AFFORDABLE GROUP HOUSING COLONY OVER AN AREA MEASURING 11.11875 ACRES IN SECTOR -7 SOHNA (LICENCE NO 182 OF 2024 DATED 10.12.2024)

DEVELOPED BY ROF INFRATECH & HOUSING PVT LTD

ESTIMATE FOR PROVIDING WATER SUPPLY.SEWERAGE. STORM WATER DRAINAGE, ROADS,STREET LIGHTING AND HORTICULTURE IN RESPECT OF AFFORDABLE GROUP HOUSING COLONY OVER AN AREA MEASURING 11.11875 ACRES IN SECTOR -7 SOHNA (LICENCE NO 182 OF 2024 DATED 10.12.2024) .

Gurugram is a town and municipal corporation in the Gurugram district of the state of Haryana, India. It is a part of the National Capital Region (NCR) of Delhi. Its proximity to the burgeoning city of Gurgaon has in recent years caused its character and demographics to change dramatically. It has many factories, offices, hotels, IT parks and educational institutes. There are several sightseeing spots around the area, some overlapping with Gurgaon. Sohna is 41 kilometres from Indira Gandhi International Airport and is located on National Highway 48, making it well connected with Delhi, Gurgaon, Rewari, Dharuhera, Jaipur, Ahmedabad and Mumbai.

PROJECT REPORT/ESTIMATE FOR PROVIDING WATER SUPPLY, SEWERAGE, STROM WATER DRAINAGE, ROADS, STREET LIGHTING AND HORTICULURE IN RESPECT OF AFFORDABLE GROUP HOUSING COLONY OVER AN AREA MEASURING 11.11875 ACRES IN SECTOR -7 SOHNA (LICENCE NO 182 OF 2024 DATED 10.12.2024).

The Haryana Government has prepared a master plan for development of Residential/Industrial/ Commercial urban estate Gurugram. Project is developed by M/s ROF Infratech & Housing Pvt Ltd. They have decided to develop the area in this master plan as a Residential Group Housing colony and has named this part as Retirement Housing Colony for an area measuring 11.11875 Acres in the Sector-7, Sohna, Haryana.

Water Supply

1 **Source**

The source of water supply in this area is from **HSVP** how ever tubewells shall be proposed for Emergency if permission will get from CGWA. At present water supply is from HSVP municipal supply and tanker supply is sweet and fit for human consumption. However in borewell water is available at reasonable depth. The average yield of tubewell with 40-45 ft strainers will be about 20,000 litre per hour. The recharging of underground water table in this belt is stated to be good. However still we shall resort to rain water harvesting system to keep up the recharging system. The number of tubewells required for the above area has been worked out and the tubewells will be bored after the permission from CGWA in tune with growth of demand. The ultimate requirement of tubewells includes provisions of 10% stand by. Ultimately, water shall be supplied to the Project by **HARYANA SHAHARI VIKAS PRADHIKARAN, GURUGRAM, HARYANA.**

2 **Design**

The scheme has been designed for approved population of **9455 persons in 11.11875 acres**. The rate of water supply per head per day has been taken as 172.5 litres (150+15%) as per NBC 2016 / HSVP norms. in addition to above necessary provision of water for coomercial area, parks etc. have been taken into account for calculating the maximum quantity of water requirement.

3 **Pumping Equipments**

It has been proposed to install pumping set as described with standby of equal capacity. The provision for standby generating set has been provided in case of any electricity failure. Generator will be provided separately or added to the capacity of main generator.

4 **Under Ground Storage**

Underground storage tank provision has been made for **800KL** capacity. in 4 compartments, which caters for the raw, domestic as well as for firefighting requirement. The water from fire compartment shall overflow to the raw water compartment so that the water in the fire compartment always remain fresh.

5 **Boosting Station**

A boosting station having monoblock centrifugal pump set is planned near under ground reservior to pump water from domestic/ treated under ground water tank to over head water tank provided at terrace.

6 **Distribution System**

The distribution system for this development has been designed to supply @ 155.25 litre per head her day @ 2.5 times the average rate of flow on 'Hazen william' formula with C-140. Necessary provision for laying D.I. pipe K-7 conforming to relevent IS standards along with valves and specials has been made in the project. The minimum terminal head at any point will be more than 30.00 meters so thet it can serve the stilt and four floors stories construction envisaged in the plan. Minimum pipe dia for distribution is kept as 100 mm dia for domestic water supply.

7 **Rising Mains**

Rising mains from HSVP water main or sector road to water works have also been designed and provision for 100 mm dia D.I. pipe line (dia as/ design) has been made in this estimate.

