प्रतिवेदन

प्रस्तुत प्राक्कलन Rain Water Harvesting Structure का निर्माण मुख्यतः छत से बेकार बह रहे वर्षा जल को रोकना, एवं सतह पर रूके हुए वर्षा जल को हाइजीनिक (Hygienic) तरीके से संग्रह कर उन स्थलों के Subsoil/ groundwater जल स्तर को recharge करने हेतु तैयार किया गया है।

प्राक्कलन में Recharge pit का व्यास 6 फीट एवं 6 फीट गहरा जालीनुमा ईट जोड़ाई का कार्य प्रावधानित है। Recharge pit में वर्षा जल को filter करने हेतु Gravel के टुकड़े का उपयोग 3 फीट गहराई में किया गया है। वर्षा जल को छत से recharge pit तक पहुँचाने के लिये 10 मीटर PVC Pipe का प्रावधान किया गया है।

प्रस्तुत प्राक्कलन में अंकित दर वर्तमान अनुसूचित दर 01.07.2018 एवं ग्रामीण विकास विभाग के पत्रांक (N) 273 दिनांक 06.03.2020 पर तैयार किया गया है। इसमें अकुशल मजदूरी दर 194/– (एक सौ चौरानबे) रूपये प्रति मजदूर रखा गया है।

8.07.20

(सहायक अभियंता)

सहायक अभियंता
मुख्य अभियंत्त कार्यालय
ग्रामीण विकास विशेष प्रक्षेत्र, राँची

03/07/2020

(कार्यपालक अभियंता)

कार्यपालक अभियन्ता
ग्रामीण विकास विभाग
ग्रामीण कार्य मामले

Detailed estimate for construction of Roof Top Rainwater Harvesting Structure

S.No	Description of work with Measurement	Qty	Unit	Rate (Rs.)	Amount (Rs.)
1. SoR/BCD-2018(5.1.1+ 5.1.2)	Earth work excavation in the foundation trenches -do-all complete job as per specification and direction of E/I.	8.21	Cum	120.53	989.20
	Recharge Pit- π ¼X7'²X6'0"=230.79 cft.				
	Pipe Laying - 19.68 X1.5'X2'= 59.04 cft				
	Total Qty = (230.79+59.04)=289.83 cft				
2. SoR/BCD-2018 (5.1.10)	Providing Coarse Clean Sand filling in the Foundation trenches including Cost of watering -do-all complete job as per specification and direction of E/I.	1.09	Cum	223.35	243.50
	Recharge Pit :-π ¼X7'²X 0'3"=38.5 cft.				
3. SoR/BCD-2018 (5.6.3)	Providing designation 75- B Brick Flat Soling and joints Filled with local Sand -do-all complete job as per Specification and direction of E/I.	0.90	sqm	231.26	208.84
	Recharge Pit :-π x7'5"x5" =9.72 Sft.				
4. SoR/BCD-2018 (5.2.6)	Providing designation 75 B brick work in C.M. (1:6) in foundation and plinth with approved quality of clean coarse sand of F.M. 2 to 2.5 including providing 10 mm thick mortar joints , cost fo screening materials, raking out joints to 15 mm depth, curing, taxes and royalty all complete as per building specification and direction of E/I	1.14	Cum	3750.37	4258.25
	Recharge Pit :-π x7'5"x5"x5'6"=53.46 cft.				
	Perforated B/W=75% of 53.46 cft. = 40.10cft				
5. SoR/BCD-2018 (5.3.2)	Providing P.C.C. M-15 with nominal mix of Conc.(1:2:4) on the foundation and copping -do-all complete job as per specification and direction of E/I.	0.040	Cum	5358.83	213.12
	Copping of Recharge Pit :-π X6'5"X5"X0'2" =1.404Cft.				
7. SoR/BCD-2018 (5.3.5)	Providng precast R.C.C. M-150 with nominal mix of Conc. 1:2:4 with approved quality of stone chips in the slab -do-all complete job as per specification and d irection of E/I.	0.36	Cum	5358.83	1926.17
	π ¼ X7'0"²x0'4"=12.693 Cft.				
8. SoR/BCD-2018 (5.5.5)(ii)	Providing tor steel reinforcement with cutting bending and fixing -do-all complete job as per specification and direction of E/I.	0.03	Kg	63762.52	1618.73
	2 kg/cft				
9. DSR-2019 (12.41.2)	Providing and fixing on wall face unplasticised Rigid PVC rain water pipes conforming to IS ; 13592 Type A, including jointing with seal ring conforming to IS : 5382, leaving10 mm gap for thermal expansion, (i) Single socketed pipes. (110 mm dia)	10	M	262.22	2622.20
	Total Amount				12080.01
	Less C.P & OHC@13.04%			13.04%	1575.23
	Sub-Total				10504.77

