

**PROJECT REPORT / ESTIMATES FOR PROVIDING EXTERNAL SERVICES e.g. WATER SUPPLY, FIRE, SEWERAGE & STORM WATER DRAINAGE ETC. IN RESPECT OF PROPOSED BUILDING PLANS FOR HOUSING GROUP COLONY MEASURING 10.744 ACRES LAND (LICENCE NO. 4 OF 2013 DATED 18-02-2013 IN SECTOR 112, GURGAON, MANESAR, URBAN COMPLEX, GURGAON, HARYANA, BEING DEVELOPED BY SH. AJIT SINGH AND OTHERS IN COLLABORATION WITH EMAAR MGF LAND LTD.**

Gurgaon is located at 28°28'N 77°02'E/28.47°N 77.03°E/28.47; 77.03. It has an average elevation of 220 metres (721 ft) Gurgaon district, comprising four blocks Pataudi, Sohna, Gurgaon and Farrukhnagar, was created on 15 August, 1979. On its north, it is bounded by the district of Rohtak and the Union Territory of Delhi. Faridabad district lies to its east. On its south, the district shares boundaries with the district of Mewat. To its west lies the district of Rewari and the State of Rajasthan. Gurgaon is situated between the Himalayas and Aravalis mountain ranges. It is surrounded on three sides by Haryana and to the east, across the river Yamuna by Uttar Pradesh. Its greatest length is around 13 miles and the greatest breadth is 17 miles. Delhi's altitude ranges between 213 to 305 meters above sea level.

**PROPOSED BUILDING PLANS FOR HOUSING GROUP COLONY MEASURING 10.744 ACRES LAND (LICENCE NO. 4 OF 2013 DATED 18-02-2013) FOR PHASE-1** is a residential proposed between **SECTOR 112, GURGAON, MANESAR, URBAN COMPLEX, GURGAON, HARYANA** for development by **EMAAR MGF LAND LTD.**

**1 Water Supply**

The source of water supply shall be HUDA water supply connection. It has been proposed to construct underground tanks of capacity as per attached detailed for domestic and other purpose. The underground tanks will be filled up from the riser and then pumped to the overhead water tanks of each tower.

**i.) Source**

The source of water supply in this area is tubewells as the underground water is sweet and fit for human consumption, moreover, the water is available at reasonable depth. The average yield of tubewell with 60'-80' strainer will be about 20000 lph per hour. The recharging of under ground 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 to 02 Nos and the tubewells will be bored in tune with growth of demand to avoid absence of the tubewells.

ii.) **Design**

The scheme has been designed for population of 5604 persons in 10.744 Acre. The rate of water supply per head per day has been taken assumed as 172.5 litres per head per day as per HUDA norms. In addition to above necessary provision of water for Community building, Commercial building, parks etc. have been taken into account for calculating the maximum number of tubewell water required.

iii.) **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.

iv.) **Under Ground Storage**

Underground storage tank provision has been made, which caters for the present and a lot of future requirement as well as fire fighting requirement. The water for domestic water compartment shall over flow from the fire compartment so that the water in the fire compartment also remains fresh.

v.) **Boosting Station**

The boosting station is being planned near UGSR catering to the above requirement.

vi.) **Distribution System**

The distribution systems for this development has been designed to supply @ 172.5 Litres per head per day @ 3 times the average rate of flow on 'Hazen Willima' formula with C-100. Necessary provision for laying D.I. line (under ground line above 80 mm dia) /uPVC SCH-80 (below 100 mm dia under ground) pipes only conforming to relevant IS standards along with valves and specials has been made in this estimate.

vii.) **Rising Mains**

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

**2 Sewerage**

This scheme is designed for sewer connecting to the proposed sewage treatment plant. The sewerage system has been marked on the respective plans.

The sewer lines have been designed for 3 times average DWR in relation to the water supply demand assuming that 80% of the domestic water supply shall find its way into the proposed sewer SW pipe sewers have been proposed designed to run half full. The sewers have been designed on 0.76 mtr. per second velocity ie. Self cleansing velocity. Necessary provisions for laying CI/ uPVC pipes etc. has been made in this estimate.

Necessary design statement for entire sewerage system has been prepared and attached with estimate.

**3 Storm Water Drainage**

The storm water drain is being designed to carry 45 mm rain fall per hour. Also suitable provisions are contemplated in our scheme to ensure better recharging of under ground water table in the area. DWC/RCC NP<sub>3</sub> pipe drain with minimum 400 mm dia is proposed in this area.

