IL	EXL							
	B - 1800mm Dia at Near NAGAR Abad Highway (Width of trench-1.8+0.38+0.38+0.5=3.06m)										
	For Depth	0.0m to 1.5m		0.0m to 3.0m		0.0m to 4.5m		0.0m to 6.0m		0.0m to 7.5m	
For Width of Trench Calculation on Outer dia of Pipe + 0.50 for Bottom and Add 0.4 for Subsequent upper Lifts.	For Lift 0.0m to 1.5m	3.060		3.460		3.860		4.260		4.660	
	For Lift 1.5m to 3.0m			3.060		3.460		3.860		4.260	
	For Lift 3.0m to 4.5m					3.060		3.460		3.860	
	For Lift 4.5m to 6.0m							3.060		3.460	
	For Lift 6.0m to 7.5m									3.060	
	B 33	Connect to Manhole No. B 34									
	CH6154.95	552.590	546.045	545.655			6.935	6.613			
	CH6199.55	552.025	546.125	545.735			6.290				
	Item No. 1 :- Excavation for foundation/pipe trenches in all types of soil & soft murrum etc complete.										
	(a) For Lift 0 to 1.5m	1			41.000	4.660	0.800	152.848	0.000	152.848	
	Item No. 2 :- Excavation for foundation/pipe trenches in Hard murrum etc complete.										
	(a) For Lift 0 to 1.5m	1			41.000	4.660	0.700	133.742	0.000	133.742	
	(b) For Lift 1.5m to 3.0m	1			41.000	4.260	1.000	174.660	0.000	174.660	
	Item No. 4:- Excavation for foundation/pipe trenches in soft rock etc complete.										
	(b) For Lift 1.5m to 3.0m	1			41.000	4.260	0.300	52.398	0.000	52.398	
	Item No. 5 :- Excavation for foundation/pipe trenches in Hard rock etc complete.										
	(b) For Lift 1.5m to 3.0m	1			41.000	4.260	0.200	34.932	0.000	34.932	
	(c) For Lift 3.0m to 4.5m	1			41.000	3.860	1.500	237.390	0.000	237.390	
	(d) For Lift 4.5m to 6.0m	1			41.000	3.460	1.500	212.790	0.000	212.790	
	(e) For Lift 6.0m to 7.5m	1			41.000	3.060	0.613	76.907	0.000	76.907	
	Item No. 7 :- Filling in plinth and floors/ trenches etc complete (bedding)	1			41.000	3.060	0.200	25.092	0.000	25.092	
	Item No. 11 Transportation of earth Transportation charges including loading & unloading							178.048	0.000	178.048	
	Item No. 17 (m) :- Lowering & Laying RCC NP3 class pipe of 1800mm Dia	1			42.500			42.500	0.000	42.500	
	Item No 30 :- Refilling the excavated trenches ...										
	Total Excavation = A							1075.667			
	Deduction										
	pipe area	1		0.785	41.000	2.180	2.180	152.96			
	soling							0.00			
	PCC							0.00			
	Murrum bedding							25.09			
	Total = B							178.05			
					Net Qty = A - B				897.62	0.000	897.619



B. K. Pardeshi
Sectional Engineer



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B Sewer, 800mm-MB

11th RA BILL MEASUREMENTS

SEWER "B"

Date	Particulars of work	DETAILS						Content of arrears	Last measurement		Total Upto Date Quantity
		No			L	B	D		Page	Quantity	
		GL	IL	EX.L							
	800mm Dia- Near Mahemood Masjid Gate (Width of trench-0.8+0.19+0.19+0.5=1.68m)										
For Width of Trench Calculation Outer dia of Pipe + 0.50 for Bottom and Add 0.4 for Subsequent upper Lifts.	For Depth	0.0m to 1.5m			0.0m to 3.0m		0.0m to 4.5m				
	For Lift 0.0m to 1.5m	1.680			2.080		2.480				
	For Lift 1.5m to 3.0m				1.680		2.080				
	For Lift 3.0m to 4.5m						1.680				
	B 56										
	CH7994.15	564.035	561.155	560.860			3.175	Near Panchakki			
	CH8016.15	563.945	561.185	560.890			3.055				
	Item No. 3 :- Excavation for foundation/pipe trenches in slush etc complete.										
	(a) For Lift 0 to 1.5m	1			18.750	2.480	0.400	18.600	0.000	18.600	
	Item No. 1 :- Excavation for foundation/pipe trenches in all types of soil & soft murum etc complete.										
	(a) For Lift 0 to 1.5m	1			18.750	2.480	0.500	23.250	152.848	176.098	
	Item No. 4:- Excavation for foundation/pipe trenches in soft rock etc complete.										
	(a) For Lift 0 to 1.5m	1			18.750	2.480	0.600	27.900	0.000	27.900	
	(b) For Lift 1.5m to 3.0m	1			18.750	2.080	0.200	7.800	52.398	60.198	
	Item No. 5 :- Excavation for foundation/pipe trenches in Hard rock etc complete.										
	(b) For Lift 1.5m to 3.0m	1			18.750	2.080	1.300	50.700	34.932	85.632	
	(c) For Lift 3.0m to 4.5m	1			18.750	1.680	0.115	3.623	237.390	241.013	
	Item No. 7 :- Filling in plinth and floors/ trenches etc complete.(bedding)	1			19.750	1.680	0.200	6.636	25.092	31.728	
	Item No. : 11 Transportation of earth Transportation charges							21.062	178.048	199.110	
	Item No. 17 (f) :- Lowering & Laying RCC NP3 class pipe of 800mm Dia	1			20.450			20.450	0.000	20.450	
	Item No 30 :- Refilling the excavated trenches ...										
	Total Excavation= A							131.873			
	Deduction										
	pipe area	1		0.785	18.750	0.990	0.990	14.43			
	Murum bedding							6.64			
	Total = B							21.06			
					Net Qty = A - B			110.811	897.619	1008.430	
	B 57										
	CH8016.15	563.945	561.185	560.890			3.055				
	CH8046.75	563.330	561.325	561.030			2.300	2.678			
	Item No. 1 :- Excavation for foundation/pipe trenches in all types of soil & soft murum etc complete.										
	(a) For Lift 0 to 1.5m	1			29.150	2.080	0.800	48.506	176.098	224.604	



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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 Nakshrawadi (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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B Sewer, 800mm-MB