10. SoR/BCD-2018 (Sl. No-9 pg -25)	Supplying, filling, spreading & leveling stone metal of Gr.II as filter media in recharge pit do all complete job as per direction of engineer in-charge.	2.40	cum	534.4	1284.10
	Bottom Layer- π ¼X6²X3'0"=84.85 cft				
11. DSR-2019 (17.29)	Providing and fixing 100 mm sand cast Iron grating for gully trap at the inlet and outlet of the PVC rain water pipe do all complete job as per direction of Engineer in-charge	2	no	33.32	66.64
12 .SoR/BCD-2018 (Sl.No-35(i) pg -30)	Providing D-Handel made of 16 mm wide and 6 mm thick aluminium flat -do-all complete job as per specification and direction of E/I.	4	no	27.88	111.52
	As per MGNREGA SoR **Deduction(-)** for Extra Cost of Labour=(237.38-194=43.38)	24.44	md	43.38	(-) 1060.00
	Addition (+) for applicable rate of Skilled Lbaour required i.e. Rs 379.51- Rs 327.81=Rs.51.70	1.72		51.7	(+) 51.70
	Total Amount				10958.74
13	Add Carriage of Material (Transportation cost shoul be paid as per actual lead)				
	(i) Cement+Steel(5P) in MT	0.222	MT	142.21	31.62
	(ii) Sand(5P) in cum	1.673	cum	142.21	237.87
	(iii) Chips(5P) in cum	0.359	cum	227.53	81.75
	(iv) Bricks(5P) in Thousand	0.490	Thousand	568.83	278.91
	Sub-Total				11,588.89
14	Add G.S.T			12%	1390.67
	Total Amount		Amount		13,258.48
15	**Provision as As per MGNREGA**				
15(i)	Labour for drinking water & child creche	1	md	194	194
15(ii)	Mate @ 20 unskld persondays/ no.()	1	no	287.9	287.90
	Sub-Total				13,740.38
	Say				13,740.00
16	**Contingencies**				
	(I) C.I.B. (Wall Writing)		L.S.	500	500
	(II) First Aid Box		L.S.	50	50
	(III) Photography		L.S.	50	50
	(IV) Temperory Shed		L.S.	50	50
	Total Amount (Rs.)				14,390.00
	Labour Component =	**35.91**	%		
	Material Component =	**64.09**	%		
	Total Mandays generated=MD	**25**			

Technical Approval is accorded for Rs 14,390=00
(Rupees Fourteen Thousand Three Hundred and Ninty Only.)

8.07.20
Assistant Engineer
सहायक अभियंता
मुख्य अभियंता कार्यालय
ग्रामीण विकास विशेष प्रक्षेत्र, राँची

09/07/2020
Executive Engineer
कार्यपालक अभियन्ता
ग्रामीण विकास विभाग
ग्रामीण कार्य मामले

Labour & Material Abstract

Sl. No.	Item of work	Qty	Unit	Cement (bag)	Sand (cum)	Chips (cum)	Mason	Labour	Brick
1	E/w in Excavation	8.21	cum					19.1	
2	Sand filling	1.09	cum		1.090			0.4	
3	P.c.c (1:2:4)	0.40	cum	2.59	0.180	0.359	0.47	1.8	
4	B/F/S	0.90	sqm		0.014		0.05	0.1	29
5	Brick work(1:6)	1.14	cum	1.86	0.389		1.20	2.4	461
	Total			**4.45**	**1.673**	**0.359**	**2**	**24**	**490**

