GOVERNMENT OF TRIPURA DEPARTMENT OF AGRICULTURE (ENGINEERING WING)

200

HISTORY SHEET

Estimate No:- T.S No:-13(Thirteen)/CE / Agri/DA/MGNREGA/TS/2015-16/Dated 07/12/2015.

Name of Work:- Model Estimate for installation of Small Bore Deep Tube Well(SBDTW) for irrigation fitted with Submergible pump set having capacity 2000 GPH at 40m head including laying of 100m distribution pipe of 40m dia at different location in Tripura(RD schedule) under MGNREGA during 2015-16.

Department: Department of Agriculture.

Target :- 2500 Nos SBDTW for Department of Agriculture during 2015-16

Scheme: - MGNREGA

Administrative Approval & Expenditure Sanction: - As per communication of concerned DM & Collector.

Fund Available / Not Available: Available under MGNREGA Scheme during 2015-16.

Mention reference on which estimate is prepared: As per instruction of the Director of Agriculture, Govt. of Tripura vide his letter No.F.21(12)-Agri/SS/2015-16/2452-59 Dated, 04/12/2015 and subsequent decision taken in a meeting held in this regard on 04/12/2015 in the office chamber of the Joint Secretary to the Govt. of Tripura, RD Department.

Estimate is revised :- No.

If yes, mention the earlier T.S. No .:- Nil

REPORT

The estimate has been framed as per decision of the Director, Department of Agriculture, Agartala and subsequent discussion held in this regard on 04/12/2015 in the office chamber of the Joint Secretary to the Govt. of Tripura, RD Department. 6 % to 8% of labour component may be enhanced for North, Unokoti & Dhalai District depending upon the soil characteristic, site condition and depth of water bearing strata etc which may be considered with due regards to the governing factors during implementation of the work. All necessary items have been included in the estimate based on current RD approved rate (HPC approved rate), beside 3% for contingency & 1% for labour CESS considered in the estimate

Estimate cost:- Rs2,47,400 /- (Rupees Two Lac Forty Seven Thousand four hundred) only.

Schedule of Rate:- As per RD Schedule & latest RD approved rate (HPC approved rate).

Method: - Departmental Execution by Agriculture, Rural Development and TTAADC.

Availability of site: Available that to be finalized in consultation with and approval by the PRI Body.

Demarcation is done: - As per available site condition.

Tentative completion time: - January 2016 to May -2016 for 2500Nos and average 10 (Ten) days for Each

Soil Category: - Tripura Soil Condition...

Junior Engineer

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Name of work:- Model estimate for Installation of Small Bore Deep Tube Well for irrigation fitted with submersible pump set having capacity 2000 GPH at 40 mtr head in/c laying of 100 m distribution pipe of 40mm dia (1 Unit) at different location in Tripura (RD Schedule) under MGNREGA during 2015-16.

Specification

- 1) Size of well = 150 mm X 100 mm NB.
- 2) Depth of well = 87 mtr. = 285 fit.
- 3) Discharge of well = 3500 GPH.
- 4) Capacity of submersible pump set = 2 HP capacity having 2000 GPH at 40 mtr. Head
- 5) Delivery pipeline of pump set= 40 mm dia. G.I Pipe
- 6) Area to be irrigated = 1 hec. To 2.0 hec

Provision in the estimate for

- 1) Gravel packing throughout well.
- 2) Service connection (Extension) with earthen
- 3)100 mtr. Delivery pipe line in/c addl.30 mtr. faxable pipe
- 4) Complete panel board with KISOK box (MS sheet enclose)
- 5) Provision of (5+35) = 40 mtr. specific cable suitable for submersible pump set.
- 6) Casing pipe (150 mm) = 36 mtr,100 mm = 24 mtr.& strainer = 27 mtr. of 100 mm NB.

