

# APPENDIX - 7 BOQ - IRRIGATION

## Part - A - SPRINKLER

Sr. No.	Item Description	Unit	Rate in Rs.
	<b>SPRINKLER , DRIP &amp; HYDRANT IRRIGATION SYSTEM</b>		
<b>1.0</b>	<b>Piping Network</b>		
	Providing of PVC pipes (IS:4985- 88), and fittings & Accessories like tees, elbows, bends, junctions, Reducers etc; as required/directed at site a) PVC Pipe 4" Sch 40	Mtr	780.00
1.1	b) PVC Pipe 3" Sch 40	Mtr	555.00
1.2	c) PVC Pipe 2.5" Sch 40	Mtr	426.00
1.3	d) PVC Pipe 75mm x 10kg/cm2	Mtr	312.00
1.4	e) PVC Pipe 63mm x 10kg/cm2	Mtr	218.00
1.5	f) PVC Pipe 040mm x 10 kg/cm2	Mtr	96.00
1.6	g) PVC Pipe 2" Sch 40	Mtr	261.00
1.7	h) PVC Pipe Sch 40 1"	Mtr	125.00
1.8	i) RCC Hume Pipe Half Round 3" to 6"	Mtr	325.00
<b>2.0</b>	Providing of Non-Potable Water Marked Rotary or Spray Pop-up sprinkler 4" (5 to 7 Mtr Radius) with Check Valve, Wiper Seal, Flow Shield complete with required nozzle	Nos	932.00
2.1	Providing of Swing Joint 1/2" with PP Clamp Saddle with Chromed Nut Bolt & Nitrile Rubber Gasket	Nos	235.00
2.2	Providing INLINE Drip Pressure Compensating 16mm 18" Spaced 2 to 3.5 LPH, 4 Bar Pressure Rating, 1.2mm Thickness, Brown Color	Mtr	42.00
2.3	17mm Insert Fittings - Brown Color - Take Off, Elbow, Tees, End Cap	Set	76.00
2.4	9" Long Lateral Hold Stake - MS Gavanized	Nos	14.00
2.5	Providing of 16 mm - 4 Bar Pressure Rating, 1.2mm Thickness, LEED Compliance, Brown Color, PE pipe -together with all required accessories.	Mtr	20.00
<b>3.0</b>	<b>Valves</b> <b>Providing of Various Valves with required Fittings &amp; Tapping PP Clamp Saddles with Chromed Nut Bolt &amp; Nitrile Rubber Ring</b>  a) Master Valve Diapharm Solenoid Valve Flanged 110mm (4)" PN 10	Nos	60,030.00
3.1	b) PVC Ball Valve 63mm PN 16	Nos	1,863.00
3.2	c) 1" Double Acting Air cum Vacuum Release Valve with GM Valve	Nos	4,071.00
3.3	d) Lockable Quick Coupling Hydrant valve 1" with Four Sets of Key & Sweilve Elbow	Nos	7,245.00
3.4	e) Rectangular Valve Box 12'	Nos	2,553.00
3.5	f) Round Valve Box 7"	Nos	1,035.00
3.6	g) Water Meter 4"	Nos	107,640.00
3.7	h) Non Return Valve 4"	Nos	13,110.00
3.8	i) Round Valve Box 10"	Nos	1,242.00
3.9	j) PVC Ball Valve 90mm	Nos	3,795.00
3.10	k) PVC Ball Valve 75mm	Nos	3,243.00
3.11	l) PVC Butter Fly Valve 4"	Nos	10,764.00
<b>4.0</b>	Automation Providing Automation Items for Irrigation with all its required accessories. a) Irrigation Controller 8 to 48 Station, Out Dorr, 230 VAC Unit, Capable of running 4 Independent Programs with Power Back up Lithium Coin-Cell Battery	Set	58,650.00
4.1	b) 2" Solenoid Valve - 2" BSP Female Threaded, Pressure - 1 to 10 Bar	Nos	7,800.00
4.2	c) Double Seathed Direct Barrier Irrigation Automation Cable 1.5 Sq.MM Black	Mtr	28.00
4.3	d) Votage Stabilizer 1 Kva	Nos	17,250.00
4.4	e) Weather Prrof Cable Connection DBY	Nos	207.00
4.5	f) Valve - Pressure Regulating	Nos	4,416.00
<b>5.00</b>	Filteration Unit Providing Fully Automatic Self Cleaing Filter, Pressure Differential Based, 80/110 Micron, Flanged End & all required Accesories a) Screen Filter Self Cleaning 3" - 40m3	Nos	77,050.00
5.1	b) Header Assembly 4"/ 6 " for Each Filter & Pump saction Made of Galavnized Pipes or PVC Sch 80 Pipe Fittings	Nos	53,130.00
5.2	c) Glycerene Filled Pressure Gauge 2" Dia	Nos	759.00
<b>6.0</b>	Pump Station - Providing, of VFD Based Pump Station giving flow of 9 lps at 35 m head complete Set (2 working + 1 stand By) with Pressure Tank, Panel & all required accessories.	Set	529,506.00