8 **Sewerage**

This scheme is designed for sewer connecting to the proposed sewage treatment plant. The sewage system has been marked on the respsctive plans.
The sewer lines have been designed for 3 times average DWF in relation to the water supply demand assuming that 80% of water supply shall find its way into the propoesd sewer. uPVC SH 80 pipe sewers have been proposed and designed to run half full. The sewers have been designed on 0.75 M per second minimum velocity i.e. self cleansing velocity Necessary provision for laying DWC HDPE SN8 pipes and manholes etc. has been made in this estimate.

Size/ Shape of Manholes

As per IS 4111:1986 "Circular type of manholes are much stronger than rectangular and arch type manholes thus these type of manholes are preferred over rectangular as well as arch type manholes. However both rectangular and circular type of manholes are propsed to be provided. The brick masonary rectangular manhole is proposed to be provided for depth upto 0.9m.

The brick masonry/ concrete circular manholes are proposed to be provided for all depth exceeding 0.9 m upwards. Circular manholes are strsaight down in lower portion and slanting on top portion so as to narrow down the top opening equal to internal dia of manhole cover.

Depending on the depth of manhole, brick circular manhole of dia 910, 1220, 1520, 1820 mm dia are proposed to be provided.

9 **Storm Water Drainage**

The storm water is designed to carry 6.25 mm rainfall per hour or 0.123 cusecs per acre as discharge. Also suitable provisions are contemplated in our scheme to ensure better recarging of underground water table in the area. Underground R.C.C. pipe drain with minimum 400 mm dia are proposed to be provided in this area with circular manhole.

Necessary design statement for entire storm water system has been prepared and attached with estiamte.

10 **Rain Water Harvesting**

The main emphasis on recharging the underground aquifers and safe disposal of storm water with flooding the site has been laid in designing/ planning of storm water drainage system. Rain water harvesting are proposed to be provided.

11 **Roads**

The roads are proposed to be provided in the retirement housing in such a way that main 9 m wide road connects with 24 m sector road. Internal service of the roads of the colony 6m wide provide approach for construction of roads. Detailed calculation of the various item of works have been made on the basis of the detail design of the roads as approved by Chief Engineer HSVP, Gurugram.

12 **Street Lighting**

Street lighting system has been designed to provide illumination of 15 to 20 lux on roads. Street lights are provided on 6 m high steel tubular poles are located on one side of 6.0m & 9.0 m wide road. Luminaries with 65 watts LED lights are proposed to be provided for achieving the desired illumination.

13 **Horticulture**

Provision of road side plantation of trees with tree guards has been made for all roads.The parks shall be developed by providing lawns & ornamental trees with tree guards.

14 **Specifications :**

The work will be carried out in accordance with the standard sprcification of P.H. Department as laid down by HSVP & Haryana Government.

15 **Rates**

Estimate for providing services in this pocket has been prepared on the recent HSVP rates.

16 **Cost**

The total cost of development in this project including various P.H. and B & R services works out to **Rs. ~~1332.97~~ 2039.81 Lacs** which includes 3% contingency and PE charges and 49% departmental charges also.

The cost per gross acre for this phase works out to App. **Rs. ~~119.89~~ 183.46 Lacs/acre** which covers the provision of services like water supply, sewerage, storm water drainage, roads, street lighting and plantations including plantations maintenance thereof as well as future expansion whatsoever indicated.