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. 2 :- Excavation for foundation/pipe trenches in Hard murrum etc complete.										
	(a) For Lift 0 to 1.5m	1			29.150	2.080	0.500	30.316		133.742	164.058
	Item No. 4:- Excavation for foundation/pipe trenches in soft rock etc complete.										
	(a) For Lift 0 to 1.5m	1			29.150	2.080	0.200	12.126		27.900	40.026
	(b) For Lift 1.5m to 3.0m	1			29.150	1.680	0.600	29.383		60.198	89.581
	Item No. 5 :- Excavation for foundation/pipe trenches in Hard rock etc complete.										
	(b) For Lift 1.5m to 3.0m	1			29.150	1.680	0.578	28.306		85.632	113.938
	Item No. 7 :- Filling in plinth and floors/ trenches etc complete.(bedding)	1			29.650	1.680	0.200	9.962		31.728	41.690
	Item No. : 11 Transportation of earth Transportation charges							32.390		199.110	231.500
	Item No. 17 (f) :- Lowering & Laying RCC NP3 class pipe of 800mm Dia	1			30.000			30.000		20.450	50.450
	Item No 30 :- Refilling the excavated trenches ...										
	Total Excavation= A							148.637			
	Deduction										
	pipe area	1		0.785	29.150	0.990	0.990	22.43			
	Murrum bedding							9.96			
	Total = B							32.39			
	Net Qty = A - B							116.247		1008.430	1124.677
	CH8046.75	563.330	561.325	561.030			2.300	2.260			
	CH8076.75	563.380	561.455	561.160			2.220				
	Item No. 1 :- Excavation for foundation/pipe trenches in all typesof soil & soft murum etc complete.										
	(a) For Lift 0 to 1.5m	1			30.000	2.080	0.650	40.560		224.604	265.164
	Item No. 2 :- Excavation for foundation/pipe trenches in Hard murrum etc complete.										
	(a) For Lift 0 to 1.5m	1			30.000	2.080	0.300	18.720		164.058	182.778
	Item No. 4:- Excavation for foundation/pipe trenches in soft rock etc complete.										
	(a) For Lift 0 to 1.5m	1			30.000	2.080	0.200	12.480		40.026	52.506
	Item No. 5 :- Excavation for foundation/pipe trenches in Hard rock etc complete.										
	(a) For Lift 0m to 1.5m	1			30.000	2.080	0.350	21.840		0.000	21.840
	(b) For Lift 1.5m to 3.0m	1			30.000	1.680	0.760	38.304		113.938	152.242
	Item No. 7 :- Filling in plinth and floors/ trenches etc complete.(bedding)	1			30.000	1.680	0.200	10.080		41.690	51.770
	Item No. : 11 Transportation of earth Transportation charges							33.161		231.500	264.661
	Item No. 17 (f) :- Lowering & Laying RCC NP3 class pipe of 800mm Dia	1			30.000			30.000		50.450	80.450
	Item No 30 :- Refilling the excavated trenches ...										
	Total Excavation= A							131.904			
	Deduction										
	pipe area	1		0.785	30.000	0.990	0.990	23.08			



B. K. Pardeshi
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Sectional Engineer



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B Sewer, 800mm-MB

Date	Particulars of work	DETAILS						Content of arrears	Last measurement		Total Upto Date Quantity
		No			L	B	D		Page	Quantity	
		GL	IL	EX.L							
	Murum bedding							10.08			
	Total = B							33.16			
		Net Qty = A - B						98.743	1124.677	1223.420	
	CH8076.75	563.380	561.455	561.160			2.220	2.310			
	CH8110.95	563.690	561.585	561.290			2.400				
	Item No. 1 :- Excavation for foundation/pipe trenches in all types of soil & soft murum etc complete.										
	(a) For Lift 0 to 1.5m	1			32.750	2.080	0.600	40.872	265.164	306.036	
	Item No. 2 :- Excavation for foundation/pipe trenches in Hard murum etc complete.										
	(a) For Lift 0 to 1.5m	1			32.750	2.080	0.300	20.436	182.778	203.214	
	Item No. 4 :- Excavation for foundation/pipe trenches in soft rock etc complete.										
	(a) For Lift 0 to 1.5m	1			32.750	2.080	0.200	13.624	52.506	66.130	
	Item No. 5 :- Excavation for foundation/pipe trenches in Hard rock etc complete.										
	(a) For Lift 0m to 1.5m	1			32.750	2.080	0.400	27.248	21.840	49.088	
	(b) For Lift 1.5m to 3.0m	1			32.750	1.680	0.810	44.566	152.242	196.808	
	Item No. 7 :- Filling in plinth and floors/ trenches etc complete.(bedding)	1			33.250	1.680	0.200	11.172	51.770	62.942	
	Item No. : 11 Transportation of earth Transportation charges							36.369	264.661	301.030	
	Item No. 17 (f) :- Lowering & Laying RCC NP3 class pipe of 800mm Dia	1			33.600			33.600	80.450	114.050	
	Item No 30 :- Refilling the excavated trenches ...										
	Total Excavation= A							146.746			
	Deduction										
	pipe area	1		0.785	32.750	0.990	0.990	25.20			
	Murum bedding*							11.17			
	Total = B							36.37			
		Net Qty = A - B						110.377	1223.420	1333.797	
	B 58										
	CH8110.95	563.690	562.585	562.290			1.400	1.577			
	CH8136.55	564.195	562.735	562.440			1.755				
	Item No. 1 :- Excavation for foundation/pipe trenches in all types of soil & soft murum etc										
	(a) For Lift 0 to 1.5m	1			24.150	1.680	0.400	16.229	306.036	322.264	
	Item No. 2 :- Excavation for foundation/pipe trenches in Hard murum etc complete.										
	(a) For Lift 0 to 1.5m	1			24.150	1.680	0.200	8.114	203.214	211.328	
	Item No. 4 :- Excavation for foundation/pipe trenches in soft rock etc complete.										
	(a) For Lift 0 to 1.5m	1			24.150	1.680	0.200	8.114	66.130	74.245	
	Item No. 5 :- Excavation for foundation/pipe trenches in Hard rock etc complete.										
	(a) For Lift 0m to 1.5m	1			24.150	1.680	0.700	28.400	49.088	77.488	
	(b) For Lift 1.5m to 3.0m	1			24.150	1.680	0.077	3.124	196.808	199.932	



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M/s. Khilari Infrastructure Pvt.Ltd. & GECPL (Joint Venture)