A) Materials component:

SI.	Item	Rate	Unit	Qty.	Amount
No.				For each wells	Each well
1.	150 mm dia NB UPVC 'CS' pipes conforming to IS: 12818: 1992 (Latest abembend) having capacity 10 kg/cm ² (Oriplast/Supreme/Jain irrigation/karon)	@ 622.00 (SOR- 2015 DWS)	Mtr.	36	22,392/-
2	100 mm dia NB UPVC pipe 'CM' pipes conforming to IS : 12818: 1992 (Latest abembend) having capacity 10 kg/cm² (Oriplast/Supreme/Jain irrigation/karon)	@ 348.00 (SOR- 2015 DWS)	Mtr.	24	8,352/-
3	100 mm NB UPVC 'RS' pipe conforming IS: 12818: 1992 (Latest abembend) having capacity 10 kg/cm ² (Oriplast/Supreme/Jain irrigation/karon)	@ 558.00 (SOR- 2015 DWS)	Mtr.	27.	15,066/-
4	40 mm dia NB G.I pipes medium class (TATA/Jindal make.) conforming IS: 1239	@ 288.50 (SOR- 2015 DWS)	Mtr.	27.30	7,876/-
5	Pea groves (2 - 4.75 effective size) (Durgapur) confirming to 1S: 4097	@ 7150.00 (SOR- 2015 DWS)	Cum	3.5	25,025/-
6	2 H.P submersible pump having capacity of 2000 GPH at 40 mtr. Head.) ISI marked of CRI / KSB / Worthington / Taxmo / Rubi /Kiloskar, Water cool)	@ 19,757.00 (LMR)	No.	1 .	19,757/-
7.	Single phase motor starter unit for 2 HP submersible pump set (with 2 pole contractor, running capacitor 50+ 50 MFD, starter capacitor 200/250 MFD, 1 No overload relay 18-25A adjustable type, volt meter (0-420V), Amps meter (0-150A), 1 No 25 Amps ON/OFF switch, 1 no. Indicating lamp etc of same brand of supplied pumps /C&S/BCH/L&T/Schneider make. (To be supplied with submersible pump set)	@ 3,200 (LMR)	Set	1	3,200/-

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8.	32 AMPS main switch (220 volts) (Re-wireable type) of Hevels/BCH/L&T make. (To be supplied with submersible pump set)	@ 1431.00 (LMR)	Set	1	1431/-
9.	PVC insulated 3 core flat copper cable conforming to relevant IS ccde suitable for submersible motor. (To be supplied with submersible pump set)	@ 102.01 (SOR-2015 DWS)	Mtr.	35	3,570/-
10.	Flexible pipe (waste fittings 40 mm dia)	@ 34.00 (SOR- 2015 DWS)	Mtr.	30	4500/-
11.	G.I Socket (40 mm dia.)	@ 38.10 (SOR-2015 DWS)	Nos.	21	800/-
12.	G.I Unequal Tee (50 X 50 X 40 mm dia.)	@ 126.70 (SOR- 2015 DWS)	Nos.	5	634/-
13.	G.I Equal Tee (40 X 40 x 40 mm dia.)	@ 76.20 (SOR- 2015 DWS)	No.	1	76/-
14.	G.I Union Joint. (40 mm dia.)	@ 107.60 (SOR- 2015 DWS)	No.	1	108/-
15.	G.I. Bend (40 mm dia.)	@ 177.90 (SOR- 2015 DWS)	Nos.	5	890/-
16.	G. I Reducer (50 X 40mm dia)	@ 71.50 (SOR- 2015 DWS)	No.	1	72/-
17.	G.I Full way valve (40 mm dia.)	@ 299.90 (SOR- 2015 DWS)	Nos.	5	1500/-
18.	G.I Safety climbs (100 mm dia.)	@ 350.00 (SOR- 2015 DWS)	No.	1	350/-
19.	UPVC Reducer (150 mm X 100 mm dia.) suitable for UPVC 'CM' casting or 'CS' casting or 'RS' pipes (confirming to IS: 12818)	@ 720.00 (SOR- 2015 DWS)	No.	1	720/-
20.	Housing clamp (150 mm dia.) [made with 12 mm thick MS Sheet) as per specification (IS: 2800 – Part-1]	@ 350.00 (LMR)	No.	1	350/-
21.	UPVC Bail plug Suitable for 113 mm outer dia. UPVC pipes	@ 200.00 (LMR)	No.	l	200/-
22.	UPVC pipe 50 mm OD (conforming to IS: 4985)	@ 63.00 (SOR- 2015 DWS)	Mtr.	100	6300/-
23.	UPVC Socket/ coupler conforming to IS: 10124 (Part-2)	@ 37.00 (SOR- 2015 DWS)	Nos.	50	1850/-
24.	UPVC end cap 50 mm dia. conforming to IS: 10124 (Part-2)	@ 35.00 (SOR- 2015 DWS)	No.	I	35/-
25.	UPVC end cap 140 mm dia. conforming to IS: 10124 (Part-4)	@ 125.00 (SOR- 2015 DWS)	No.	1	125/-
26.	Barak Bamboo	@ 250.00 (LMR)	Nos.	3	750/-