	DESIGN CALCULATION		**For 11.11875 Acres**	**Unit**	
	Daily water requirement		**Acres**		
	Total No. of Units		1891	Nos	
	Population per Units		5	Person/DU	
1	Therefore population Units		9455	Persons	
		SAY	9455	Persons	
	Total daily Water requirement for person (135 LPCD + 15%)	@	155.25	LPCD	
			Domestic @ 65%	Flushing @ 35%	
			954127.69	513761.06	LPD
		Or Say	**954.20**	**513.80**	**KLD (1)**
2	**Non Residential building water requirement**				
a	No. of commercial area		1	No.	
	Daily water requirement	@	32000	Ltrs/Acre/day	
	Area of commercial		0.221975	Acre	
	Daily water requirement	@	20800	11200	Ltrs/Acre/day
	Therefore daily water requirement		4617.08	2486.12	lit/day
		Or Say	**4.62**	**2.49**	KLD
b	No. of community centre		1	No.	
	Daily water requirement	@	25000	Ltrs/Acre/day	
	Area of commercial		0.101605	Acre	
	Daily water requirement	@	16250	8750	Ltrs/Acre/day
	Therefore daily water requirement		1651.08	889.05	lit/day
		Or Say	**1.65**	**0.89**	KLD
	Total 2 (a+b)		**6.27**	**3.38**	**KLD (2)**
3	Area under Parks		1.5200	Acre	
	Daily water requirement	@	25000	lit/acre/day	
	Therefore daily water requirement			38000	lit/day
				38.00	KLD
4	Area under Roads		3.5	Acre	
	Daily water requirement	@	5000	lit/acre/day	
	Therefore daily water requirement			17500	lit/day
				17.50	KLD
		Total		**55.50**	**KLD**
I	**Total daily requirement**				
a)	For (1+2)		960.47	517.18	KLD
b)	Under Road+ Parks (3+4)		0.00	55.50	KLD
	Total Daily Requirement		960.47	572.68	KLD
		Or Say	**961.00**	**573.00**	**KLD**
II	**Tubewell**				
	Assuming working hours of tubewells		**16**	hours	
	Assuming discharge/hour of each tubewell		**20**	KL/hours	
	Total domestic water requirment		**961**	**KLD**	
	No. of tubewells required		3.00	Nos.	
	Add 10% standby		0.30		
		Total	3.30	Nos.	
		Proposed	3.0 ~~4.0~~	Nos.	

So It is proposed ~~4~~ 3 nos. of tubewell if permission will get from from CGWA. The provision of ~~4~~ 3 nos. of tubewell has been made in the estimate because the water demand for flushing, horticulture and the road washing purpose is to be met from re circulated after treatment at STP and ultimate water supply is to be provided by HSVP.

III	**Pumping machinery for tubewell**				
a)	Gross working load	=	45.00	m	
b)	Average Fall in S.L	=	3.05	m	
c)	Depression head	=	6.10	m	
d)	Friction loss	=	2.50	m	
		=	56.65	m	
	Say	=	60.00	m	
	BHP = (20x1000x60)/(60x60x75x0.6)	=	7.41	HP	
	With 60% efficiency **Proposed**		**7.50**	HP	

It is proposed to install **4 no. Submersible pumping set** with a discharge of **20000 ltr./hour (335 lpm) driven with 7.5 HP** electric motor.

IV	**Underground Tank**					
	Daily requirement for domestic use and other except fire fighting		=		**960.47**	KLD
	Capacity of under ground tank 14 hr storage except fire fighting @ 60% storage requirement		=		**576.28**	KLD
		Say	=		**600.00**	KLD
	Total Population in DU		=		**9455**	Person
	Fire Tank Capacity as 100 x [sqrt(2534) /1000] x ~~1/3~~		=	307.48	~~102.50~~	KLD
		Say	=	310	~~200.00~~	KLD
		Total		910	~~800.00~~	**KLD**

It is proposed to provide 1 no. under ground tank of capacity ~~800~~ **KL** which also includes ~~200~~ **KL** capacity for **fire fighting**.
Tank will have four compartments, Two for fire, one for raw and one for domestic use. The water first enters the fire compartment, then over flows to the domestic water use compartment so that the water in the fire compartment shall remain fresh.

It is proposed to provide under ground tank of following capacity

a)	Capacity of Fire tank-1	155	~~100.00~~	KLD
b)	Capacity of Fire tank-2	155	~~100.00~~	KLD
c)	Capacity of Raw tank		**300.00**	KLD
d)	Capacity of Domestic tank		**300.00**	KLD

V BOOSTING MACHINERY (Drinking water)
UG. Tank

a) Filter Feed Pump

	Daily requirement for domestic use	=	960.47	KLD
	Assuming 12 hours running 2 pumps (with one standby)			
	Discharge/hour	=	40.02	KL/HR
			666.99	LPM
		Or Say	670.00	LPM
	Head of pump			
i)	Suction lifts	=	0.0	m
ii)	Friction loss in M<main & specials	=	0.0	m
iii)	Clear head	=	30.0	m
		=	30.0	m
	Say	=	30.0	m
	BHP of motor (670*30)/(60*75*0.6)	=	7.44	HP
		Or Say	7.5	HP

b) Domestic Water Transfer Pump

	Daily requirement for domestic use	=	960.47	KLD
	Assuming 8 hours running 2 pumps (with one standby)			
	Discharge/hour	=	60.03	KL/HR
			1000.49	LPM
		Or Say	1000.00	LPM
	Head of pump			
i)	Suction lifts	=	3.0	m
ii)	Friction loss in M<main & specials	=	7.5	m
iii)	Clear head	=	47.6	m
iv)	Residual head	=	10.0	m
		=	68.1	m
	Say	=	70.0	m
	BHP of motor (1000*70)/(60*75*0.6)	=	25.93	HP
		Or Say	25.0	HP