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B Sewer, 800mm-MB

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. 7 :- Filling in plinth and floors/ trenches etc complete.(bedding)	1			24.650	1.680	0.200	8.282	62.942	71.225	
	Item No. : 11 Transportation of earth Transportation charges							26.863	301.030	327.893	
	Item No. 17 (f) :- Lowering & Laying RCC NP3 class pipe of 800mm Dia	1			25.000			25.000	114.050	139.050	
	Item No 30 :- Refilling the excavated trenches ...										
	Total Excavation= A							63.982			
	Deduction										
	pipe area	1		0.785	24.150	0.990	0.990	18.58			
	Murum bedding							8.28			
	Total = B							26.86			
					Net Qty = A - B			37.119	1333.797	1370.916	
	CH8136.55	564.195	562.755	562.460			1.735	1.820			
	CH8161.55	564.495	562.885	562.590			1.905				
	Item No. 1 :- Excavation for foundation/pipe trenches in all typesof soil & soft murum etc										
	(a) For Lift 0 to 1.5m	1			25.000	2.080	0.550	28.600	322.264	350.864	
	Item No. 2 :- Excavation for foundation/pipe trenches in Hard murum etc complete.										
	(a) For Lift 0 to 1.5m	1			25.000	2.080	0.200	10.400	211.328	221.728	
	Item No. 4:- Excavation for foundation/pipe trenches in soft rock etc complete.										
	(a) For Lift 0 to 1.5m	1			25.000	2.080	0.200	10.400	74.245	84.645	
	Item No. 5 :- Excavation for foundation/pipe trenches in Hard rock etc complete.										
	(a) For Lift 0m to 1.5m	1			25.000	2.080	0.550	28.600	77.488	106.088	
	(b) For Lift 1.5m to 3.0m	1			25.000	1.680	0.320	13.440	199.932	213.372	
	Item No. 7 :- Filling in plinth and floors/ trenches etc complete.(bedding)	1			25.000	1.680	0.200	8.400	71.225	79.625	
	Item No. : 11 Transportation of earth Transportation charges							27.634	327.893	355.527	
	Item No. 17 (f) :- Lowering & Laying RCC NP3 class pipe of 800mm Dia	1			25.000			25.000	139.050	164.050	
	Item No 30 :- Refilling the excavated trenches ...										
	Total Excavation= A							91.440			
	Deduction										
	pipe area	1		0.785	25.000	0.990	0.990	19.23			
	soling							0.00			
	PCC							0.00			
	Murum bedding							8.40			
	Total = B							27.63			
					Net Qty = A - B			63.806	1370.916	1434.721	
	CH8161.55	564.495	562.885	562.590			1.905	2.055			
	CH8183.95	564.945	563.035	562.740			2.205				
	Item No. 1 :- Excavation for foundation/pipe trenches in all typesof soil & soft murum etc										
	(a) For Lift 0 to 1.5m	1			20.950	2.080	0.750	32.682	350.864	383.546	



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B Sewer, 800mm-MB

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							
	Item No. 2 :- Excavation for foundation/pipe trenches in Hard murrum etc complete.										
	(a) For Lift 0 to 1.5m	1			20.950	2.080	0.250	10.894		221.728	232.622
	Item No. 4:- Excavation for foundation/pipe trenches in soft rock etc complete.										
	(a) For Lift 0 to 1.5m	1			20.950	2.080	0.400	17.430		84.645	102.075
	Item No. 5 :- Excavation for foundation/pipe trenches in Hard rock etc complete.										
	(a) For Lift 0m to 1.5m	1			20.950	2.080	0.100	4.358		106.088	110.446
	(b) For Lift 1.5m to 3.0m	1			20.950	1.680	0.555	19.534		213.372	232.906
	Item No. 7 :- Filling in plinth and floors/ trenches etc complete.(bedding)	1			21.450	1.680	0.200	7.207		79.625	86.832
	Item No. : 11 Transportation of earth Transportation charges							23.326		355.527	378.853
	Item No. 17 (f) :- Lowering & Laying RCC NP3 class pipe of 800mm Dia	1			21.800			21.800		164.050	185.850
	Item No 30 :- Refilling the excavated trenches ...										
	Total Excavation= A							84.898			
	Deduction										
	pipe area	1		0.785	20.950	0.990	0.990	16.12			
	Murrum bedding							7.21			
	Total = B							23.33			
	B 59										
	CH8183.95	564.945	563.035	562.740							
	CH8209.55	564.990	563.095	562.800			2.205	2.197			
							2.190				
	Item No. 1 :- Excavation for foundation/pipe trenches in all types of soil & soft murrum etc										
	(a) For Lift 0 to 1.5m	1			24.150	2.080	0.900	45.209		383.546	428.755
	Item No. 2 :- Excavation for foundation/pipe trenches in Hard murrum etc complete.										
	(a) For Lift 0 to 1.5m	1			24.150	2.080	0.200	10.046		232.622	242.669
	Item No. 4:- Excavation for foundation/pipe trenches in soft rock etc complete.										
	(a) For Lift 0 to 1.5m	1			24.150	2.080	0.400	20.093		102.075	122.168
	(b) For Lift 1.5m to 3.0m	1			24.150	1.680	0.200	8.114		89.581	97.696
	Item No. 5 :- Excavation for foundation/pipe trenches in Hard rock etc complete.										
	(b) For Lift 1.5m to 3.0m	1			24.150	1.680	0.497	20.164		232.906	253.070
	Item No. 7 :- Filling in plinth and floors/ trenches etc complete.(bedding)	1			24.650	1.680	0.200	8.282		86.832	95.114
	Item No. : 11 Transportation of earth Transportation charges							26.863		378.853	405.716
	Item No. 17 (f) :- Lowering & Laying RCC NP3 class pipe of 800mm Dia	1			25.000			25.000		185.850	210.850
	Item No 30 :- Refilling the excavated trenches ...										
	Total Excavation= A							103.627			
	Deduction										
	pipe area	1		0.785	24.150	0.990	0.990	18.58			
	Murrum bedding							8.28			



B. K. Pardeshi
Sectional Engineer

[Signature]



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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B Sewer, 800mm-MB