**4 Roads**

Cost of road has been taken in the estimate.

**5 Street Lighting**

Provision for street lighting on surrounding area has been made.

**5 Horticulture**

Estimates and details of plantation, landscaping, signage etc. has been included.

**7 Specifications :**

The work will be carried out in accordance with the standard specifications of PH as laid down by the HUDA/Haryana Government.

**8 Rates**

Estimates for providing services in this site has been prepared on the recent HUDA rates.

9 Cost

The total cost of development in this Project including various PH & B & R services works out to **Rs. 2150.19 lacs** which includes 3% contingency and PE charges and 49% departmental charges also.

The cost per gross acre for this phase works out to **Rs. 200.129 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.

**SH. AJIT SINGH AND OTHER IN COLLABORATION WITH EMAAR MGF LAND LTD.**

Authorised Signatory

**PROPOSED BUILDING PLANS OF GROUP HOUSING COLONY IN SECTOR 112, GURGAON, MANESAR, URBAN COMPLEX, GURGAON, HARYANA**

**DESIGN CALCULATION**

	<b>PHASE-2</b>	
1 Total No. of Main units	816 Nos.	
Total No. of Service personnel	442 Nos.	
Population per Units (general)	5 persons	
Population per Units (Service personnel)	2 persons	
Total population (general)	4080 persons	
Total population (Service personnel)	884 persons	
Threrfore, Total Population	4964 persons	
	<b>4964 persons</b>	
Water requirement for Units per LPCD	172.50 Lpcd.	
	<b>Domestic @ 65 %</b>	<b>Flushing @ 35 %</b>
Water requirement for Units	113.00	59.50 Lpd.
	560932	295358 Lpd.
	560.93	295.36 Kld.
<b>VISITORS @ 10%</b>	497.00 persons	
Water requirement per person	15.00 Lpd.	
	<b>Domestic</b>	<b>Flushing</b>
Water requirement	5.00	10.00 Lpd.
	2485	4970 Lpd.
	2.49	4.97 Kld.

		<b>563.42</b>	<b>300.33 Kld.</b>
<b>2</b>	Total No. of EWS units	160 Nos.	
	Population per Units (EWS)	4 persons	
	Total population (EWS)	640 persons	
	Threrfore, Total Population	640 persons	
		<b>640 persons</b>	
	Water requirement for Units per LPCD	172.50 Lpcd.	
		<b>Domestic @ 65 %</b>	<b>Flushing @ 35 %</b>
	Water requirement for Units	113.00	59.50 Lpd.
		72320	38080 Lpd.
		72.32	38.08 Kld.
	<b>VISITORS @ 10%</b>	64.00 persons	
	Water requirement per person	15.00 Lpd.	
		<b>Domestic</b>	<b>Flushing</b>
	Water requirement	5.00	10.00 Lpd.
		320	640 Lpd.
		0.32	0.64 Kld.
		<b>72.64</b>	<b>38.72 Kld.</b>

<b>3 CLUB HOUSE</b>		2616.082 sq.m	
	@	1.4 sq.m/per	
<b>Population</b>		1869	
Staff @ 10%		187 Person	
Visitors @ 90%		1682 Person	
<b>Per Person Water Requirement</b>		<b>Domestic</b>	<b>Flushing</b>
Staff	45.00	25.00	20.00 Lpd.
Visitors	15.00	5.00	10.00 Lpd.
<b>Daily Water Requirement</b>			
Staff		4671.58	3737.26 Lpd.
Visitors		8408.84	16817.67 Lpd.
		<b>13.08</b>	<b>20.55 Kld.</b>
<b>4 CONVENIENT SHOPPING</b>		183.000 sq.m	
	@	3.0 sq.m/per	
<b>Population</b>		61	
Staff @ 10%		6 Person	
Visitors @ 90%		55 Person	
<b>Per Person Water Requirement</b>		<b>Domestic</b>	<b>Flushing</b>
Staff	45.00	25.00	20.00 Lpd.
Visitors	15.00	5.00	10.00 Lpd.
<b>Daily Water Requirement</b>			
Staff		152.50	122.00 Lpd.
Visitors		274.50	549.00 Lpd.
		<b>0.43</b>	<b>0.67 Kld.</b>