Sr. No.	Item Description	Unit	Rate in Rs.
7.0	Excavating, Laying, Joiting & Commissioning PVC Pipes from 250mm OD to 25mm OD, Trench Size minimum 600mm Deep for Main Lines, 300mm to 450mm Deep for Submain Lines, Backfilling with compaction and removing excess soil up to 50m Lead from site. Includes Installation & Commissioning of all Irrigation hardwares like Sprinklers, Dripper, Drip Lines, Valves, Saddles, Swing Joints, Valve Boxes, Filter Unit & Automation Items Complete as per drawing, specifications, instruction & directions of the Engineer-in-charge.	Mtr	141.00
7.1	Providing & Fixing Suitable Thrust Block for Main Line at Bend, Tee etc.	Nos	1,380.00
8.0	Operation & Maintenance of Irrigation System Daily Operation of Irrigation System by using Automation, Routine Check up of Pump Station, Cleaning of Screen Filter, Cehcking Cable Connection, Valves & Servicing them as per requirement. Attending minor repair works as & when required. Maintaining Daily Log sheet provided.	Months	9,660.00
8.1	SITC of Gear Drive Pop up Sprinkler 8-12 meter Radius Rotor with Check Valve of Rain Bird / Toro make	Nos	1,440.00
8.2	SITC of Spray Pop Up Sprinkler 3 to 5 Meter Radius of Rain Bird / Toro make	Nos	303.00
8.3	SITC of Swing Joing 3/4" of Rain Bird/Toro make	Nos	180.00
8.4	SITC of Swing Joint 1/2" of Rain Bird/Toro make	Nos	160.00
8.5	SITC of PP Clamp Saddle 3/4" PN 16 of Astore/Cepex make	Nos	105.00
8.6	SITC of PP Clamp Saddle 1/2" PN 16 of Astore/Cepex make	Nos	83.00
9.0	Bore well - Inclusive of Drilling , Devolving , Providing Casing Pipe , Pump, cable , Panel , Column Pipe etc. a complete borewell construction job a) Casing Pipe 8" Dia using MS / PVC Deep Well Pipe - Plain & Ribbed Screen	Meter	-
9.1	b) Column Pipe 4" Galvanized or uPVC Pipe	Meter	-
9.2	c) Submersible Pump V6 having discharge of 9 LPS @ 140 Mtr Head with Auto Level Panel with Centrifugal Seperator / Filter of 40m3	Nos	-
9.3	d) Pilot Drilling of 20" Dia, making of Pit, Gravel Providing & Packing, Loweing of Pipes, Compressor development using Top line Air Line, Lowring of Pump, Cable, Fixing of Auto Level Panel & other civil work	Job	-
9.4	e) Hot Deep Galvanised with Powder coated Header for Distrubution 4" including all required Fittings to connect with Valves on Water Supply Main Line	Nos	-
9.5	f) Dewatering Pump 4" Outlet, MOC – CI Pump Flow – 10 lps @ 12 m with Dischrge Line 4" & Valves	Nos	47,520.00
10.0	DWC / PE Crossing Sleeve Pipes 6"	Meter	638.00
10.1	DWC / PE Crossing Sleeve Pipes 4"	Meter	442.00
10.2	DWC / PE Crossing Sleeve Pipes 3"	Meter	355.00
<b>PART - B - PIPING</b>			
1.0	<b>Piping Network</b>  Providing of PVC pipes (ASTM STANDARD), and fittings & Accessories like tees, elbows, bends, junctions, Reducers with support claim at existing structure etc; as required/directed at site a) PVC Pipe 1.5" Sch 40	Mtr	240.00
1.1	b) PVC Pipe 1"" Sch 40	Mtr	180.00
1.2	c) LLDPE 16MM X 4KG/CM2	Mtr	120.00
1.3	PVC 110 mm x 6 Kg/cm2	mtr	540.00
	PVC 90 mm x 6 Kg/cm2	mtr	408.00
	PVC 75 mm x 6 Kg/cm2	mtr	288.00
	PVC 63 mm x 6 Kg/cm2	mtr	240.00
2.0	Providing of Fogger above hieght 2to8 mtr with support clamp/ wire with 28 LPH discharge at 4kg/cm2 pressure , spray pattern must be in mist form with Check Valve, wight block etc as per required/directed by engineer	Nos	240.00
3.0	Providing Pump with pressure switch , tank, & complete header with valve assembly with 1.5 LPS flow & 45 Mtr Head with accessories	L.S	24,600.00
4.0	Providing Disc type Filter of 7M3/hr flow with assembly PN -10 with accessories	Nos	10,200.00
5.0	Providing of Time Base Controller with neccessary arrangement as per require/ directed at site	Nos	5,400.00
6.0	<b>Valves</b> <b>Providing of Various Valves with required Fittings &amp; Tapping PP Clamp Saddles with Chromed Nut Bolt &amp; Nitrile Rubber Ring</b>  a) Diapharm Solenoid Valve  Flanged 1" PN 10	Nos	3,900.00
6.1	b) PVC Ball Valve 1" PN 16	Nos	1,500.00
6.2	c) 1" Double Acting Air cum Vacuum Release Valve with GM Valve	Nos	3,006.00
6.3	e) Rectangular Valve Box 12'	Nos	2,220.00
6.4	f) Round Valve Box 7"	Nos	900.00
6.5	g) Water Meter 1"	Nos	15,000.00
6.6	h) Non Return Valve 1.5"	Nos	2,700.00

Sr. No.	Item Description	Unit	Rate in Rs.
7.0	Excavating, Laying, Joiting & Commissioning PVC Pipes from 50mm OD to 25mm OD, Trench Size minimum 600mm Deep for Main Lines, 300mm to 450mm Deep for Submain Lines, Backfilling with compaction and removing excess soil up to 50m Lead from site. Includes Installation & Commissioning of all Items Complete as per drawing, specifications, instruction & directions of the Engineer-in-charge.	Mtr	126.00
8.0	Providing & fixing PVC Floor Trap OR multi floor trap of 75mm dia diameter, with necessary distance piece of 75mm dia pipe and 150 * 150 mm grating,making necessary SLAB/WALL holes and cutting wall,etc complete.( Supreme /Finolex/Prince/Astral Makes)		
8.1	110 mm x 75 mm	Nos.	619.00
8.2	110 mm x 50 mm	Nos.	540.00
8.3	110 mm x 110 mm	Nos.	840.00