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27.	Muli Bamboo	@ 20.00 Nos. (LMR)	10	200/-		
28.	Coir Rope	@ 75.00 Kg. (LMR)	1	75/-		
29.	Teflon Tape	@ 30.00 Nos. (LMR)	4	120/-		
30.	Plumber	@ 300.00 Kg. (LRM)	2.5	750/-		
31.	40 mm dia 150 mtr. long G.I Nipple	@ 41.00 Nos. (LMR)	4	164/-		
32.	Solvent cement conforming to IS: 14182	@ 180.00 Kg. (SOR- 2015 DWS)	1/2	90/-		
33.	Cement	@ 6.80 Kg (SOR- 2015 DWS)	10	68/-		
34.	Nuts & Bolts.	@ 86.00 Kg. (SOR- 2015 DWS)	1/2	43/-		
35.	PVC insulation Tap.	@ 11.70 No. (SOR- 2015 DWS)	2	23/-		
36.	Rubber insertion 3 mm thick. 100 mm dia.	@ 18.10 No. (SOR- 2015 DWS)	2	36/-		
		SUB TOTAL OF (A) 1,2				
		Add:- 15% enhanced cost over basic rate of SOR-2015, DWS for overheads, contractors profit & haula (on item no. 1,2, 3,4,5,9,10,11,12,13,14,15,16,17, 18, 19,22,23,24, 25, 31,32,33,34,35 & 36) (on Rs.1,00)		15,075/-		
		Add:- 10% enhanced cost over Local Market Rate (on item no.6,7,8,20,21,25,26,27,28,29,30,31) (on Rs.26		2,700/-		
		TOTAL	OF (A)	1,45,273/-		

NB:- Rates of different materials considered in the estimate is indicative & during implementation all rates to be finalized observing the codal formalities as per DFPRT-2011. Issue rates of R.D approved items shall be followed for the materials to be lifted from R.D store.

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B) Manpower component:

SI.	Description Unit		Cost of unit as per RD	Requirement	Amount	
No.	× , •		Schedule	Per well	Cost of each well	
1.	Highly skilled	No.	Rs.290.00	37.00	10,370/-	
2.	Skilled	No.	Rs.254.00	102.00	25,908/-	
3.	Semi skilled	No.	Rs.218.00	75.00	16,350/-	
4.	Unskilled	No.	Rs.189.00	139.00	26,271/-	
	TOTAL OF (B) (Wages comp	onent for Kh	owai, Sepahijala, West, So	outh & Gomati District)	78,899/-	
	NB: - Wages component @6% to 8% @ may be enhanced for North, Unakoti & Dhalai District depending upon the location of SBDTW and soil condition.					