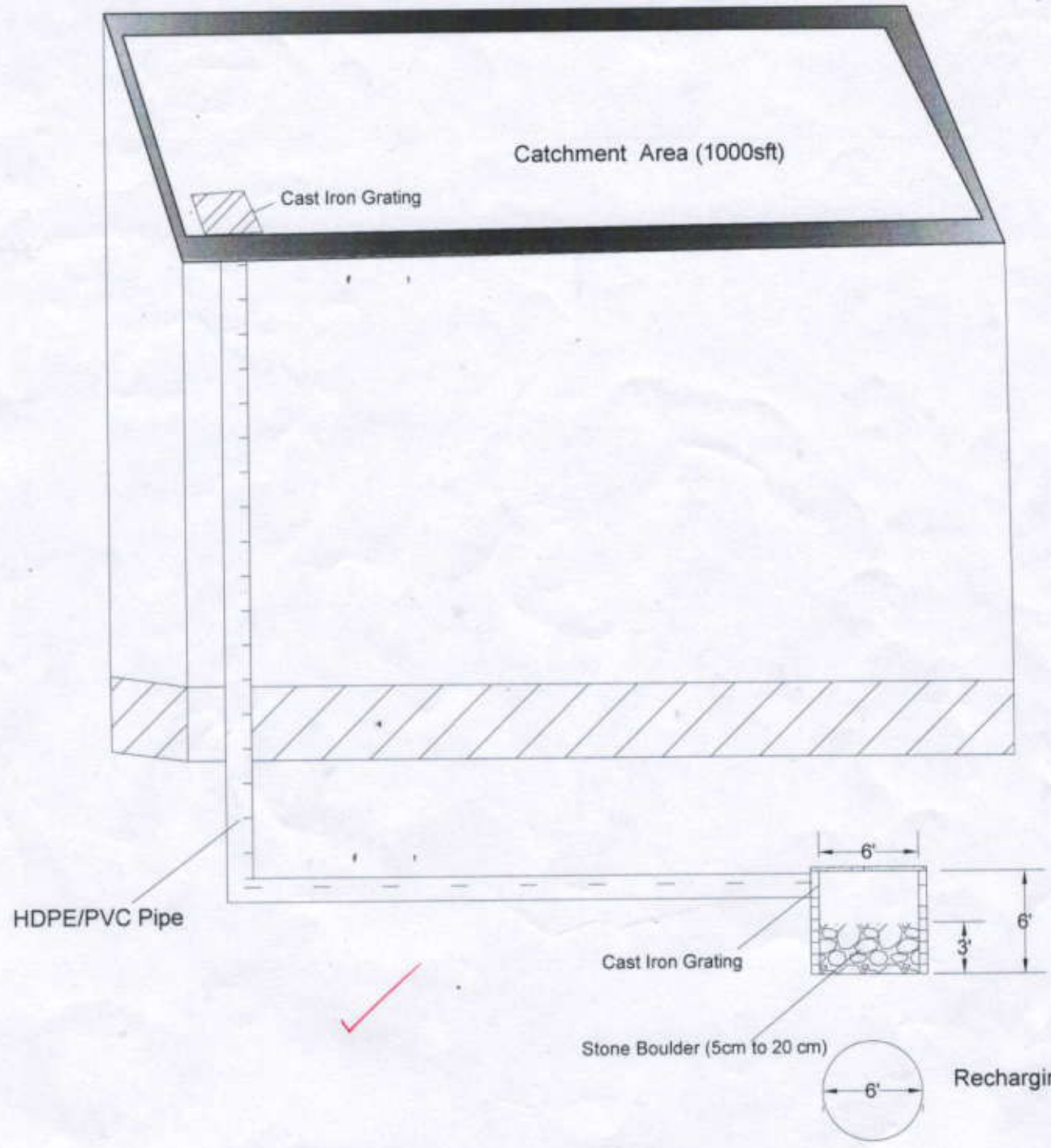


Fig:- Roof Top Rain Water Harvesting Structure