

Name of the Project :- Supply, Installation, Commissioning, Operation & Maintenance for Smart Water Meter & Related Infrastructure

Work for Water Supply System of Thane City

Item No.	Item/ Description	Quantity	Unit	Rate	Amount
A	(A) Consumer Survey & Consumer Awarne				
1	Consumer Survey / Consumer Matching and Geo-Spatial Data Integration as Specified to the satisfaction of Engineer Incharge etc. complete.	113328	no. of connections		-
2	Carrying out a preliminary activity of network survey and digitalization of distribution Network as Specified to the satisfaction of Engineer In charge etc. complete	1600	RKM		-
3	Hoardings for 5 Years (Size 30 x 20 Feet for every 10000 connections for one month quarterly) as per detailed	237600	Per Sq.ft Per month		-
4	Regional TV advertises For 5 years as per detailed Technical Specifications in the NIT to the satisfaction of Engineer In charge etc. complete.	156	per 30 sec		-
5	Banners 6'X4' (1 per 25 connections) as per detailed Technical Specifications in the NIT to the satisfaction of Engineer In charge etc. complete.	15000	Nos.		-
6	News Papers advertise (half the A4 paper size (300sqcm) advertises in daily news paper every week) as per detailed Technical Specifications in the NIT to the satisfaction of Engineer In charge/ Consultant etc. Complete	46800	Per Sqcm		-
7	Activities in Schools, Colleges & Public Places as per detailed Technical Specifications in the NIT to the satisfaction of Engineer In charge/ etc. complete.	156	Nos.		-
8	Ward Sabha, Road Shows & Street Plays. As per detailed Technical Specifications in the NIT to the satisfaction of Engineer In charge/ etc. Complete	3285	Nos		-
9	Videos (3 minute each) as per detailed Technical Specifications in the NIT to the satisfaction of Engineer Incharge etc. complete	274	Nos.		-
	(A) Consumer Survey & Consumer Awarne Total				-
10	Excavation for foundation / pipe trenches in earth, soils of all types, sand, gravel and soft murum, including removing the excavated material up to a distance of 50 meters and lifts as below, stacking and spreading as directed, normal dewatering, preparing the bed for foundation and excluding backfilling etc. complete. and as per detailed Technical Specifications in the NIT to the satisfaction of Engineer In charge etc. complete				
	Excavation Soft 0 to 1.5 M	147326.4	cum		-

Item No.	Item/ Description	Quantity	Unit	Rate	Amount
11	Excavation for foundation / pipe trenches by all means in soft rock and old cement and lime masonry foundation asphalt road including removing the excavated material up to a distance of 50 M beyond area and lifts as below, stacking as directed by Engineer-in-charge, normal dewatering, preparing the bed for foundation and excluding, backfilling, etc.complete. and as per detailed Technical Specifications in the NIT to the satisfaction of Engineer In charge etc. complete.				
	Excavation Soft 0 to 1.5 M	22665.6	cum		-
12	Providing, Installing and Giving satisfactory field testing of domestic Battery operated, "B" class, AMR Mechanical/Ultrasonic/Electromagnetic/volumetric Water Meters having No moving part in contact with water, with magnetically sealed coupled and hermetically sealed register, Stainless steel/Glass/ Engineered plastic confirming to ISO 4064 along with manufacturing test certificate and Guarantee certificate with Battery life of min. 10 years with GSM / RF Technology for communication to server with PC Software including 36 month Guarantee including all material required for fixing, labour & giving satisfactory leak proof test etc Complete. General Specifications :-				
	1)Meter should be battery operated with no moving parts, low pressure loss, dry type as per ISO 4064 / OIML R49 and certification as per FCRI / MID.2) Display : 8 digit LCD,3) Enclosure : Protection class IP 68.4) Temperature : Ambient 50 deg. C.6) POWER SUPPLY : 3.6 lithium battery with minimum life of 10 years. 7) Memory built-in and should have storage for at least 12 months with daily / monthly accumulated totalised data with time and date should be available. It should be able to access memory of the meter through serial communication 8) End Connection : Screwed up to 40 mm BSP/NPT coupling 9) Installation: Should be able to install in any orientation. 10) transducer: Inbuilt as per detailed Technical Specifications in the NIT to the satisfaction of Engineer In charge				
12.1	Mechanical/Ultrasonic / Electromagnetic / volumetric AMR Meter 15 mm	100045	No.		-
12.2	Mechanical/Ultrasonic / Electromagnetic / volumetric AMR Meter 20 mm	1079	No.		-
12.3	Mechanical/Ultrasonic / Electromagnetic / volumetric AMR Meter 25 mm	12000	No.		-
12.4	Mechanical/Ultrasonic / Electromagnetic / volumetric AMR Meter 40 mm	68	No.		-
13	Fixing Water Meter in position from 15mm to 50mm dia including cost all labour as per detailed Technical Specifications in the NIT to the satisfaction of Engineer In charge etc. complete.	113192	No.		-