<b>5</b>	<b>PRIMERY SCHOOL UNDER EWS</b>			
	Population	@	1021.670 sq.m	
	Per Person Water Requirement		4.0 sq.m/per	
	Daily Water Requirement		255 Person	
			<b>Domestic</b>	
			45.00 Lpd.	
			11493.79 Lpd.	
			<b>11.49 Kld.</b>	
	<b>Total Domestic Water Requirement For UGT (1 To 5)</b>	<b>Total</b>	<b>661.06</b>	<b>360.27 Kld.</b>
<b>6</b>	<b>GREEN AREA</b>			
	Phase-2 (6637.629 sqm or 1.64 Acres)			1.64 Acre
	Daily water requirement @ 25000 lit/Acre	@		25000 Ltr./Acre
				41000.00 Lpd.
				<b>41.00 Kld.</b>
		<b>Total</b>		<b>41.00 Kld.</b>
<b>7</b>	<b>TOTAL DAILY REQUIREMENT</b>			
	a) For Domestic +Flushing use (1 To 5)		661.06	360.27 Kld.
	b) Green Area (7)		0.00	41.00 Kld.
	Total Daily Requirement		661.06	401.27 Kld.
		<b>SAY</b>	<b>670.00</b>	<b>410.00 Kld.</b>



<b>8</b>	<b>TUBE WELL FOR UGT</b>			
	Assuming working hours of tubewells			12 Hours
	Assuming discharge/hour of each tubewell			20 KL/Hours
	Total domestic demand			<b>661.06 Kld.</b>
	No. of tubewells required		661.06 /20/8	2.75
		<b>Say</b>		<b>3.00 Nos.</b>
<b>9</b>	<b>PUMPING MACHINERY FOR TUBE WELL</b>			
	Gross working load		=	45.00 Mtr.
	Average fall in SL		=	3.05 Mtr.
	Depression head		=	6.10 Mtr.
	Friction loss in main		=	2.50 Mtr.
			=	56.65 Mtr.
		<b>Say</b>	=	60.00 Mtr.
	BHP = $20000 \times 60 \times 1 / 60 / 60 / 75 / 0.6$		=	7.41 HP
	With 60% efficiency			<b>7.50 HP</b>
<b>10</b>	<b>UNDER GROUND RAW, DOMESTIC &amp; FIRE TANK</b>			
	Daily requirement for domestic use		=	661.06 Kld.
	Capacity of under ground tank			
	24 hours storage		661.06 x 24 / 24	661.06 Kld.
		<b>Say</b>	=	<b>700.00 Kld.</b>
	Fire Tank Capacity As/NBC-2016		=	700.00 KLD
		<b>Say</b>	=	<b>700.00 KL</b>
	<b>TOTAL</b>			<b>1400.00 KL</b>

It is proposed to provide under ground tank of capacity **1400 KL** which also includes **700 KL** capacity for fire fighting.

Tanks will have eight compartments, four for fire, two for raw and the other two for domestic use. The water first enters the raw compartment, then over flows to the fire compartment, then over flows to the domestic compartment so that the water in the fire compartment shall remain fresh.

It is proposed to provide the under ground tank of following capacity :

Capacity of Fire Water Tank-01	<b>140.00 KL</b>
Capacity of Fire Water Tank-02	<b>190.00 KL</b>
Capacity of Fire Water Tank-03	<b>150.00 KL</b>
Capacity of Fire Water Tank-04	<b>220.00 KL</b>
Capacity of Raw Water Tank-01	<b>140.00 KL</b>
Capacity of Raw Water Tank-02	<b>190.00 KL</b>
Capacity of Domestic Water Tank-01	<b>150.00 KL</b>
Capacity of Domestic Water Tank-02	<b>220.00 KL</b>
	<b>UGT</b>

<b>11 BOOSTING MACHINERY (U.G. TANK) FOR TOWER- 1, 2 &amp; 3</b>		
Total No. of Main units (136+136+136)		408 Nos.
Total No. of Service personnel (134+134+134)		402 Nos.
Population per Units (general)		5 Persons
Population per Units (Service personnel)		2 Persons
Population (general)		2040 Persons
Population (Service personnel)		804 Persons
Total Population		2844 Persons
Water requirement for Units per LPCD		172.5 Lpcd
Domestic Water requirement @ 65%		113 Lpcd
Flushing Water requirement @ 35%		59.5 Lpcd
Daily water requirement		490590 Lpcd
Daily domestic water requirement		321372 Lpcd
Daily flushing water requirement		169218 Lpcd
Daily requirement for domestic use	=	321.37 Kld.
Assuming 6 hours pumping	3 pumps (with one standby)	
Discharge/hour	$321.37 / 6 / 3 =$	17.85 KL/Hours
Head of pump		
i) Suction lifts	=	0.0 Mtr.
ii) Friction loss in M<main & specials	=	9.0 Mtr.
iii) Clear head	=	121.0 Mtr.
iv) Residual head	=	5.0 Mtr.
	=	135.0 Mtr.
BHP of motor		14.9 HP
	=	15.0 <b>HP</b>