VI	**Gen Set**	Nos.	HP			
a)	Raw Water Transfer Pump	2	7.5	=	15.0	HP
b)	Domestic Water Transfer Pump	2	25.0	=	50	HP
c)	Flushing Water Transfer Pump	2	~~15.0~~ 17.50	=	~~30~~ 35	HP
d)	Tubewell	3	7.5	=	~~30~~ 22.50	HP
e)	Lighting		7.5	=	7.5	HP
					~~132.5~~ 130.0	HP
			or ~~132~~5 x 0.746 x 1.50		~~148.3~~ 145.47	KVA
			Say		~~150~~ 150.0	KVA

130.0

5	**Sewage Treatment Plant capacity**				
	Gross domestic + Flushing water requirement/day			1477.6 5	KLD
	Sewage flow will be 80% of total load			1182.11	KLD
	STP Capacity required			1182.11	KLD
	Add 5% for marginal factor			59.10	
	STP Capacity (Or Say)			1200.00 1241.22 SAY 1250 KLD	KLD
VII	**STP Treated Tank**				
	Daily requirement for flushing, horticulture, road washing	=		572.68	KLD
	Capacity of under ground tank 14 hr storage @60% storage	=		343.61	KLD
	Say	=		350.00	KLD
VIII	**BOOSTING MACHINERY (Flushing water)**				
	STP			572.68	
	Daily requirement for Flushing & Horticulture use		=	~~555.18~~	KLD
	Assuming 8 hours running 2 pumps (with one standby)			35.79	
	Discharge/hour		=	~~34.70~~	KL/HR
				596.50 ~~578.31~~	LPM
			Or Say	600.0 ~~580.00~~	LPM
	Head of pump				
i)	Suction lifts		=	3.0	m
ii)	Friction loss in M<main & specials		=	7.5	m
iii)	Clear head		=	47.6	m
iv)	Residual head		=	10.0	m
			=	68.1	m
	Say		=	70.0	m
	BHP of motor (~~580~~ 600*70)/(60*75*0.6)		=	~~15.0~~ 15.55	HP
			Or Say	~~15.0~~ 17.50	HP

FINAL ABSTRACT OF COST

	Amount (Lacs.) For 11.11875 Acre
Sub Work 1- Water Supply	Rs. 554.93
Sub Work 2- Sewerage	Rs. 377.34
Sub Work 3- S.W. Drainage	Rs. 175.92
Sub Work 4- Roads	Rs. 449.04
Sub Work 5- Street Lighting	Rs. 42.66
Sub Work 6- Horticulture	Rs. 9.24
Sub Work 7- Maintenance of services for 10 years including resurfacing of roads after 1st 5 years & II. Phase i.e. 10 years maintenance (as per HSVP norms)	Rs. 430.68
TOTAL	Rs. 2039.81

COST Rs. 2039.81 Lac. = Rs. 183.46 Lac.
ACRE 11.11875 Acre

Director
Town & Country Planning
Haryana

Checked subject to Comments
In forwarding letter No. 18483
Dt. 16/01/2026 .....and notes
Attached with the estimate

Executive Engineer (M)
for Chief Engineer-I
HSVP, Panchkula

Beniara Associates Pvt. Ltd.
MEP
Consultant
SARAI, NEW DELHI 110030

Executive Engineer,
HSVP, Division No. VI,
Gurugram

Superintending Engineer,
HSVP, Circle-I, Gurugram

Executive Engineer,
HSVP, Division No. VI,
Gurugram

Director
Town & Country Planning
Haryana

FINAL ABSTRACT OF COST

	Amount (Lacs.) For 11.11875 Ac
Sub Work 1- Water Supply	~~543.00~~ 554.93
Sub Work 2- Sewerage	~~361.80~~ 377.34
Sub Work 3- S.W. Drainage	~~152.12~~ 175.92
Sub Work 4- Roads	~~96.12~~ 449.04
Sub Work 5- Street Lighting	42.66
Sub Work 6- Horticulture	9.24
Sub Work 7- Maintenance of services for 10 years including resurfacing of roads after 1st 5 years & II. Phase i.e. 10 years maintenance (as per HSVP norms)	~~128.03~~ 430.68
TOTAL COST / ACRE	~~1332.97~~ 2039.81 lacs ~~119.89~~ Rs 2039.81 lacs / 11.11875 Acres = Rs 183.46 lacs