Item No.	Item/ Description	Quantity	Unit	Rate	Amount
14	Providing and fixing water meter box of HDPE/GRP material , including necessary excavation, cost of locking arrangement etc complete of suitable size for 15 to 40 mm dia. and as per detailed Technical Specifications in the NIT to the satisfaction of Engineer In charge etc. complete.	113192	No.		-
15	Providing, Installing and Giving satisfactory field-testing of battery operated Woltmanteype / Electromagnetic / Ultrasonic / Mechanical / Volumetric AMR water meter capable of measuring low flows & highflows with only one moving part, with no sensitivity or vibration conditions, humidity conditions having maximum working pressure of 16 bars with cast irons / polystered coated body with flanges confirming to ISO 4064 , along with manufacturing test certificate and Guarantee certificate with Battery life of min. 10 years with GSM / RFTechnology for communication to server with PC Software including 36 month Guarantee including Cost of strainer and all material required for fixing, labour & giving satisfactory leak proof test as per detailed Technical Specifications in the NIT to the satisfaction of Engineer In charge etc. complete.				
15.1	AMR Meter 50 mm	102	No		-
15.2	AMR Meter 80 mm	10	No		-
15.3	AMR Meter 100 mm	12	No		-
15.4	AMR Meter 150 mm	10	No		-
15.5	AMR Meter 200 mm	1	No		-
15.6	AMR Meter 300 mm	1	No		-
16	Cutting and chamfering the CI /DI pipes manually or mechanically of required length including all cost of material & labour etc. complete.				
16.1	100 mm Dia	12	No.		-
16.2	150 mm Dia	10	No		-
16.3	200 mm Dia	1	No.		-
16.4	300 mm Dia	1	No.		-
17	Providing DI fittings / Specials with internal cement lining & suitable for hydrostatic pressure as per IS, Flanged Socketed / Spigotted Tailpiece , double socket , bends , reducers, etc. at site of work as directed by Engineer-In-Charge etc. complete	2000	Kg		-
18	Supply of CI Mechanical Compression Collar Coupling (Popularly known as Jiffy Collar Coupling) suitable for C.I. spun Pipes (as per-IS-1536/2001) and D.I. Pipes (as per-IS-8329/2000) complete with sealing rubber gasket of S.B.R., C.I.Follower Glands and M.S. Nut Bolts. The whole assembly should be mechanically and hydraulically tested to the provisions as laid down in IS: 1538/1993. and as per detailed Technical Specifications in the NIT to the satisfaction of Engineer In charge etc. complete				
18.1	100 mm dia	12	No.		-
18.2	150 mm dia	10	No.		-
18.3	200 mm dia	1	No.		-
18.4	300 mm dia	1	No.		-