<b>10 BOOSTING MACHINERY (U.G. TANK) FOR TOWER- 4, 5 &amp; 6</b>		
Total No. of Main units (136+136+136)		408 Nos.
Total No. of Service personnel (40)		40 Nos.
Population per Units (general)		5 Persons
Population per Units (Service personnel)		2 Persons
Population (general)		2040 Persons
Population (Service personnel)		80 Persons
Total Population		2120 Persons
Water requirement for Units per LPCD		172.5 Lpcd
Domestic Water requirement @ 65%		113 Lpcd
Flushing Water requirement @ 35%		59.5 Lpcd
Daily water requirement		365700 Lpcd
Daily domestic water requirement		239560 Lpcd
Daily flushing water requirement		126140 Lpcd
Daily requirement for domestic use	=	239.56 Kld.
Assuming 6 hours pumping	3 pumps (with one standby)	
Discharge/hour	$239.56 / 6 / 3 =$	13.31 KL/Hours
Head of pump		
i) Suction lifts	=	0.0 Mtr.
ii) Friction loss in M<main & specials	=	11.0 Mtr.
iii) Clear head	=	121.0 Mtr.
iv) Residual head	=	5.0 Mtr.
	=	137.0 Mtr.
BHP of motor		11.3 HP
	=	12.0 <b>HP</b>

<b>11</b>	<b>BOOSTING MACHINERY (U.G. TANK) FOR EWS &amp; PRIMARY SCHOOL</b>		
	Daily requirement for domestic use	=	84.13 Kld.
	Assuming 6 hours pumping	1 pumps (with one standby)	
	Discharge/hour	/ 6 / 1 =	14.02 KL/Hours
	Head of pump		
	i) Suction lifts	=	0.0 Mtr.
	ii) Friction loss in M<main & specials	=	10.0 Mtr.
	iii) Clear head	=	34.0 Mtr.
	iv) Residual head	=	5.0 Mtr.
		=	49.0 Mtr.
	BHP of motor		4.2 HP
		=	5.0 <b>HP</b>
<b>12</b>	<b>BOOSTING MACHINERY (U.G. TANK) FOR CLUB HOUSE &amp; CONVENIENT SHOPPING</b>		
	Daily requirement for domestic use	=	13.51 Kld.
	Assuming 6 hours pumping	1 pumps (with one standby)	
	Discharge/hour	/ 6 / 1 =	2.25 KL/Hours
	Head of pump		
	i) Suction lifts	=	0.0 Mtr.
	ii) Friction loss in M<main & specials	=	7.0 Mtr.
	iii) Clear head	=	26.0 Mtr.
	iv) Residual head	=	5.0 Mtr.
		=	38.0 Mtr.
	BHP of motor		0.5 HP
		=	1.0 <b>HP</b>

**12 PUMPS FOR FIRE PROTECTION**

Pump Description	Location	Nos.	Discharge	Head	HP
i) Diesel Driven Pump	Pump Room	2	2850	190	210
ii) Main Electric (Hydrant & Sprinkler) Pump	Pump Room	2	2850	190	210
iii) Jockey Pump	Pump Room	2	180	190	20
iv) Water Curtain Pump	Pump Room	1	4000	50	80
<b>Capacity of Gen Set</b>	Nos.				
Domestic Water Pumps for PH-2 Tower-1, 2 & 3	3		15.0	45.0 HP	
Domestic Water Pumps for PH-2 Tower-4, 5 & 6	3		12.0	36.0 HP	
Domestic Water Pumps for EWS & P. School	1		5.0	5.0 HP	
Domestic Water Pumps for Club & Con. Shopping	1		1.0	1.0 HP	
Tubewell PH-2	3		7.5	22.5 HP	
Fire Pump (Jockey) PH-2	2		13	26 HP	
Lighting				75 HP	
				210.5 HP	
	or			235.55 KVA	
	Say			<b>240.00 KVA</b>	