Executive Engineer
HSVP Division No. VI
Gurugram

Superintending Engineer,
HSVP Circle-I, Gurugram

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Executive Engineer (M)
for Chief Engineer-I
HSVP, Panchkula

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हरियाणा शहरी विकास प्राधिकरण
HARYANA SHEHARI
VIKAS PRADHIKARAN

Address: C-3, HSVP , HQ Sector-6
Panchkula

C.E.I-No. 18483
Dated: 16/01/2026
Annexure-A

SUB:- **Request for approval of service plan estimate for setting up of Affordable Group Housing Colony over an area measuring 11.11875 acres situated in revenue estate of Village Sohna, Sector-7, Tehsil-Sohna, District-Gurugram being developed by M/s ROF Infratech & Housing Pvt. Ltd. (Licence no. 182 of 2024 dated 10.12.2024).**

Technical note and comments:-

1. All detailed working drawings would have to be prepared by the colonizer for Integrating the internal services proposals with the master proposals of town.
2. The correctness of the levels will be the sole, responsibility of the colonizer for the integration of internal proposals, with the master proposals, of town and will be got confirmed before execution.
3. The material to be used shall the same specifications as are being adopted by HSVP and further shall also confirm to such directions, as issued by Chief Engineer, HSVP from time to time.
4. The work shall be carried out according to Haryana PWD specification or such specifications as are being followed by HSVP. Further it shall also confirm to such other directions, as are issued by Chief Engineer, HSVP from time to time.
5. The colonizer will be fully responsible to meet the demand of water supply and allied services till such time these are made available by State Government/ HSVP. All link connections with the State Government/ HSVP system and services will be done by the colonizer. If necessary extra tube-wells shall also be installed to meet extra demand of water beyond the provision according to EDC deposited.
6. Structural design & drawings of all the structures, such as pump chamber, boosting chamber, RCC OHSR underground tanks quarters, manholes chamber, sections of RCC pipes sewer and SW pipes, sewer, ventilating shafts for sewerage and Masonry Ventilation Chamber for Chamber for storm water drainage, temporary disposal/ arrangement etc. will be as per relevant I.S codes and PWD specifications; colonizer himself will be responsible for structural stability of all structures.
7. Potability of water will be checked and confirmed and the tube-wells will be put into operation after getting chemical analysis of water tested.

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हरियाणा शहरी विकास प्राधिकरण

HARYANA SHEHARI VIKAS PRADHIKARAN

Address: C-3, HSVP , HQ Sector-6
Panchkula

8. Only D.I pipes will be used in water supply and flushing system, UPVC/ HDPE pipe for irrigation purposes.
9. A minimum 100 & 150mm i/d/D.I (K-7), 200mm i/d SW and 400mm id RCC NP-3 pipes will be used for water supply, sewerage and storm water drainage respectively.
10. Standard X-section for S.W. pipes sewer, RCC pipes sewer etc. will be followed as are being adopted in Haryana Public Health Engineering Deptt. or HSVP. If needed, the same may be sought by the colonizer from concerned Executive Engineer of HSVP.
11. The developer may be directed to get the Sewage Treatment Plant (STP) got designed from a Govt. Institute like IIT, NIT etc. so as to ensure that the technology adopted by him is appropriate. He must take this action before construction of STP and submit documentary proof for the same at the time of grant of occupation certificate. The efficacy of such STP shall be checked randomly by the concerned Regional Officer of HSPCB.
12. The X-section, width of roads, will be followed as approved by the Chief Town Planner, Haryana, Chandigarh. The kerbs and channels will also be provided as per approved X-section and specifications. If needed, the same may be sought by the colonizer from concerned Executive Engineer of HSVP.
13. The specifications for various roads will be followed as per IRC/MORTH specifications.
14. The wiring system of street lighting and specifications of street lighting fixture will be as per relevant standards.
15. This shall confirm to such other conditions as are incorporated in the approved estimate and the letter of approval.

Executive Engineer (M),
For Chief Administrator, HSVP,
Panchkula.