Date	Particulars of work	DETAILS						Content of arrears	Last measurement		Total Upto Date Quantity
		GL	IL	EX.L	L	B	D		Page	Quantity	
	Item No. : 11 Transportation of earth Transportation charges							32.390		432.579	464.969
	Item No. 17 (f) :- Lowering & Laying RCC NP3 class pipe of 800mm Dia	1			30.000			30.000		235.850	265.850
	Item No 30 :- Refilling the excavated trenches ...										
	Total Excavation= A							136.492			
	Deduction										
	pipe area	1		0.785	29.150	0.990	0.990	22.43			
	Murrum bedding							9.96			
	Total = B							32.39			
	Net Qty = A - B							104.102		1659.964	1764.066
	CH8265.75	565.640	563.530	563.235			2.405	2.527			
	CH8294.75/CH8194.15	566.010	563.655	563.360			2.650				
	Item No. 3 :- Excavation for foundation/pipe trenches in slush etc complete.									MH No.B60	
	(a) For Lift 0 to 1.5m	1			27.550	2.080	0.000	0.000		18.600	18.600
	Item No. 1 :- Excavation for foundation/pipe trenches in all types of soil & soft murum etc										
	(a) For Lift 0 to 1.5m	1			27.550	2.080	0.150	8.596		441.851	450.446
	Item No. 2 :- Excavation for foundation/pipe trenches in Hard murum etc complete.										
	(a) For Lift 0 to 1.5m	1			27.550	2.080	0.250	14.326		264.842	279.168
	(b) For Lift 1.5m to 3.0m	1			27.550	1.680	0.000	0.000		174.660	174.660
	Item No. 4:- Excavation for foundation/pipe trenches in soft rock etc complete.										
	(a) For Lift 0 to 1.5m	1			27.550	2.080	0.100	5.730		133.254	138.985
	(b) For Lift 1.5m to 3.0m	1			27.550	1.680	0.000	0.000		97.696	97.696
	Item No. 5 :- Excavation for foundation/pipe trenches in Hard rock etc complete.										
	(a) For Lift 0m to 1.5m	1			27.550	2.080	1.000	57.304		230.387	287.691
	(b) For Lift 1.5m to 3.0m	1			27.550	1.680	1.027	47.534		337.036	384.569
	(c) For Lift 3.0m to 4.5m	1			27.550	1.680	0.000	0.000		241.013	241.013
	(d) For Lift 4.5m to 6.0m	1			27.550	1.680	0.000	0.000		212.790	212.790
	(e) For Lift 6.0m to 7.5m	1			27.550	1.680	0.000	0.000		76.907	76.907
	Item No. 7 :- Filling in plinth and floors/ trenches etc complete.(bedding)	1			28.050	1.680	0.200	9.425		113.359	122.784
	Item No. : 11 Transportation of earth Transportation charges							30.621		464.969	495.590
	Item No. 17 (f) :- Lowering & Laying RCC NP3 class pipe of 800mm Dia	1			28.400			28.400		265.850	294.250
	Item No 30 :- Refilling the excavated trenches ...										
	Total Excavation= A							133.490			
	Deduction										
	pipe area	1		0.785	27.550	0.990	0.990	21.20			
	soling							0.00			
	PCC							0.00			
	Murrum bedding							9.42			
	Total = B							30.62			
	Net Qty = A - B							102.868		1764.066	1866.935



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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. :-

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B Sewer-Near Makal Gate-600mm (2)

17th RA BILL MEASUREMENTS

SEWER "B"

Date	Particulars of work	DETAILS						Content of arrears	Last measurement		Total Upto Date Quantity
		No			L	B	D		Page	Quantity	
		GL	IL	EX.L							
	Branch of B Sewer-600mm Dia Near Makal Gate. (Width of trench-0.6+0.17+0.17+0.5=1.44m)										
	For Depth	0.0m to 1.5m			0.0m to 3.0m	0.0m to 4.5m					
For Width of Trench Calculation Outer dia of Pipe + 0.50 for Bottom and Add 0.4 for Subsequent upper Lifts.	For Lift 0.0m to 1.5m	1.440			1.840	2.240					
	For Lift 1.5m to 3.0m				1.440	1.840					
	For Lift 3.0m to 4.5m					1.440					
	B 68	Gap Completed Between B68 to B69									
	CH8566.15	571.695	570.510	570.310			1.385	1.813			
	CH8579.85	572.760	570.720	570.520			2.240				
	Item No. 1 :- Excavation for foundation/pipe trenches in all types of soil & soft murum etc										
	(a) For Lift 0 to 1.5m	1			10.800	1.840	0.100	1.987	450.446	452.434	
	Item No. 2 :- Excavation for foundation/pipe trenches in Hard murum etc complete.										
	(a) For Lift 0 to 1.5m	1			10.800	1.840	0.150	2.981	279.168	282.148	
	Item No. 4:- Excavation for foundation/pipe trenches in soft rock etc complete.										
	(a) For Lift 0 to 1.5m	1			10.800	1.840	0.150	2.981	138.985	141.966	
	Item No. 5 :- Excavation for foundation/pipe trenches in Hard rock etc complete.										
	(a) For Lift 0m to 1.5m	1			10.800	1.840	1.100	21.859	287.691	309.550	
	(b) For Lift 1.5m to 3.0m	1			10.800	1.440	0.313	4.868	384.569	389.437	
	Item No. 7 :- Filling in plinth and floors/ trenches etc complete.(bedding)	1			11.800	1.440	0.200	3.398	122.784	126.182	
	Item No. : 11 Transportation of earth Transportation charges including loading & unloading excavated	1						8.425	495.590	504.015	
	Item No 17 (d) :- Lowering & Laying RCC NP3 class pipe of 600mm Dia	1			12.500			12.500	0.000	12.500	
	Item No 30 :- Refilling the excavated trenches ...										
	Total Excavation= A=							34.676			
	Deduction										
	pipe area	1.00		0.785	10.800	0.770	0.770	5.03			
	Murum bedding							3.40			
	Total = B							8.43			
								Net Qty = A - B	26.251	1866.93	
	B68A	In casing has Done for 32M									
	CH8579.85	572.760	572.720	572.520			0.240	0.845			
	CH8595.45	574.370	573.120	572.920			1.450				
	Item No. 1 :- Excavation for foundation/pipe trenches in all types of soil & soft murum etc										
	(a) For Lift 0 to 1.5m	1			14.150	1.440	0.150	3.056	452.434	455.490	



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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. :- 142
Page No. :-