<b>13</b>	<b>Sewage Treatment Plant Capacity (STP.)</b>	
i.)	Daily Domestic Requirement (1 To 6)	661.06 Kld.
ii.)	Rate of Flow To Sewer @ 80%	528.85 Kld.
iii.)	Daily Flushing Requirement	360.27 Kld.
iv.)	Rate of Flow To Sewer @ 100%	360.27 Kld.
v.)	Total Sewage Flow	889.12 Kld.
	<b>Proposed STP. Capacity</b>	<b>900.00 Kld. STP</b>

Estimate for Providing in Internal Development works

SH. AJIT SINGH AND OTHER IN COLLABORATION WITH EMAAR MGF LAND LTD.

Description	Phase-1	Phase-2	Phase-1+2
	Already Approved Amount (Lacs.)	- Amount (Lacs.)	- Amount (Lacs.)
<b>Sub Work - I</b> Water Supply System	195.35	572.79	768.14
<b>Sub Work - II</b> Sewerage System	32.42	251.75	284.17
<b>Sub Work - III</b> Storm Water Drainage System	36.68	104.17	140.85
<b>Sub Work - IV</b> Roads & Footpath	113.52	761.19	874.71
<b>Sub Work - V</b> Street Lighting	7.07	41.22	48.29
<b>Sub Work - VI</b> - Horticulture	7.08	26.94	34.02
<b>Sub Work - VII</b> - Maintenance of Services for 10 years including resurfacing of roads after 1st 5 years & II phase i.e. 10 years of maintenance (as per HUDA norms)	74.78	346.14	0.00
<b>Total</b>	<b>466.90</b>	<b>2104.21</b>	<b>2150.19</b>

(RUPEES TWENTY ONE CRORES FIFTY LACS NINETEEN THOUSAND ONLY)

SH. AJIT SINGH AND OTHER IN COLLABORATION WITH EMAAR MGF LAND LTD.

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**FINAL ABSTRACT OF REVISED COST**

<b>Description</b>	<b>Already Approved</b>		
	<b>Phase-1 Amount (Lacs.)</b>	<b>Phase-2 Amount (Lacs.)</b>	<b>Phase-1+2 Amount (Lacs.)</b>
Sub Head - ( I ) Head Works	36.75	138.00	174.75
Sub Head - ( II ) Pumping Machinery	51.00	130.10	181.10
Sub Head - ( III ) Distribution System	18.15	35.63	53.78
Sub Head - ( IV ) Irrigation Scheme	7.20	20.12	27.32
Sub Head - ( V ) Fire Scheme	14.19	49.38	63.57
	<b>Total</b>	<b>127.29</b>	<b>373.23</b>
Add 3% Contingencies	3.82	11.20	15.02
	<b>Total</b>	<b>131.11</b>	<b>384.42</b>
Add 49% Departmental Charges	64.24	188.37	252.61
	<b>Grand Total</b>	<b>195.35</b>	<b>572.79</b>
(CO to final abstract of cost)	<b>Say</b>	<b>195.35</b>	<b>572.79</b>

Sub Work I				Water Supply	
Sub Head No. I				Head Works	
S. No.	Description	Unit	Qty	Rate (Rs.)	PH-2 Amount Rs. (lacs)
1	Boring and installing 510 mm i/d tubewells with reverse/direct rotary rig complete with pipe strainer to a depth of about 80 m. complete.	Nos.	3	1500000.00	45.00
2	Constructing pump chambers as per standard design of PWD PH/HUDA 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 chambers for UGT	LS	1	-	10.00
ii)	construction of UG tank PH-1 (Dom.+ Fire)	KL	-	-	-
iii)	construction of UG tank PH-1 (Dom.+ Fire)	KL	1400	5500.00	77.00
4	Provision for carriage of material and other unforeseen items.	LS	-	-	1.50
5	Provision for facilities staff for Maintenance	LS	-	-	1.50
	(C.O. to abstract of cost of Sub-work No.I)				138.00
				<b>Say</b>	<b>138.00</b>