C) <u>Usage charges of Plant & Machineries and important tools.</u>

S1.	Description of Plant & Machineries	Rate	Target	Cost of each well
No.				
1.	Supplying & fitting fixing of M.S. (18 SWG) KIOSK (size 1200 mm length x 450 mm width x height 450 mm) fitted four side s lope roof filled with 4 Nos. support of 40 mm X 40 mm (6mm thick) MS angle, 1.00 mtr. Length from the top level of concrete base embedded in 1:2:4 cement concrete base (size 300mm X 300 mm X 600mm) with proper locking arrangement and coated with anti corrosive paint (both inside and outside) including necessary provision for fitting fixing of single phase motor starter unit, main switch, energy meter etc complete in all respect as per direction of the Engg-in-charge.	5,000/-	I Job	5,000/-
2.	Extension of Electric Service connection with providing 30 mtr. length of LT Line including providing & fixing GI Pipe of 40 mm. dia Tata medium class of 3 mtr. Length fitted in the CC Block 1:2:4 of 300mm X 300mm X 500 mm as per direction of the Engg-In-Charge.	4,000/-	1 Job	4,000/-
3.	Trial run & commissioning of the scheme in all respect as per direction of the Engg-In-Charge.	1,000/-	1 Job	1,000/-
4.	Hiring of diesel pump.	88/-	2 Hr.	176/-
5.	Hiring of chain pully, chain etc.	118/-	4 Hr.	472/-
6.	Hiring of air compressor. 300-450 cfm for use in SBDTW for washing & development of well.	1,480/-	2 Hr.	2,960/-
7.	Hiring of Theader for G.I. Pipes	59/-	2 Hr.	118/-
8.	Hiring of water tank.6.00 kilo litre capacity.	298/-	2 Hr.	596/-

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Sub Total of (C)	14,322/-
Add:-15% ennanced cost over basic rate of SOR-2015, DWS for overheads contractors profit etc. (on item no. 4,5,6,7 & 8) [on Rs.4,322/-]	648/-
Add:- 10% enhanced cost due to escalation of price of materials at the time of execution of work.	1,000/-
Total of (C)	15,970/-
Total $(A + B + C)$	2,40,142/-
Add:- 3% contingency for carriage of materials at FOR destination and others (on Rs.1,61,243/-)	4,837/-
Add:- 1% labour cess (on Rs.2,40,142/-)	2,401/-
Grand Total	2,47,380/-
Say Rs.2,47,000/-	
(Rupees two lacs forty seven thousand) only	

Prepared by Mchaknabon !! 07,12.2015

A. Chakraborti

07/12/2015

r.r. A. Chakraborti, BE (M) Jumar Engineer (Mech.) Gr.-1, Oto, the Chief Engineer (Agri.) Tripura, Agartala

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Name of work:- Model estimate for Installation of Small Bore Deep Tube Well for irrigation fitted with submersible pump set having capacity 2000 GPH at 40 mtr head in/c laying of 100 m distribution pipe of 40mm dia (1 Unit) at different location in Tripura (RD Schedule) under MGNREGA during 2015-16.

- 1) Size of well = 150 mm X 100 mm NB.
- 2) Depth of well = 87 mtr. = 285 fit.
- 3) Discharge of well = 3500 GPH.
- 4) Capacity of submersible pump set = 2000 GPH at 40 mtr. head having 2 HP capacity.
- 5) Delivery of pipeline = 40 mm dia.