WATER SUPPLY HEAD		Amount (Lacs.) For 11.11875 Ac
Sub Head 1- Head Works		~~145.75~~ 143.30
Sub Head 2- Pumping Machinery		~~50.20~~ 66.50
Sub Head 3- Distribution System	Dom. + Flushing + Rising main	42.93 ✓
Sub Head 4- Irrigation scheme		15.~~53~~
Sub Head 5- Fire Scheme		93.33 ~~99.64~~
Total		~~353.95~~ 361.59
Add 3% Contingencies & PE Charge		~~10.62~~ 10.85
Add 49% Departmental Charges		~~364.57~~ 372.44 ~~178.64~~ 182.49
	TOTAL	~~543.21~~ 554.93
(CO to final abstract of cost)	SAY	~~543.00~~

Sub Head I

Water Supply
Head Works
Rs.(lakhs)

S. No.	Description	Unit	Qty	Rate	Amount
1	Boring and installing 510 mm i/d tubewells with reverse/direct rotary rig complete with pipe strainer to a depth of about 80m. complete.	Nos.	3	1500000.00	~~60.00~~ 45.0
2	Constructing pump chambers as per standard design of PWD PH/HSVP of size 1.50x1.50 m.	Nos.	3	100000.00	~~3~~.00
3	Construction of boosting chambers of suitable size along with under ground tank pumping machinery and generating set etc. complete in all respects. Details of boosting station				
i)	construction of boosting chamber			LS	5.00
ii)	construction of UG Tank (Raw Tank- 300 KL + Dom Tank 3~~0~~ KL + Fire Tank ~~10~~ KL X ~~2~~ nos. + Flushing Tank 350 KL near STP Separately. 310	KL.	1260 ~~1150~~ KLD	5500.00	~~63.25~~ 69.30
4	Provision for carriage of material and other unforeseen items .	LS		LS	2.00
5	Provision for boundary wall around T.W. & water works	LS		LS	3.00
6	Provision for footpath, lawn, headers etc as TW .	LS		LS	1.00
7	Provision for facilities staff for Maintenance. 2 No. 350	LS		LS	15.0 ~~7.50~~ 143.30 lacs
	(C.O. to abstract of cost of Sub-work No.I)			**TOTAL**	~~145.75~~
				SAY	~~145.75~~

Sub Work I
Sub Head No. II

Water Supply
Pumping Machinery
Amount (Rs.)
(in Lakhs)

S. No.	Description	Unit	Qty	Rate	
1	Providing and installing electricity driven electro or submersible pumping set capable of delivering about 20 KL water per hour against a total head of 60 M complete with motor and other accessories.	Nos.	3	200000.00	6.00
2	Provision for cheap pressure type chlorination plant complete.			LS	1.00
3	Provision for making foundations & erection of pumping machinery.			LS	2.00
4	Provision for pipes, valves & specials inside the pump chamber.			LS	1.50
5	Provision for electric services connection including electric fittings for tubewells chambers complete. Including cost of trasfermer.			LS	2.50
6	Providing and installing electricity driven pumping set, capable of delivering 670 LPM of water at 30M head complete in all respects. (For Filter Feed Pump) (7.5 HP) (2 working + 1 standby)	~~Nos.~~ Each	3 No	150000.00	4.50 ~~5.40~~
7	Providing and installing electricity driven pumping set, capable of delivering 1000 LPM of water at 70M head complete in all respects. (25 HP) (Domestic Water Transfer Pump) (2 working + 1 standby)	Each ~~Nos.~~	3 No	5.0 ~~250000.00~~	15.0 ~~7.50~~
8	Providing and installing electricity driven pumping set, capable of delivering ~~600~~ 1000 LPM of water at 70M head complete in all respects. (~~15~~ 17.50 HP) (Flushing Water Transfer Pump) (2 working + 1 standby)	Each Nos.	(2+1) 3 No	3.50 lac ~~210000.00~~	10.50 ~~6.30~~
9	Provision of diesel generator set of each for standby arrangements for booster pump complete with gear head arrangements of following capacities 150 KVA.	150 KVA	1 SOUND KVA LS		22.50 ~~15.00~~
10	Provision for carriage of materials and other unforeseen items.			LS	1.00
	(C.O. to abstract of cost of Sub-work No.I)			**TOTAL**	~~50.20~~ 66.50
				SAY	~~50.20~~