Item No.	Item/ Description	Quantity	Unit	Rate	Amount
19	Supply of mechanical Compression flanged /socket tailpiece (Popularly known as I Flanged/ Socket Tailpiece) suitable for making flanged connection with the plain barrel of C.I. Spun pipes and (as per- IS- 1536/ 2001) and D.I. pipes (as per IS: 8329/2000). The Tailpiece to be supplied complete with sealing rubber gasket of S.B.R, C.I. Follower Glands and M.S. Nut Bolts. The whole assembly should be mechanically and hydraulically tested to the provisions as laid down in IS: 1538/1993. and as per detailed technical specification provided in Vol - II 6.28.10				
19.1	100 mm dia	12	No.		-
19.2	150 mm dia	10	No.		-
19.3	200 mm dia	1	No.		-
19.4	300 mm dia	1	No.		-
20	Providing double flanged D.I. Glandless (resilient seated) manually operated Sluice Valve PN 1 with internal & external epoxy coating with testing as per IS 14846 and flanges confirming to IS 1538 including transportation up to site of work, unloading with the help of Chain pulley block, Crane & giving testing to work Pressure as per detailed Technical Specifications in the NIT to the satisfaction of Engineer In charge etc. complete. Note: Prior permission of Engineer-In-Charge should be taken before actual purchasing .				
20.1	Sluice Valve 100 mm dia PN1	12	No.		-
20.2	Sluice Valve 150 mm dia PN1	10	No.		-
20.3	Sluice Valve 200 mm dia PN1	1	No.		-
20.4	Sluice Valve 300 mm dia PN1	1	No.		-
21	Lowering, laying and jointing in position following C.I.D/F. reflux valves, Butterfly valves and Sluice valves including cost of all labour, jointing material, including nut bolts and giving satisfactory hydraulic testing, etc. complete. (Rate for all class of valves.) and as per detailed Technical Specifications in the NIT to the satisfaction of Engineer In charge .				
21.1	Sluice Valve 100 mm dia PN1	12	No.		-
21.2	Sluice Valve 150 mm dia PN1	10	No.		-
21.3	Sluice Valve 200 mm dia PN1	1	No.		-
21.4	Sluice Valve 300 mm dia PN1	1	No.		-
22	Providing & Constructing Brick Wall Masonry Chamber with 35 cm thick B.B. Masonry, M 150 proportion PCC bedding of 150 mm thick, including excavation. BB masonry in CM 1:5 proportion, with 20 mm cement plaster in C.M. 1:3 from inside & outside, precast RCC frame and cover of 150 mm Thick etc. complete as per detailed Technical Specifications in the NIT to the satisfaction of Engineer In charge etc. complete.	24	No.		-

Item No.	Item/ Description	Quantity	Unit	Rate	Amount
23	Providing and fixing ferrule of brass / gunmetal as per IS mark for old or new connection drilling, threading with all arrangement for lifting including satisfactory hydraulic testing as per detailed Technical Specifications in the NIT to the satisfaction of Engineer In charge etc. complete.				
23.1	Ferrule 15 mm	100045	No		-
23.2	Ferrule 20 mm	1079	No		-
23.3	Ferrule 25 mm	12000	No		-
23.4	Ferrule 40 mm	68	No		-
23.5	Ferrule 50 mm	102	No		-
24	Providing & Supply of Electro Fusion Fittings in accordance with BS EN12201: Part-3 suitable for drinking water with in black/ blue and as per detailed Technical Specifications in the NIT to the satisfaction of Engineer In charge etc. complete.				
24.1	Coupler				
24.2	20 mm	30014	No		-
24.3	25 mm	324	No		-
24.4	32 mm	3600	No		-
24.5	50 mm	20	No		-
24.6	63 mm	31	No		-
	Ferrule Tapping TEE				
24.7	110x1/2"	21010	No		-
24.8	110x3/4"	227	No		-
24.9	110x1"	2520	No		-
22.10	150x1/2"	6003	No		-
22.11	150x3/4"	65	No		-
22.12	150x1"	720	No		-
22.13	200xx1/2"	1501	No		-
22.14	200xx3/4"	16	No		-
22.15	200x1"	180	No		-
22.16	250xx1/2"	900	No		-
22.17	250x3/4"	10	No		-
22.18	250x1"	108	No		-
22.19	250x1.4"	10	No		-
22.20	250x2"	15	No		-
22.21	300xx1/2"	600	No		-
22.22	300xx3/4"	6	No		-
22.23	300x1"	72	No		-
22.24	300x1.4"	10	No		-
22.25	300x2"	16	No		-
	Elbow 90 deg				
22.26	20 mm	30014	No		-
22.27	25 mm	324	No		-
22.28	32 mm	3600	No		-
22.29	50 mm	20	No		-
22.30	63 mm	31	No		-