SI. No.	Item & Specification	Materials Quantity	Labour Quantity
1.	Construction of Barak Bamboo scaffolding for drilling & lowing of the tube-well in/c cutting a tank 2.00 m X 2.00 m X 0.90 m size in drilling & cutting the two tank with 0.30 m width & 0.15 m deep drain. 1) 1 Job	Barak Bamboo 3 Nos. Muli Bamboo = 10 Nos. Coir rope = 1 Kg.	Highly skilled = 0.75 No Skilled = 0.95 No. Unskilled = 2 Nos.
-2.	Drilling & Boring of pilot hole in any soil strata by manual means collection of soil samples of different strata met with during drilling at various suitable levels, preservation of samples in polythene Bags sample boxes and disposed of excess soil on mud including the cost for water etc as required to maintain the project hole properly as per specification & direction of the Engg-in-change. 1) 100 mm dia, N B - 90.00 m /per well	Water = 21.6 KL. Water Tank = 7.2 hr. Collection samples = 1% of materials cost. Sundries = 0.15% of materials cost. Carriage of materials = 2.5%	Highly skilled = 2 (Nos.) Skilled =21 Nos. Semi skilled =21 Nos. Unskilled=21 Nos.
3.	Reaming the pilot hole to an enlarged bore hole in any soil strata by manual means, disposal of excess soil an mud, including the cost of water etc as required to maintain the bore hole properly as per specification and direction of the Engineering – in – Charge. 1) For 100 mm dia pilot Hole to 250mm Bore Hole 90.00m/per well	Water = 21.6 KL. Water Tank = 6.72 hr. Sundries = 0.15% of materials cost. Carriage of materials = 2.5%	Highly skilled = 2 Nos Skilled = 20.16 Nos. Semi skilled = 20.16 Nos Unskilled = 20.16 Nos
4.	Providing & lowering of UPVC pipe as per IS: 12818 after washing of the bore hole by manual means as per specification & direction of the Engg-In-Charge.		

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	A. 'CS' Casing Pipe. i)150 mm dia NB	36 (Thirty six) mtr	Highly skilled =3 Nos. Skilled = 20 Nos. Semi skilled = 20 Nos. Unskilled = 10 Nos.
	ii)'CM' Casing Pipe. 100 mtr dia NB	24 (Twenty four) mtr	Highly skilled = 2 Nos. Skilled = 4 Nos. Semi skilled = 4 Nos. Unskilled =4 Nos.
	B. 'RS' strainer pipe 100 dia nominal bore	27 (Twenty seven) mtr	Highly skilled = 2 Nos. Skilled = 6 Nos. Semi skilled = 6 Nos. Unskilled = 4 Nos.
5.	Development & washing the tube-well by using air compressor (diesel operated) until sand free clear water is available as per direction of the Engg-in-charge 1 Job.	Hiring charge of hand pump = 30% Sundries = 0.15% Water charge = 1% Carriage of materials = 2.5%	Highly skilled = 1.75 Nos. Skilled = 1.75 Nos. Semi skilled = 4 Nos. Unskilled = 2 Nos.
6.	Providing & shrouding of deep tube well assembly with washed pea gravels (2.00 -4.75 mm effective size) as per specification (IS: 4097) and direction of the Engg-in-charge. 1) Pea gravels obtained from Golaghati.	4 (four) cum	Highly skilled = 3 (Nos) Skilled = 10 (Nos) Unskilled = 20 (nos)
7. (A)	Providing and fitting fixing of submersible pump having capacity of 2000 GPH, 40 mtr. head with single phase 2HP submersible motor(water filled) suitable for 150 mm X 100 mm bore well as per direction of the Enggin-charge.(CRI/KSB/Worthington/ Taxmo / Lubi /Kirloskar). 1) 1 set.	l set.	Highly skilled = 2 (Nos) Skilled = 2 (Nos) Unskilled = 2 (nos)
7. (B)	Providing & fitting fixing with PVC insulated 3 core flat copper cable conforming to relevant IS code for submersible motor with necessary equipments and fittings as required as per specification and direction of the Engineer-in-Charge. 21mtr length 3 core copper PVC insulated industrial type flat cable (2.5 Square mm size) confirming to IS: 694 complete in all respect.	21mtr length (3 core copper PVC insulated industrial type flat cable) (2.5 Square mm size)	Highly skilled = 2 (Nos) Skilled = 2 (Nos) Unskilled = 2 (nos)