Sub Work I
Sub Head No. III

Water Supply
Distribution System/Rising Main
Dom + Flushing

S. No.	Description	Unit	Qty	Rate	IN LACS
1	Providing, laying, jointing & testing D.I. K-9 pipes including cost of excavation complete as per ISI marked. (For Domestic & Flushing water supply line)				
i)	100 mm dia (811+827)	M	1638	1475.00	24.16
i)	150 mm dia	M	56	2040.00	1.14
2	Providing, laying, jointing & testing D.I. K-9 pipes including cost of excavation complete as per ISI marked. (For borewell line)				
i)	100 mm dia	M	230	1475.00	3.39
3	Providing and fixing butterfly valves including cost brick masonary chambers complete in all respects.				
i)	100 mm i/d	Nos.	18	12000.00	2.16
ii)	150 mm i/d	Nos.	3	15000.00	0.45
4	Providing and fixing 100 mm dia NRV including cost of valve chambers complete in all respects.				
i)	150 mmm dia	Nos.	2	15000.00	0.30
5	Providing and fixing air valves and scour valves including cost of valve chambers complete in all respects.	Nos.	2	10000.00	0.20
6	Providing and fixing indicating plates for sluice valve, air valve etc.	Nos.	22	2000.00	0.44
7	Provision for carriage of material			LS	3.00
8	Provision for cutting the roads and making to its original condition			LS	2.00
9	Making water supply connection			LS	2.00
10	Provision for rising main from HSVP water supply line to UG Tank				
i)	100 mm dia (DI Pipe K-9)	M	250	1475.00	3.69
	(C.O. to abstract of cost of Sub-work No.I)			**TOTAL**	**42.93**
				SAY	**42.93**

Sub Work I

Sub Head No. IV

Water Supply

Irrigation

S. No.	Description	Unit	Qty	Rate	IN LACS
1	Providing, laying, jointing & testing HDPE PE-80 pipes including cost of excavation complete as per ISI marked.				
i)	25 mm dia	M	36	300.00	0.108
ii)	65 mm dia	M	1629	830.00	13.521
2	Providing & fixing 20 mm PVC Irrigation hydrant valve with PVC lid complete in all respect including cost of PVC keys	Nos.	36	5000.00	1.80
	Prov. for carriage of material & other unforeseen items			(L.S.)	0.10
	(C.O. to abstract of cost of Sub-work No.I)			TOTAL	~~15.43~~
				SAY	~~15.43~~ 15.53

Sub Work I — **Water Supply**
Sub Head No. V — **Fire Fighting**

S. No.	Description	Unit	Qty	Rate	IN LACS
1	Providing laying, testing & commissioning of 'C' class heavy duty MS Pipe conforming to IS 1239/Class -II of IS: 3589 i/c fittings like elbows, tees, flanges, tapers, nuts bolts, gaskets etc. in ground including welding, excavation & providing cement concrete blocks as supports, anticorrosive treatment with coaltar/asphalt tape as per IS 10221, refilling the trench etc. of following sizes complete as required.				
i)	150 mm dia	M	1545	2500 ~~5104.00~~	38.63 ~~78.857~~
2	Supplying and fixing Single headed external yard hydrant valve with 1 No. 63 mm dia instantaneous Stainless Steel coupling and cast iron wheel, ISI marked, conforming to IS 5290 (type A) with blank Stainless Steel cap and chain as required :	Nos.	28	15000 ~~6632.00~~	4.20 ~~1.86~~
3	Supplying, installation, testing and commissioning of Fire Pump conforming to IS 12469: 2019 suitable for automatic operation and consisting of following, as required				
a)	Main Fire Pump Electric operated 2280 LPM 88M Head	~~Each~~ (L.S.)	1	15.00 424172.00	15.0 4.24
b)	Diesel operated stand by Pump 2280 LPM 88M Head	~~Each~~ (L.S.)	2	15.00 667029.00	30.0 ~~13.34~~
c)	Jockey Pump 180 LPM 88M Head	~~Each~~ (L.S.)	1	134171.00 2.00	~~1.34~~ 2.0
	(C.O. to abstract of cost of Sub-work No.I)			~~TOTAL~~ ~~SAY~~	~~99.64~~ 99.64

Providing & laying valve including cost of surface boxes and masonry chamber etc. complete in all respect (L.S.) @ 2.00 lacs