Item No.	Item/ Description	Quantity	Unit	Rate	Amount
25	Providing & supply compression fittings PN-1.6 rated in confirmation to ISO -14236 /2000, tested as per ISO 3459, ISO-3501 & ISO-3503, suitable for drinking water & approved by WRAS, UK / KIWA etc. in food grade polypropylene & inclusive of all costs such as testing, all taxes related to central, state & municipal inspection charges, transportation up to site, transit insurance, loading, unloading, stacking as per detailed Technical Specifications in the NIT to the satisfaction of Engineer In charge etc. complete.				
	Metal insert female adapter				
25.1	20 mm	30014	No		-
25.2	25 mm	324	No		-
25.3	32 mm	3600	No		-
25.4	50 mm	20	No		-
25.5	63 mm	31	No		-
26	Providing & supplying Ball valves etc com as per detailed Technical Specifications in the NIT to the satisfaction of Engineer In charge etc. complete.				
26.1	15 mm	30014	No.		-
26.2	20 mm	324	No.		-
26.3	25 mm	3600	No.		-
26.4	40 mm	20	No.		-
27	Providing & Supply Composite Strap Saddle of PE/PP or SS or combination of both for HouseService Connection (HSC)tapping on DI/Clpipelines as per detailed TechnicalSpecifications in the NIT to the satisfaction ofEngineer Incharge/ Consultant etc. complete				
27.1	100 mm	97462	No		-
27.2	150 mm	11333	No		-
27.3	200 mm	1133	No		-
27.4	250 mm	1133	No		-
27.5	300 mm	1133	No		-
27.6	400 mm	1133	No		-
28	Providing and Supplying Blue MDPE pipesconforming to ISO 4427:1996 manufacturedfrom virgin resin PE 80 Food grade compoundedRaw Material having Blue Color only withquality assurance certificate from qualityagencies like WRC / CIPET (India) / DVGM /KIWA / SPGN etc. for usage in Drinking Watersystem The cost shall include testing of allmaterials, all taxes Central, state , Municipal,Inspection charges, transportation up to site,transit insurance, loading, unloading, stackingetc. complete as specified in the NIT to thesatisfaction of Engineer In charge etc. complete.				
28.1	MDPE Pipe 20 mm PN 1.6 (SDR9)	1500675	Rmt		-
28.2	MDPE Pipe 25 mm PN 1.25 (SDR9)	16185	Rmt		-
28.3	MDPE Pipe 32 mm PN 1.25 (SDR9)	180000	Rmt		-
28.4	MDPE Pipe 50 mm PN 1.25 (SDR9)	1020	Rmt		-
28.5	MDPE Pipe 63 mm PN 1.0 (SDR9)	1530	Rmt		-

Item No.	Item/ Description	Quantity	Unit	Rate	Amount
29	Lowering, laying & jointing Blue MDPE Pipe unloading as specified in detailed Technical Specifications in the NIT to the satisfaction of Engineer In charge/ Consultant etc. complete.				
29.1	MDPE Pipe 20 mm	1500675	Rmt		-
29.2	MDPE Pipe 25 mm	16185	Rmt		-
29.3	MDPE Pipe 32 mm	180000	Rmt		-
29.4	MDPE Pipe 50 mm	1020	Rmt		-
29.5	MDPE Pipe 63 mm	1530	Rmt		-
30	Providing ISI mark G.I Pipe of following class and dia. including all local and central taxes, octroi, inspection charges, transportation to stores, etc. complete as per I.S 1239/2004. and as per detailed technical specification provided in Vol - II 6.28.21. as per detailed Technical Specifications in the NIT to the satisfaction of Engineer In charge etc. complete.				
30.1	Medium type				
30.2	15 mm	100045	Rmt		-
30.3	20 mm	1079	Rmt		-
30.4	25 mm	12000	Rmt		-
30.5	32 mm	68	Rmt		-
30.6	40 mm	102	Rmt		-
31	Software1: Supply of licenses and implementation of Metering, Billing, Collection, Customer Information System (CIS), Asset Management, Customer mobile App. (customer self service) Connections: 5, 00,000 Nos. Professional Users: 100 Nos. (including OEM Software Server -10nos. RAM -64 GB, Disk GB-800) as per detailed Technical Specifications in the NIT to the satisfaction of Engineer In charge etc. complete.	1	Nos		-
32	Software2: Supply and implementation Meter Data management System as per detailed Technical Specifications in the NIT to the satisfaction of Engineer In charge etc. complete.	1	Nos		-
	REINSTATEMENT OF THE ROAD				
33	Supplying 15 to 23 cm. Trap / Granite / quartzite / gneiss / laterite stone rubble at the road side including conveying & stacking etc. complete. and as per detailed technical specification provided in Vol - II 6.28.53	38236.725	Cum		-