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8.	Providing, fitting fixing, lowering, positioning & resting of 40mm dia G.I. column pipe (medium class) both end threaded (maximum length of	G.I. Pipe = 21 mtr. G.I socket = 21 Nos.	Highly skilled =2 (Nos) Skilled = 4 (Nos)
	each column pipe is 3mtr and total 21 mtr long column assembly) in/c.	S.1 300Ret - 21 1103.	Unskilled = 4 (nos)
	fitting fixing of necessary GI socket with submersible pump set by		
	taplon and other compounding materials etc. complete in all respect as		
	per direction of the Engg-in-charge. 1) 21 mtr per scheme = 21 mtrs		
9.	Supplying & fitting fixing of M.S. (18 SWG) KIOSK (size 1200 mm	1 No. M.S. (18 SWG) KIOSK	Highly skilled = 2 (Nos)
	length x 450 mm width x height 450 mm) fitted four side slope roof filled	(size 1200 mm length x 450	Skilled = 2 (Nos)
	with 4 Nos. support of 40 mm X 40 mm (6mm thick) MS angle, 1.00 mtr.	mm width x height 450 mm)	Unskilled = 2 (nos)
	Length from the top level of concrete base embedded in 1:2:4 cement concrete base (size 300mm X 300 mm X 600mm) with proper locking		
	arrangement and coated with anti corrosive paint (both inside and		
	outside) including necessary provision for fitting fixing of single phase		
	motor starter unit, main switch, energy meter etc complete in all respect		
	as per direction of the Engg-in-charge.		
	1) 1 Job	3.6	TY 11 111 1 2 2 1
10.	Supply & fitting fixing of single phase motor starter Unit for 2 Hp submersible Pump set (with 2 pole contractor, Running capacitor 50+ 50	i) Strarter = 1 Set complete (Suitable for 2 HP submersible	Highly skilled = 2 (Nos) Skilled = 2 (Nos)
	MFD, starter capacitor 200/250 MFD, 1 No overload relay 18-25A	pump set consisting of 2 pole	Unskilled = $2.(nos)$
	adjustable type, volt meter (0-420V), Amps meter (0-150A), 1 No 25	contractor, Running capacitor	
	Amps ON/OFF switch, 1 no. Indicating lamp etc of same brand of	50+ 50 MFD, starter capacitor	
	supplied pumps /C&S/BCH/L&T/Schneider make and 32 AMPS main	200/250 MFD, 1 No overload	
	switch (220 volts) (Re-wireable type) of Hevels/BCH/L&T make in/c	relay 18-25A adjustable type, volt meter (0-420V), Amps	
	necessary electrical wiring in the KIOSK and G.I Pipe earthing as per	meter (0-150A), 1 No 25 Amps	
	electrical rules etc. complete as per direction of the Engg-In-Charge.	ON/OFF switch, 1 no.	
	1) 1 Job	Indicating lamp etc)	
		ii) 32 AMPS main switch – 1	
11.	Extension of Electric Service connection with providing 30 mtr. length of	No.	l Job.
11.	LT Line including providing & fixing GI Pipe of 40 mm. dia Tata		I JOD.
	medium class of 3 mtr. Length fitted in the CC Block 1:2:4 of 300mm X		
	300mm X 500 mm as per direction of the Engg-In-Charge. 1 Job.		