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B Sewer-Near Makal Gate-600mm (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							
	Item No. 2 :- Excavation for foundation/pipe trenches in Hard murrum etc complete.										
	(a) For Lift 0 to 1.5m	1			14.150	1.440	0.100	2.038		282.148	284.186
	Item No. 4:- Excavation for foundation/pipe trenches in soft rock etc complete.										
	(a) For Lift 0 to 1.5m	1			14.150	1.440	0.150	3.056		141.966	145.022
	Item No. 5 :- Excavation for foundation/pipe trenches in Hard rock etc complete.										
	(a) For Lift 0m to 1.5m	1			14.150	1.440	0.445	9.067		309.550	318.618
	Item No. 7 :- Filling in plinth and floors/ trenches etc complete.(bedding)	1			14.650	1.440	0.200	4.219		126.182	130.402
	Item No. : 11 Transportation of earth Transportation charges including loading & unloading excavated	1						10.805		504.015	514.820
	Item No 17 (d):- Lowering & Laying RCC NP3 class pipe of 600mm Dia	1			15.000			15.000		12.500	27.500
	Item No 30 :- Refilling the excavated trenches ...										
	Total Excavation= A=							17.218			
	Deduction										
	pipe area	1.00		0.785	14.150	0.770	0.770	6.59			
	Murrum bedding							4.22			
	Total = B							10.80			
	Net Qty = A - B							6.413		1893.185	1899.598
	CH8595.45	574.370	573.120	572.920			1.450	1.600			
	CH8610.45	575.070	573.520	573.320			1.750				
	Item No. 1 :- Excavation for foundation/pipe trenches in all typesof soil & soft murum etc										
	(a) For Lift 0 to 1.5m	1			15.000	1.440	0.150	3.240		455.490	458.780
	Item No. 2 :- Excavation for foundation/pipe trenches in Hard murrum etc complete.										
	(a) For Lift 0 to 1.5m	1			15.000	1.440	0.400	8.640		284.186	292.826
	Item No. 4:- Excavation for foundation/pipe trenches in soft rock etc complete.										
	(a) For Lift 0 to 1.5m	1			15.000	1.440	0.800	17.280		145.022	162.302
	Item No. 5 :- Excavation for foundation/pipe trenches in Hard rock etc complete.										
	(a) For Lift 0m to 1.5m	1			15.000	1.440	0.150	3.240		318.618	321.858
	(b) For Lift 1.5m to 3.0m	1			15.000	1.440	0.100	2.160		389.437	391.597
	Item No. 7 :- Filling in plinth and floors/ trenches etc complete.(bedding)	1			15.000	1.440	0.200	4.320		130.402	134.722
	Item No. : 11 Transportation of earth Transportation charges including loading & unloading excavated	1						11.301		514.820	526.121
	Item No 17 (d):- Lowering & Laying RCC NP3 class pipe of 600mm Dia	1			15.000			15.000		27.500	42.500
	Item No 30 :- Refilling the excavated trenches ...										
	Total Excavation= A=							34.560			
	Deduction										



Budget

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AURANGABAD MUNICIPAL CORPORATION.

(From No.52)

Measurement Book

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Book No. :-

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B Sewer-Near Makal Gate-600mm (2)

Date	Particulars of work	DETAILS						Content of arrears	Last measurement		Total Upto Date Quantity
		GL	No IL	EX.L	L	B	D		Page	Quantity	
	pipe area	1.00		0.785	15.000	0.770	0.770	6.98			
	Murum bedding							4.32			
	Total = B							11.30			
		Net Qty = A - B						23.259	1899.598	1922.657	
	CH8610.45	575.070	573.520	573.320			1.750	1.848			
	CH8626.15/CH8596.15	575.685	573.940	573.740			1.945		B69		
	Item No. 1 :- Excavation for foundation/pipe trenches in all types of soil & soft murum etc										
	(a) For Lift 0 to 1.5m	1			14.250	1.840	0.100	2.622	458.730	461.352	
	Item No. 2 :- Excavation for foundation/pipe trenches in Hard murum etc complete.										
	(a) For Lift 0 to 1.5m	1			14.250	1.840	0.400	10.488	292.826	303.314	
	Item No. 4:- Excavation for foundation/pipe trenches in soft rock etc complete.										
	(a) For Lift 0 to 1.5m	1			14.250	1.840	0.200	5.244	162.302	167.546	
	Item No. 5 :- Excavation for foundation/pipe trenches in Hard rock etc complete.										
	(a) For Lift 0m to 1.5m	1			14.250	1.840	0.800	20.976	321.858	342.834	
	(b) For Lift 1.5m to 3.0m	1			14.250	1.440	0.348	7.141	391.597	398.738	
	Item No. 7 :- Filling in plinth and floors/ trenches etc complete.(bedding)	1			14.750	1.440	0.200	4.248	134.722	138.970	
	Item No. : 11 Transportation of earth Transportation charges including loading & unloading excavated	1						10.880	526.121	537.002	
	Item No 17 (d) :- Lowering & Laying RCC NP3 class pipe of 600mm Dia	1			15.100			15.100	42.500	57.600	
	Item No 30 :- Refilling the excavated trenches ...										
	Total Excavation = A =							46.471			
	Deduction										
	pipe area	1.00		0.785	14.250	0.770	0.770	6.63			
	Murum bedding							4.25			
	Total = B							10.88			
		Net Qty = A - B						35.591	1922.857	1958.447	
	B 76	Gap Completed Between B76 to B79									
	CH8926.65	581.335	578.520	578.320			3.015	3.153			
	CH8952.25	581.760	578.670	578.470			3.290				
	Item No. 1 :- Excavation for foundation/pipe trenches in all types of soil & soft murum etc										
	(a) For Lift 0 to 1.5m	1			24.150	2.240	0.100	5.410	461.352	466.762	
	Item No. 4:- Excavation for foundation/pipe trenches in soft rock etc complete.										
	(a) For Lift 0 to 1.5m	1			24.150	2.240	0.200	10.819	167.546	178.365	
	Item No. 5 :- Excavation for foundation/pipe trenches in Hard rock etc complete.										
	(a) For Lift 0m to 1.5m	1			24.150	2.240	1.200	64.915	342.834	407.749	
	(b) For Lift 1.5m to 3.0m	1			24.150	1.840	1.500	66.654	398.738	465.392	
	(c) For Lift 3.0m to 4.5m	1			24.150	1.440	0.153	5.321	241.013	246.333	
	Item No. 7 :- Filling in plinth and floors/ trenches etc complete.(bedding)	1			24.650	1.440	0.200	7.099	138.970	146.069	



B. K. Pardeshi
Sectional Engineer



AURANGABAD MUNICIPAL CORPORATION.