Item No.	Item/ Description	Quantity	Unit	Rate	Amount
34	Providing, laying, spreading & compacting stone aggregates of specific sizes to Water bound macadam for... specification including spreading in uniform thickness, hand packing rolling with 3 wheeled stell/ vibratory roller 8-10 tonnes in stages to proper grade and camber, applying and brooming requisite type of screening/ binding Materials to fill up the interstices of coarse aggregate, watering and compacting to the required density to protect edges, lighting, guarding, barricading and maintenance of iversion etc. complete. As per technical specification CI No. 405A. as per detailed TechnicalSpecifications in the NIT to the satisfaction ofEngineer In charge etc. complete.	38236.725	Cum		-
35	Providing and laying bituminous macadam in 50/75 mm compacted thickness on prepared surface with specified graded crushed styone aggregates as per Table 500-4, grading-II for base/ binding Course, loading of aggrgate with F.E. loader, heating and mixing of stone aggrgate and bitumen in computerised hot mix plant, transported to site by tippers to paver, laid, over a previously repaired surface with paver finisher to the required grade, level and alignment an rolling with power roller and vibratory compactor as per clauses 501.6 and 501.7 to achieve the desired compaction complete as per clause 504 of MORT&H specification and including all material, labour, machinery, lighting, guarding and maintenance of diversion but excluding cost of primer/ tack coat. With Bitumen VG-grade 30 @ 3.4% (percentage by weight of total mix). With SCADA with fully automatic micro processor based PLC attachment. as per detailed TechnicalSpecifications in the NIT to the satisfaction ofEngineer In charge etc. complete.	38236.725	Sqm		-
36	Providing 25mm thick Premix bituminous carpet of 60/70 grade of bitumen including supplying all materials, preparing and cleaning the base heating bitumen, mixing hot bitumen and chips, laying the carpet layer and compacting etc. complete. (Using Bulk Asphalt). and as per detailed technical specification provided in Vol - II 6.28.56	254911.5	Sqm		-
37	Providing and laying bituminous tack coat, @... By manual/mechanical sprayer including supplying all materials, preparing the existing surface, heating bitumen and applying tack coat evenly on the surface etc. complete. (using 60/70 grade). and as per detailed technical specification provided in Vol - II 6.28.57				
37.1	A) @ 50 kg/100m ² over B.T. surface	254911.5	Sqm		-
37.2	B) @ 100 kg/100m ² over W.B.M. surface	254911.5	Sqm		-

Item No.	Item/ Description	Quantity	Unit	Rate	Amount
38	Providing and laying in situ, following grades of C.C. of trap/granite/quartzite/gneiss metal for foundation and bedding including dewatering, formwork, compacting and curing, finishing, etc. complete. M-25 For Road Surface as per detailed Technical Specifications in the NIT to the satisfaction of Engineer In charge etc. complete.	10196.46	Cum		-
39	Providing and laying 60mm thick factory made cement concrete interlocking paver block of M-30 grade made by block making machine with strong vibratory compaction and of approved size and design / shape laid in required colour and pattern over and including 50 mm thick compacted bed of coarse sand filling the joints with coarse sand etc. all complete as per the direction on Engineer -in-charge. as per detailed Technical Specifications in the NIT to the satisfaction of Engineer In charge etc. complete.	42485.25	Sqm		-
(B) Cost of Flow Meters, HSC and IT & Billing					-
(C) Operation & Maintenance					
40	Operation & Maintenance of Water Meters of all diameters from 15mm to 300mm for seven Years as per detailed specifications and to the satisfaction of Engineer In Charge.	113328	Nos.		-
(D) Annuity Payment					
41	Annuity Payment and as per detailed technical specification				
	Monthly Annuity Payment for of 30% (A+B)	84	Per Month		-
C O&M Cost					-

Price Bid Summary Sheet

SR.No	Description				Total Amount (Rs.) INR
1	(A) Consumer Survey & Consumer Awarves (Item No. 1 to 9)				
2	(B) Cost of Flow Meters, HSC and IT & Billing (Item No. 10 to 39)				
3	Total Cost (A+B)	In Figure			
		In Words			
4	(C) O & M Services Cost (Item no 40)				
5	(D) Annuity Payment (Item no-41)				
6	Evaluated Bid Price [(A+B)x0.70]+(C)+(D)	In Figure			
		In Words			