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12.	Providing and fixing of UPVC reducer for UPVC 'CM" casing or "CS"	1 No. UPVC reducer having	Highly skilled = 0.50 No
	casing or "RS" Pipes as specification and direction of the Engg-In-	size 150 mm X 100 mm	Unskilled = 1 No
	Charge. 150 mm X 100 mm size.		
	1) 1 X 1= 1 No		
13.	Providing and fixing of UPVC bail plug suitable for 113 mm outer dia	1 No. UPVC bail plug	Highly skilled = 0.50 Nos
	UPVC pipes as per direction of the Engg-In-Charge.		Unskilled $= 1$ no
	1) 1 X 1 = 1 No.		
14.	Providing and fixing of housing clamp (made with 12 mm thick MS	1 No. housing clamp (made	Highly skilled = 0.50 No
	Sheet) by welding with blind pipe in/c applying of anti-corrosive	with 12 mm thick MS Sheet)	Unskilled $= 1$ No.
	bitumastic paint as per specification (1S: 2800-Part-I) and direction of	having size 150mm dia. NB	
	Engg-In-Charge.		
	(a)Size :- 150mm dia. Nominal bore		9
	1) 1 X 1 = 1 no.		
15.	Providing and fixing of UPVC end Cap suitable for UPVAC 'CM' casing	1 No. UPVC end Cap having	Highly skilled = 0.50 No
	or 'CS' casing or 'RS' pipes as per specification and direction of Engg-	size 150mm dia. NB	Unskilled = 1 no.
	In-Charge.		
	(a)150 mm dia, nominal bore		
	1) 1 X 1 = 1 no.		
16.	Providing and fixing of safety clamp with submersible pump set as per	1 No. safety clamp having size	Highly skilled = 0.50 (Nos)
	direction of Engg-In-Charge.	100 mm dia,	Unskilled = 1 (nos)
	100 mm dia,	,	
	1) 1 X 1 = 1 No		
17.	Providing & laying of Cement concrete 1: 2: 4 (1 Cement: 2 river sand	Cement - 0.175 Cum	Highly skilled = 0.50 (Nos)
,	: 4 jhama bricks aggregate 20 mm nominal size) excluding cost of		Skilled = 1 (Nos)
	centering, shuttering, finishing & reinforcement – all work up to plinth		Unskilled = 2 numbers (nos)
	level.	*	,
	1) 0.175 Cum per scheme= 0.175 Cum		
18.	Excavation trenches of required width for pipe, cables etc. including	100 mts	Unskilled = 20 (nos)
	excavation sockets and dressing of sides where required, ramming of		
	bottom depth up to 1.5 mtr. Including getting out the excavated soil and		*
	back filling of soil as required after laying of pipeline, In Layers not		
	exceeding 200 mm in depth including consolidating each deposited Layer		
	by ramming, watering etc. and disposing of surplus excavated soil with		
	all required leads as per chapter -2 of CPWD specification and direction	*	*
	an required leads as per chapter -2 of Cr wb specification and direction		

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	of Engg-in-Charge.		
	A. For U. PVC Pipe in new work. a. In all kinds of Soil.		
	i) for Pipes not exceeding 90 mm dia 151 mtr. Per scheme =100 mtr.		
19.	Providing, fixing and laying rigid UPVC Pipe conforming to IS: 4985 jointing with couplers of same class conforming to IS: 10124 (Par I=II) with solvent cement conforming to IS: 14182 including testing of joints. Complete (but excluding the cost of specials like bend, tees etc. per chapter-20 of CPWD specification and direction of the Engg-In-Charge. a) 50 mm dia (Working presence 2.5 kg/cm ²)	UPVC Pipe having size -50 mm dia - 150 mtr.	Highly skilled = 2 (Nos) Skilled = 2 (Nos) Unskilled = 4 (nos)
20.	Providing, fixing and laying fabricated UPVC end Cap conforming to IS: 10124 (Part-4) with solvent Cement conforming to IS: 14182 including testing of joints complete as per chapter 20 of CPWD specification and direction of the Engg-In-Charge. 1) 50 mm dia. 2 Nos. X 1 = 2 Nos.	UPVC end Cap having size 50 mm dia – 2 Nos.	Highly skilled = 0.50 (No) Skilled =0.75 No Unskilled = 2 (Nos)
21.	Providing and fixing G.I Unequal Tee with the pipeline including testing of joints complete as per CPWD specification and direction of the Engg-In- charge. 1) 50mmx50mm x 40mmdia 5X 1 = 5 nos.	G.I Unequal Tee having size 50mmx50mm x 40mmdia - 5 Nos.	Highly skilled = 0.50 (No) Skilled =0.75 No Unskilled = 2 (no)
22.	Labour changes for making G.I short piece in/e cutting, threading at both end, fitting fixing at site etc. as specification and the direction of the Engg-In- change. (G.I pipes will be supplied separately). a) External work: 40mmdia NB 6mtr x 1 = 6mtr	6 m	Highly skilled = 0.50 (Nos) Skilled =0.75 No Unskilled = 1 nos
24.	Labour Charges for fitting fixing of hydrant point with GI short pieces including connection with distribution pipe lines as per direction of the Engg-In- charge . 1) 4 Nos.	4 nos.	Highly skilled = 0.75 (Nos) Skilled = 1 (Nos) Unskilled = 1 (nos)
25.	Providing and fixing G.I union as per CPWD specification and direction of the Engg-In- change. 1) 40mmdis 1No	G.I union having size 40 mm dia – 1 No.	Highly skilled = 0.75 (Nos) Unskilled = 1 (nos)