Sub Work I		Water Supply			
Sub Head No. II		Pumping Machinery			
S. No.	Description	Unit	Qty	Rate (Rs.)	PH-2 Amount (in Lakhs)
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	150000.00	4.50
2	Providing & installing electricity driven pumping set capable of delivering 300 LPM of water against a total head of 135 m complete with motor and other accessories (For Domestic - 15 HP).	Nos.	4	250000.00	10.00
3	Providing & installing electricity driven pumping set capable of delivering 230 LPM of water against a total head of 137 m complete with motor and other accessories (For Domestic - 12 HP).	Nos.	4	225000.00	9.00
4	Providing & installing electricity driven pumping set capable of delivering 240 LPM of water against a total head of 49 m complete with motor and other accessories (For Domestic - 5 HP).	Nos.	2	110000.00	2.20

5	Providing & installing electricity driven pumping set capable of delivering 40 LPM of water against a total head of 38 m complete with motor and other accessories (For Domestic - 1 HP).	Nos.	2	70000.00	1.40
6	Provision for diesel engine generator set each for standby Arrangements for booster pump complete with gear haed arrangements of following capacities.				
i)	250 KVA	LS	1	-	15.00
7	Providing & installing pumping set of following capacities for fire protection:				
i)	180 LPM @ 190 M Head (13 HP)	Nos.	2	390000.00	7.80
ii)	2850 LPM @ 190 M Head (220 HP) Hydrant	Nos.	2	1450000.00	29.00
iii)	2850 LPM @ 190 M Head (DG Pump)	Nos.	2	1650000.00	33.00
iv)	4000 LPM @ 50 M Head (80 HP) Water Curtain	Nos.	1	470000.00	4.70
8	Provision for diesel engine genset stand bye arrangements for Tubewells.	Nos.	3	100000.00	3.00
9	Provision for cheap pressure type chlorination plant complete.	Nos.	3	100000.00	3.00
10	Provision for making foundations & erection of pumping machinery.	LS	-	-	2.00
11	Provision for pipes, valves & specials inside the pump chamber.	LS	-	-	1.50
12	Provision for electric services connection including electric fittings for tubewells chambers complete including cost of transformer.	LS	-	-	2.50

13	Provision for carriage for materials and other unforeseen items.	LS	-	-	1.50
	(C.O. to abstract of cost of Sub-work No.I)				
				<b>Total</b>	<b>130.10</b>
				<b>Say</b>	<b>130.10</b>

Sub Work I Sub Head No. III		Water Supply Distribution System/Rising Main			
S. No.	Description	Unit	Qty	Rate (Rs.)	PH-2 Amount (Rs.)
1	Providing, laying, jointing & testing D.I. pipes including cost of excavation complete as per ISI marked.				
i)	100 mm dia (For Tubewell)	M	109	1460.00	159140.00
ii)	150 mm dia (For Tubewell)	M	81	2150.00	174150.00
2	Providing, laying, jointing & testing uPVC SCH-80 (food grade) pipes including cost of excavation (under ground / basement ceiling level) complete as per ISI marked.				
i)	32 mm dia	M	331	370.00	122470.00
ii)	65 mm dia	M	381	790.00	300990.00
iii)	80 mm dia	M	260	1060.00	275600.00
iv)	100 mm dia	M	789	1460.00	1151940.00
v)	150 mm dia	M	202	2150.00	434300.00
3	Providing, fixing & Testing valves (ball/butterfly) including cost of complete in all respects.				
i)	32 mm i/d ball valve	Nos.	2	1640.00	3280.00
ii)	65 mm i/d butterfly valve	Nos.	1	4450.00	4450.00
iii)	80 mm i/d butterfly valve	Nos.	1	6060.00	6060.00
iv)	100 mm i/d butterfly valve	Nos.	7	12000.00	84000.00
v)	150 mm i/d butterfly valve	Nos.	1	15500.00	15500.00
4	Providing, fixing & Testing Non Return valves (NRV) including cost of complete in all respects.				
i)	100 mm i/d	Nos.	4	14000.00	56000.00

PROPOSED GROUP HOUSING "EKAANTAM" AT SECTOR-113 GURGAON (HARYANA)

5	Providing and fixing air valves and scour valves including cost of complete in all respects.	Nos.	10	10000.00	100000.00
6	Providing and fixing indicating plates for valves.	Nos.	26	2000.00	52000.00
7	Provision for carriage of materials etc. and other unforeseen charges.	LS	-	-	150000.00
8	Provision for cutting the roads and making to its original conditions.	LS	-	-	200000.00
9	Making water supply connection.	LS	-	-	200000.00
10	Provision for rising main from HUDA water supply line to UG Tank.				
i)	100 mm i/d	M	50	1460.00	73000.00
	(C.O. to abstract of cost of Sub-work No.I)			<b>Total</b>	<b>3562880.00</b>
				<b>Say</b>	<b>35.63</b>