(From No.52)

Measurement Book

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B Sewer-Near Makal Gate-600mm (2)

Date	Particulars of work	DETAILS						Content of arrears	Last measurement		Total Up to Date Quantity
		GL	IL	EX.L	L	B	D		Page	Quantity	
	Item No. : 11 Transportation of earth Transportation charges including loading & unloading excavated	1						18.339		537.002	555.341
	Item No 17 (d) :- Lowering & Laying RCC NP3 class pipe of 600mm Dia	1			25.000			25.000		57.600	82.600
	Item No 30 :- Refilling the excavated trenches ...										
	Total Excavation= A=							153.119			
	Deduction										
	pipe area	1.00		0.785	24.150	0.770	0.770	11.24			
	Murum bedding							7.10			
	Total = B							18.34			
	Net Qty = A - B							134.779		1958.447	2093.227
	CH8952.25	581.760	578.670	578.470			3.290				
	CH8974.65	582.250	578.820	578.620			3.630	3.460			
	Item No. 1 :- Excavation for foundation/pipe trenches in all types of soil & soft murum etc										
	(a) For Lift 0 to 1.5m	1			20.950	2.240	0.100	4.693		466.762	471.454
	Item No. 4:- Excavation for foundation/pipe trenches in soft rock etc complete.										
	(a) For Lift 0 to 1.5m	1			20.950	2.240	0.200	9.386		178.365	187.751
	Item No. 5 :- Excavation for foundation/pipe trenches in Hard rock etc complete.										
	(a) For Lift 0m to 1.5m	1			20.950	2.240	1.200	56.314		407.749	464.062
	(b) For Lift 1.5m to 3.0m	1			20.950	1.840	1.500	57.822		465.392	523.214
	(c) For Lift 3.0m to 4.5m	1			20.950	1.440	0.460	13.877		246.333	260.213
	Item No. 7 :- Filling in plinth and floors/ trenches etc complete.(bedding)	1			21.450	1.440	0.200	6.178		146.069	152.246
	Item No. : 11 Transportation of earth Transportation charges including loading & unloading excavated	1						15.928		555.341	571.269
	Item No 17 (d) :- Lowering & Laying RCC NP3 class pipe of 600mm Dia	1			21.800			21.800		82.600	104.400
	Item No 30 :- Refilling the excavated trenches ...										
	Total Excavation= A=							142.091			
	Deduction										
	pipe area	1.00		0.785	20.950	0.770	0.770	9.75			
	Murum bedding							6.18			
	Total = B							15.93			
	Net Qty = A - B							126.163		2093.227	2219.390
	B 77										
	CH8974.65	582.250	579.170	578.970			3.280				
	CH9005.25	582.645	579.240	579.040			3.605	3.443			
	Item No. 1 :- Excavation for foundation/pipe trenches in all types of soil & soft murum etc										
	(a) For Lift 0 to 1.5m	1			29.150	2.240	0.100	6.530		471.454	477.984
	Item No. 4:- Excavation for foundation/pipe trenches in soft rock etc complete.										
	(a) For Lift 0 to 1.5m	1			29.150	2.240	0.350	22.854		187.751	210.604
	Item No. 5 :- Excavation for foundation/pipe trenches in Hard rock etc complete.										
	(a) For Lift 0m to 1.5m	1			29.150	2.240	1.050	68.561		464.062	532.623



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AURANGABAD MUNICIPAL CORPORATION.

(From No.52)

Measurement Book

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Book No. :-
Page No. **145**

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

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B Sewer-Near Makal Gate-600mm (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							
	(b) For Lift 1.5m to 3.0m	1			29.150	1.840	1.500	80.454		523.214	603.668
	(c) For Lift 3.0m to 4.5m	1			29.150	1.440	0.443	18.595		260.211	278.806
	Item No. 7 :- Filling in plinth and floors/ trenches etc complete.(bedding)	1			29.650	1.440	0.200	8.539		152.246	160.786
	Item No. : 11 Transportation of earth Transportation charges including loading & unloading excavated	1						22.106		571.269	593.376
	Item No 17 (d):- Lowering & Laying RCC NP3 class pipe of 600mm Dia	1			30.000			30.000		104.400	134.400
	Item No 30 :- Refilling the excavated trenches ...										
	Total Excavation= A=							196.993			
	Deduction										
	pipe area	1.00		0.785	29.150	0.770	0.770	13.57			
	Murrum bedding							8.54			
	Total = B							22.11			
					Net Qty = A - B			174.887		2219.390	2394.277
	CH9005.25	582.645	579.240	579.040			3.605	3.700			
	CH9035.25	582.905	579.310	579.110			3.795				
	Item No. 1 :- Excavation for foundation/pipe trenches in all types of soil & soft murrum etc										
	(a) For Lift 0 to 1.5m	1			30.000	2.240	0.850	57.120		477.984	535.104
	Item No. 2 :- Excavation for foundation/pipe trenches in Hard murrum etc complete.										
	(a) For Lift 0 to 1.5m	1			30.000	2.240	0.450	30.240		303.314	333.554
	Item No. 4:- Excavation for foundation/pipe trenches in soft rock etc complete.										
	(a) For Lift 0 to 1.5m	1			30.000	2.240	0.200	13.440		210.604	224.044
	(b) For Lift 1.5m to 3.0m	1			30.000	1.840	0.400	22.080		97.696	119.776
	Item No. 5 :- Excavation for foundation/pipe trenches in Hard rock etc complete.										
	(b) For Lift 1.5m to 3.0m	1			30.000	1.840	1.100	60.720		603.668	664.388
	(c) For Lift 3.0m to 4.5m	1			30.000	1.440	0.700	30.240		278.806	309.046
	Item No. 7 :- Filling in plinth and floors/ trenches etc complete.(bedding)	1			30.000	1.440	0.200	8.640		160.786	169.426
	Item No. : 11 Transportation of earth Transportation charges including loading & unloading excavated	1						22.603		593.376	615.978
	Item No 17 (d):- Lowering & Laying RCC NP3 class pipe of 600mm Dia	1			30.000			30.000		134.400	164.400
	Item No 30 :- Refilling the excavated trenches ...										
	Total Excavation= A=							213.840			
	Deduction										
	pipe area	1.00		0.785	30.000	0.770	0.770	13.96			
	Murrum bedding							8.64			
	Total = B							22.60			
					Net Qty = A - B			191.237		2394.277	2585.514
	CH9035.25	582.905	579.310	579.110			3.795	3.580			
	CH9065.15	582.555	579.390	579.190			3.365				