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26.	Providing and fixing of G.I equal tee with the pipeline in/c testing of	G.I equal tee having size	Highly skilled = 0.75 (Nos)
×	joints completed as per CPWD specification and direction of Engg-In-	40mmdiax40mmdiax40mmdia.	Unskilled = 1 (nos)
	charge	- 1 No.	
	1) 40mmdiax40mmdiax40mmdia.		
	I No.	CIDI/-II I :	Hi-l-L -1:11-1-0.75 (N)-X
27.	Providing and fitting fixing of G.I Bend / elbow in the pipelines in/c testing the joints, complete as per direction of the Engg-In- change.	G.I Bend / elbow having size 40mmdia NB - 5 Nos.	Highly skilled = 0.75 (Nos) Unskilled = 1 (nos)
	1) 40mmdia NB	40IIIIIIIIII NB - 3 NOS.	Oliskilled – I (lios)
	5 Nos.		
28.	Providing and fitting G.I reducer with pipe line including testing of joints	G.I reducer having size 50 mm	Highly skilled = 0.75 (Nos)
20.	complete as per CPWD specification and direction of the Engg-In-	X 40 mm – 1 No.	Unskilled = 1 (nos)
	change.		()
	1) Size: 50 mm X 40 mm		15
	1 No.		
29.	Providing and fitting fixing of GI full way valve as per chapter -20 of	GI full way valve having size	Highly skilled = 1 (No)
	CPWD specification & direction of the Engg-In- charge.	40 mm dia. – 5 Nos.	Skilled labour = 1 No.
	Size 40 mm dia.	30	Unskilled = 2 (nos)
	1) 4 Nos.		
30.	Painting G.I pipes and fittings with synthetic enamel paint over a ready		Skilled labour = 0.75 No.
	mixed priming coot, both of approved quality for new work as per CPWD		Unskilled = 1 (nos)
	specification and direction of the Engg-In- Charge.		
	1) 40mmdia NB. 6mtr	21.1	G : 1:11 1 2 ()
31.	Providing, fixing & testing of 40 mm dia nylon rubber coated flexible	Nylon rubber coated flexible	Semi skilled = 2 (nos)
	pipe (suprime) as per direction of the Engineer-in-charge.	pipe (suprime) having size 40 mm dia. – 30 mtr.	*
22	1) 1x30m = 30 m		Semi skilled = 2 (nos)
32.	Providing and fitting, fixing of 40mm dia clamp (approved quality) with 40mm dia nylon rubber coated flexible pipe as per direction of the	40mm dia clamp (approved quality) – 1 No.	Seini Skined – Z (1108)
	Engineer-in-charge.	quanty) = 1 No.	
	1) 1 nos.		. A
33.	Trail run & commissioning of the scheme in all respect as per direction of		Highly skilled = 0.50 No.
	the Engg-In-Charge.	. 18	Skilled labour = 1 No.
	1) 1 job.		Unskilled = 1 No.

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Tripura, Agartala