Prov. and fixing indicating plates (L.S.) 0.50 lacs

Prov. for Carriage of material and other unforseen item (L.S.) @ 1.00 lacs

Rs 93.33 lacs

Sub Work II — **Sewerage Scheme**

S. No.	Description	Unit	Qty	Rate	in Lacs
1	Providing, lowering, jointing, cutting DWC SN8 pipes and specials into trenches including cost of excavation, bed concrete lot of manholes complete.				
i)	200 mm i/d				
a)	Average depth upto 1.5 m	M	1027	1700.00	17.46
b)	Average depth 1.5m to 4.5 m	M	167	1850.00	3.09
ii)	250 mm i/d				
a)	Average depth 1.5m to 4.5 m	M	230	2000.00	4.60
iii)	400 mm i/d			4050	1.62
a)	Average depth 1.5m to 4.5 m	M	40 ~~38~~	~~2400.00~~	~~0.91~~
2	Provision for lighting, watching and temporary diversion traffic			LS	5.00
3	Provision for timbering & shoring			LS	2.00
4	Provision for cutting of roads and carriage of materials etc. and other unforsean charges			LS	5.00
5	Provision for connection with HSVP			LS	2.00
6	Providing and installation of STP 1200 KL including civil tanks and all electro mechanical works. It also includes flushing tank.	KL	1850 KLD ~~1200~~	16000.00	~~192.0~~ 200.00
7	Provision for DI K-7 pipe from S.T.P. to HSVP main line (Over flow line)			2040	5.10
i)	150 mm dia pipe	M	250	~~1475.00~~	~~3.69~~ ~~235.75~~ 245.87
	Add 3% contingencies & PE charges				~~7.07~~ ~~242.82~~ 7.36 253.25
	Add 49% Deptt. Charges				124.09 ~~118.98~~ ~~361.80~~
	(C.O. TO FINAL ABSTRACT OF COST SUB WORK - II)			**TOTAL SAY**	~~361.80~~ 377.34

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Sub Work III | **Storm water drainage**

S. No.	Description	Unit	Qty	Rate	In Lacs
1	Providing, lowering, jointing, cutting RCC NP3 pipes and specials into trenches including cost of excavation cost of manholes, ventilating chambers etc. complete in all respects.				
i)	400 mm i/d				
a)	Average depth upto 1.5 m	M	~~1665~~ 1565	2500.00	~~41.63~~ 39.13
b)	Average depth 1.5m to 4.5 m	M	264	2650.00	7.00
2	Provision for road gully and drain. pipe 300 mm Ø			LS	~~5.00~~ 7.50
3	Provision for lighting, watching and temporary diversion of traffic.			LS	~~1.00~~ 5.00
4	Provision for cutting of roads and carriage of materials etc. and other unforseen items.			LS	~~1.00~~ 10.0
5	Construction of rain water harvesting pit as per details and specification given below and as per attached drawing including, cost of excavation of all ind soil foundation trenches of drain including dressing of sides of ramming and getting out excavtion of soil.	Nos	9	350000.00	31.50
6	Provision for temporary disposal till HSVP services are provide ~~400 mm i/d (Average depth 1.5 m to 4.5 m)~~			LS	10.00
7	Provision for connection with HSVP line on ~~marked~~ master road			LS	2.00
8)	Prov. for timbering & shoring			(2.50)	2.50
					~~99.12~~ 114.63 lacs
	Add 3% contingencies				~~2.97~~ 3.44 lacs
					~~102.09~~ 118.07
	Add 49% Deptt. Charges				~~50.03~~ 57.85
				TOTAL	~~152.12~~ 175.92 lacs
	(C.O. TO FINAL ABSTRACT OF COST SUB WORK - III)			**SAY**	152.12

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Sub Work IV — Road Work

S. No.	Description	Unit	Qty	Rate	In Lacs
1	Provision for levelling and earth filling as per site conditions.	Acre	11.11875	175000.00	19.46
2	Construction of road by-				
	i) 150 mm thick RCC				
	ii) 75 mm thick PCC				
	iii) 75 thick WMM				
	iv) 200 mm thick GSB				
	Total	Sq. M	~~2.283~~ 12908	1750.00	~~0.04~~ 225.89
3	Miscellaneous items				
(a)	Providing for Kerbs & Channels for 11.11875 ACRES 1540 x 2 = 3080 SQM	RMT	3080	700.00	21.56
(b)	Provision of foot path of precast conc. for 11.11875 acres (9m &6m wide road) 132 x 4.7 = 620.4 SQM	Sq. M	620.4	~~750.00~~ 1250	~~4.653~~ 7.76
4	Provision for traffic lighting and guide map	LS		300000.00	300
5	Provision for carriage of material	LS		500000.00	5.00
6	Provision for plot indicator	LS		106000.00	1.06
7	Provision for demaracation & unfloreseen items	LS		100000.00	1.00
8	Provision for parking & pavement for commercial area @ 50% 898.30 = 449.15 sqm	sqm	449.15	1750.00	7.86
					~~292.59~~
	Add 3% contingencies				~~62.63~~ ~~1.88~~ 8.78
	Add 49% Deptt. Charges				~~64.51~~ 301.37 ~~31.61~~ 147.67
	(C.O. TO FINAL ABSTRACT OF COST SUB WORK - IV)			TOTAL SAY	~~96.12~~ ~~96.12~~ 449.04

200mm GSB
250 mm stone aggregate
50 mm DBM
30 mm BC.