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

Book No. :- **143**
Page No. :-

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B Sewer-Near Makal Gate-600mm (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									
	Item No. 1 :- Excavation for foundation/pipe trenches in all types of soil & soft murum etc (a) For Lift 0 to 1.5m	1			28.450	2.240	1.100	70.101		535.104	605.205
	Item No. 2 :- Excavation for foundation/pipe trenches in Hard murum etc complete. (a) For Lift 0 to 1.5m	1			28.450	2.240	0.300	19.118		333.554	352.672
	Item No. 4:- Excavation for foundation/pipe trenches in soft rock etc complete. (a) For Lift 0 to 1.5m	1			28.450	2.240	0.100	6.373		224.044	230.417
	(b) For Lift 1.5m to 3.0m	1			28.450	1.840	0.600	31.409		119.776	151.184
	Item No. 5 :- Excavation for foundation/pipe trenches in Hard rock etc complete. (b) For Lift 1.5m to 3.0m	1			28.450	1.840	0.900	47.113		664.388	711.501
	(c) For Lift 3.0m to 4.5m	1			28.450	1.440	0.580	23.761		309.046	332.802
	Item No. 7 :- Filling in plinth and floors/ trenches etc complete.(bedding)	1			28.950	1.440	0.200	8.338		169.426	177.763
	Item No. : 11 Transportation of earth Transportation charges including loading & unloading excavated	1						21.579		615.978	637.557
	Item No 17 (d) :- Lowering & Laying RCC NP3 class pipe of 600mm Dia	1			29.300			29.300		164.400	193.700
	Item No 30 :- Refilling the excavated trenches ...										
	Total Excavation= A=							197.875			
	Deduction										
	pipe area	1.00		0.785	28.450	0.770	0.770	13.24			
	Murum bedding *							8.34			
	Total = B							21.58			
	Net Qty = A - B							176.296		2585.514	2761.810
	B 7B										
	CH9065.15	582.555	579.390	579.190			3.365				
	CH9090.75	582.400	579.450	579.250			3.150	3.257			
	Item No. 1 :- Excavation for foundation/pipe trenches in all types of soil & soft murum etc (a) For Lift 0 to 1.5m	1			24.150	2.240	1.150	62.210		605.205	667.415
	Item No. 2 :- Excavation for foundation/pipe trenches in Hard murum etc complete. (a) For Lift 0 to 1.5m	1			24.150	2.240	0.350	18.934		352.672	371.606
	(b) For Lift 1.5m to 3.0m	1			24.150	1.840	0.500	22.218		174.660	196.878
	Item No. 4:- Excavation for foundation/pipe trenches in soft rock etc complete. (b) For Lift 1.5m to 3.0m	1			24.150	1.840	0.300	13.331		151.184	515
	Item No. 5 :- Excavation for foundation/pipe trenches in Hard rock etc complete. (b) For Lift 1.5m to 3.0m	1			24.150	1.840	0.700	31.105		711.501	742.607
	(c) For Lift 3.0m to 4.5m	1			24.150	1.440	0.257	8.937		332.807	341.745
	Item No. 7 :- Filling in plinth and floors/ trenches etc complete.(bedding)	1			24.650	1.440	0.200	7.099		177.763	184.862
	Item No. : 11 Transportation of earth Transportation charges including loading & unloading excavated	1						18.339		637.557	655.897



For Pq



AURANGABAD MUNICIPAL CORPORATION.

(From No.52)

Measurement Book

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Page No. :- **147**

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

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

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B Sewer-Near Makal Gate-600mm (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							
	Item No 17 (d) :- Lowering & Laying RCC NP3 class pipe of 600mm Dia	1			25.000			25.000		193.700	218.700
	Item No 30 :- Refilling the excavated trenches ...										
	Total Excavation= A=							156.735			
	Deduction										
	pipe area	1.00		0.785	24.150	0.770	0.770	11.24			
	Murrum bedding							7.10			
	Total = B							18.34			
	Net Qty = A - B							138.396		2761.810	2900.207
	CH9090.75	582.400	579.450	579.250			3.150				
	CH9114.65/CH9126.65	582.410	579.510	579.310			3.100	3.125			
	Item No. 1 :- Excavation for foundation/pipe trenches in all types of soil & soft murrum etc										
	(a) For Lift 0 to 1.5m	1			22.450	2.240	1.300	65.374		667.415	732.790
	Item No. 2 :- Excavation for foundation/pipe trenches in Hard murrum etc complete.										
	(a) For Lift 0 to 1.5m	1			22.450	2.240	0.200	10.058		371.606	381.664
	(b) For Lift 1.5m to 3.0m	1			22.450	1.840	0.350	14.458		196.878	211.336
	Item No. 4:- Excavation for foundation/pipe trenches in soft rock etc complete.										
	(a) For Lift 0 to 1.5m	1			22.450	2.240	0.000	0.000		230.417	230.417
	(b) For Lift 1.5m to 3.0m	1			22.450	1.840	0.400	16.523		164.515	181.038
	Item No. 5 :- Excavation for foundation/pipe trenches in Hard rock etc complete.										
	(a) For Lift 0m to 1.5m	1			22.450	2.240	0.000	0.000		532.623	532.623
	(b) For Lift 1.5m to 3.0m	1			22.450	1.840	0.750	30.981		742.607	773.588
	(c) For Lift 3.0m to 4.5m	1			22.450	1.440	0.125	4.041		341.745	345.786
	(d) For Lift 4.5m to 6.0m	1			22.450	1.440	0.000	0.000		212.790	212.790
	Item No. 7 :- Filling in plinth and floors/ trenches etc complete.(bedding)	1			22.950	1.440	0.200	6.610		184.862	191.472
	Item No. : 11 Transportation of earth Transportation charges including loading & unloading excavated	1						17.058		655.897	672.955
	Item No 17 (d) :- Lowering & Laying RCC NP3 class pipe of 600mm Dia	1			23.300			23.300		218.700	242.000
	Item No 30 :- Refilling the excavated trenches ...										
	Total Excavation= A=							141.435			
	Deduction										
	pipe area	1.00		0.785	22.450	0.770	0.770	10.45			
	soling							0.00			
	PCC							0.00			
	Murrum bedding							6.61			
	Total = B							17.06			
	Net Qty = A - B							124.377		2900.207	3024.583



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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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M. K. Infrastructures Pvt. Ltd. & GECPL (Joint Venture)

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B Sewer-Jatwada-500-MB(2) Gap