Sub Work I				Water Supply	
Sub Head No. IV				Irrigation	
S. No.	Description	Unit	Qty	Rate (Rs.)	Amount (Rs.)
1	Providing, laying, jointing & testing uPVC pipe line confirming to IS 4985 including cost of Excavation etc. complete in all respect.				
i)	25 OD	M	60	300.00	18000.00
ii)	90 OD	M	1160	1250.00	1450000.00
2	Providing and fixing 20mm dia Irrigation hydrant valve complete in all respect.	Nos.	35	5000.00	175000.00
3	Providing, fixing & Testing valves (ball/butterfly) including cost of complete in all respects.				
i)	25 mm i/d ball valve	Nos.	35	950.00	33250.00
ii)	100 mm i/d butterfly valve	Nos.	1	10000.00	10000.00
4	Providing and fixing air valves and scour valves including cost of complete in all respects.	Nos.	7	10000.00	70000.00
5	Providing and fixing indicating plates for butterfly valve, NRV, air valve & garden hydrant etc.	Nos.	78	2000.00	156000.00
6	Provision for carriage of materials etc. and other unforeseen charges.	LS	-	-	50000.00
7	Provision for cutting of roads & making good to its in original condition.	LS	-	-	50000.00
				<b>Total</b>	<b>2012250.00</b>
				<b>Say</b>	<b>20.12</b>



<b>Sub Work I</b>					<b>Fire Scheme</b>
<b>Sub Head No. V</b>					
<b>S. No.</b>	<b>Description</b>	<b>Unit</b>	<b>Qty</b>	<b>Rate</b>	<b>Amount (Rs.)</b>
1	Providing, laying, jointing & testing M.S. pipes for fire ring main including cost of Fittings & excavation complete (as per ISI marked) in all respect.				
a)	80 mm dia	M	150	1000.00	150000.00
b)	150 mm dia	M	1641	2040.00	3347640.00
2	Providing and fixing External Fire Hydrants complete with masonry chambers.	Nos.	26	15000.00	390000.00
3	Providing, fixing & Testing butter fly valve including cost of complete in all respects.				
a)	80 mm dia	Nos.	26	10000.00	260000.00
b)	150 mm dia	Nos.	9	15000.00	135000.00
4	Providing, fixing & Testing Non Return valves (NRV) including cost of complete in all respects.				
i)	80 mm i/d	Nos.	26	10000.00	260000.00
5	Providing and fixing Fire Brigade connection.				
i)	4 way inlet connection.	Nos.	7	15000.00	105000.00
ii)	2 way withdrawl connection.	Nos.	1	10000.00	10000.00
5	Provision for cutting of roads and carriage of materials etc. and other unforesean charges	LS	-	-	40000.00

PROPOSED GROUP HOUSING "EKAANTAM" AT SECTOR-113 GURGAON (HARYANA)

6	Providing and fixing indicating plates for butterfly valve, NRV, fire brigade & fire hydrant etc.	Nos.	95	2000.00	190000.00
7	Provision for carriage of material & other unforeseen charges	LS	-	-	50000.00
			<b>Total</b>		<b>4937640.00</b>
			<b>Say</b>		<b>49.38</b>

Sub Work II (Part-1)		Sewerage Scheme			
S. No.	Description	Unit	Qty	Rate (Rs.)	Amount (Rs.)
1	Providing, lowering, jointing, cutting DWC/RCC NP <sub>3</sub> pipes and specials into trenches including cost of excavation, bed concrete lot of manholes complete.				
i)	<b>200 mm i/d</b> Average depth 1.5 m to 4.5 m	M	360	1800.00	648000.00
ii)	<b>250 mm i/d</b> Average depth 1.5 m to 4.5 m	M	53	2150.00	113950.00
iii)	<b>300 mm i/d</b> Average depth 1.5 m to 4.5 m	M	158	2350.00	371300.00
iv)	<b>400 mm i/d</b> Average depth 1.5 m to 4.5 m	M	153	2600.00	397800.00
2	Provision for lighting, watching and temporary diversion of traffic	LS	-	-	100000.00
3	Provision for cutting of roads and carriage of materials etc. and other unforeseen charges.	LS	-	-	200000.00
4	Provision for sewer connection with HUDA.	LS	-	-	100000.00
5	Cost of <b>900 Kld</b> Sewerage Treatment Plant (Note: The STP cost is inclusive of civil & electromechanical part including flushing water transfer pumps)	Per KL	900	16000	14400000.00
6	Provision for CI / DI pipe from STP. To Huda Main Line.				