Date	Particulars of work	DETAILS						Content of area	Last measurement		TOTAL TO DATE
		GL	No IL	EX.L	L	B	D		Page	Quantity	
	Item No.17 (c) :- Lowering & Laying RCC NP3 class pipe of 500mm Dia	1			62.500			62.500		17.500	80.000
	Item No 30 :- Refilling the excavated trenches ...										
	Total Excavation = A							244.592			
	Deduction										
	pipe area	1									
	Murram bedding			0.785	60.800	0.650	0.650	20.17			
	Total = B							16.07			
								36.23			
	B 273							208.36		3078.596	3286.956
	CH12670.20	596.680	594.585	594.385							
	CH12713.40/CH12870	597.670	594.785	594.585			2.29	2.690			
	Item No. 3 :- Excavation for foundation/pipe trenches in slush etc complete.									B274/B280	
	(a) For Lift 0 to 1.5m	1			40.300	1.700	0.650	44.532		109.350	153.882
	Item No. 1 :- Excavation for foundation/pipe trenches in all types of soil & soft murum etc complete.										
	(a) For Lift 0 to 1.5m	1			40.300	1.700	0.850	58.234		839.537	897.770
	(b) For Lift 1.5m to 3.0m	1			40.300	1.300	1.000	52.390		86.288	138.678
	Item No. 2 :- Excavation for foundation/pipe trenches in Hard murum etc complete.										
	(a) For Lift 0 to 1.5m	1			40.300	1.700	0.000	0.000		381.664	381.664
	(b) For Lift 1.5m to 3.0m	1			40.300	1.300	0.190	9.954		236.137	246.091
	Item No. 4 :- Excavation for foundation/pipe trenches in soft rock etc complete.										
	(a) For Lift 0 to 1.5m	1			40.300	1.700	0.000	0.000		230.417	230.417
	(b) For Lift 1.5m to 3.0m	1			40.300	1.300	0.000	0.000		181.038	181.038
	Item No. 5 :- Excavation for foundation/pipe trenches in Hard rock etc complete.										
	(a) For Lift 0m to 1.5m	1			40.300	1.700	0.000	0.000		532.623	532.623
	(b) For Lift 1.5m to 3.0m	1			40.300	1.300	0.000	0.000		773.588	773.588
	(c) For Lift 3.0m to 4.5m	1			40.300	1.300	0.000	0.000		345.786	345.786
	(d) For Lift 4.5m to 6.0m	1			40.300	1.300	0.000	0.000		212.790	212.790
	Item No. 7 :- Filling in plinth and floors/ trenches etc	1			41.300	1.300	0.200	10.738		211.999	222.737
	Item No. : 11 Transportation of earth Transportation charges including							24.104		719.169	743.273
	Item No.17 (c) :- Lowering & Laying RCC NP3 class pipe of 500mm Dia	1			42.000			42.000		80.000	122.000
	Item No 30 :- Refilling the excavated trenches ...										
	Total Excavation = A							165.109			
	Deduction										
	pipe area	1									
	soling			0.785	40.300	0.650	0.650	13.37			
	PCC							0.00			
	Murram bedding							0.00			
	Total = B							10.74			
								24.10			
	Net Qty = A - B							141.01		3286.956	3427.961



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AURANGABAD MUNICIPAL CORPORATION.

(From No.52)

Measurement Book

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B Sewer-Jalal colony 500-MB (2)

14th RA BILL MEASUREMENTS

Date	Particulars of work	DETAILS						Content of area	Last measurement		TOTAL TO DATE
		No							Page	Quantity	
		GL	IL	EX.L	L	B	D				
	500mm Dia-At Jalal Colony (Width of Trench-0.5+0.15+0.15+0.5=1.3m)										
	For Width of Trench Calculation										
	Outer dia of Pipe + 0.50 for Bottom and Add 0.4 for Subsequent upper Lifts.										
	B 99										
	CH10518.65										
	CH10544.25	586.310	583.420	583.220			3.09				
	Item No. 1 :- Excavation for foundation/pipe trenches in all types of soil & soft murrum etc complete.	586.655	583.470	583.270			3.38	3.238			
	(a) For Lift 0 to 1.5m	1			24.150	2.100	1.500	76.073	897.770	973.843	
	(b) For Lift 1.5m to 3.0m	1			24.150	1.700	1.067	43.806	138.678	182.483	
	Item No. 2 :- Excavation for foundation/pipe trenches in Hard murrum etc complete.										
	(b) For Lift 1.5m to 3.0m	1			24.150	1.700	0.433	17.777	246.091	263.868	
	(c) For Lift 3.0m to 4.5m	1			24.150	1.300	0.238	7.472	0.000	7.472	
	Item No. 7 :- Filling in plinth and floors/ trenches etc complete.(bedding)	1			24.150	1.300	0.200	6.279	222.737	229.016	
	Item No. : 11 Transportation of earth Transportation charges including loading & unloading excavated							14.289	743.273	757.562	
	Item No.17 (c) :- Lowering & Laying RCC NP3 class pipe of 500mm Dia	1			25.000			25.000	122.000	147.000	
	Item No 30 :- Refilling the excavated trenches ...										
	Total Excavation = A							145.127			
	Deduction										
	pipe area	1		0.785	24.150	0.650	0.650	8.01			
	Murrum bedding							6.28			
	Total = B							14.29			
	Net Qty = A - B							130.838	3427.961	3558.799	
	CH10544.25	586.655	583.470	583.270			3.38	3.385			
	CH10569.25	586.705	583.520	583.320			3.39				
	Item No. 1 :- Excavation for foundation/pipe trenches in all types of soil & soft murrum etc complete.										
	(a) For Lift 0 to 1.5m	1			25.000	2.100	1.500	78.750	973.843	1052.593	
	(b) For Lift 1.5m to 3.0m	1			25.000	1.700	0.500	21.250	182.483	203.733	
	Item No. 2 :- Excavation for foundation/pipe trenches in Hard murrum etc complete.										
	(b) For Lift 1.5m to 3.0m	1			25.000	1.700	0.400	17.000	263.868	280.868	
	Item No. 4:- Excavation for foundation/pipe trenches in soft rock etc complete.										
	(b) For Lift 1.5m to 3.0m	1			25.000	1.700	0.300	12.750	181.038	193.788	
	Item No. 5:- Excavation for foundation/pipe trenches in Hard rock etc complete.										
	(b) For Lift 1.5m to 3.0m	1			25.000	1.700	0.300	12.750	773.588	786.338	



B. K. Pande
B. K. Pande
Sectional Engineer

[Signature]