i)	100 mm dia pipe.	M	50	1460.00	73000.00
					16404050.00
	Add 3% contingencies				492121.5
					16896171.50
	Add 49% Deptt. Charges				8279124.035
				<b>Total</b>	<b>25175295.54</b>
	(C.O. to abstract of cost of Sub-work No. 1)			<b>Say</b>	<b>251.75</b>

Sub Work - III			Storm Water Drain		
S. No.	Description	Unit	Qty	Rate (Rs.)	Amount (Rs.)
1	Providing, lowering, jointing, cutting DWC/RCC NP <sub>3</sub> pipes and specials into trenches including cost of excavation cost of manholes, ventilating chambers etc. complete in all respects.				
	<b>i) 400 mm i/d</b>				
a)	Average depth upto 1.5 m	M	934	2500.00	2333750.00
b)	Average depth 1.5 m to 4.5 m	M	126	2600.00	326300.00
2	Provision for Road Gully & Drain.	LS	-	-	500000.00
3	Provision for cutting of roads and carriage of materials etc. and other unforeseen items	LS	-	-	250000.00
4	Provision for disposal arrangements Recharge Pit.	Nos	9	350000.00	3150000.00
5	Provision for lighting, watching and temporary diversion of traffic	LS	-	-	100000.00

6	Provision of uPVC SCH-80 pipe for lifting water (overflow pumping) from drainage sumps (located at site level) to outside HUDA storm water line.				
i)	250mm dia	M	50	2550.00	127500.00
					<b>6787550.00</b>
	Add 3% contingencies				203626.50
					6991176.50
	Add 49% Deptt. Charges				3425676.49
					<b>10416852.99</b>
	(C.O. to abstract of cost of Sub-work No. 1				<b>SAY 104.17</b>
				<b>Total</b>	<b>10416852.99</b>

Sub Work IV			Road Work		
S. No.	Description	Unit	Qty	Rate (Rs.)	Amount (Rs.)
1	Provision for leveling & earth filling as per site condition.	Acres	10.7440	175000	1880200.00
2	Construction of road by:-				
	i) Providing GSB 150 mm thick.	Cum	1410.0	2000	2820000.00
	ii) 260 mm thick W.M.M. stone aggregate.	Cum	2444.0	2800	6843200.00
	iii) 100 mm Thick PCC ( 1:2:4)	Cum	940.0	8500	7990000.00
	iv) 60 mm thick Pavers complete in all respect(including 50 mm thick sand).	Sq. mtr.	9400.0	1350	12690000.00
3	Provision for making approach and pavement to building block by providing concrete pavement or tiles. Etc.	Sq. mtr.	1200.00	7500	9000000.00
4	Provision for parking arrangement	Sq. mtr.	2650.0	1500	3975000.00
5	Provision for kerb stone with complete specification.	mtr.	3000.0	1300	3900000.00
6	Provision for Carriage of material and other unforeseen items	LS.			200000.00

7	Provision for traffic lighting and guide map/ indicators	I.S.		300000.00
			<b>Total</b>	<b>49598400.00</b>
	Add 3% contingencies			1487952.00
				<b>51086352.00</b>
			<b>Total</b>	510.86
	Add 49 % department charges			250.32
			<b>SAY</b>	<b>761.19</b>



Sub Work V				Street Lighting	
S. No.	Description	Unit	Qty	Rate (Rs.)	Amount (Rs.)
1	Providing street lighting on internal roads as per standard specifications of HVPNL with CFL	per acre	10.7440	250000.00	<b>2686000.00</b>
	Add 3% contingencies				80580.00
				<b>Total</b>	<b>2766580.00</b>
	Add 49% Deptt. Charges				1355624.20
				<b>Total</b>	<b>4122204.00</b>
				<b>SAY</b>	<b>41.22</b>

Sub Work VI				Horticulture	
S. No.	Description	Unit	Qty	Rate (Rs.)	Amount (Rs.)
1	Development of lawn area				
	a) Trenching the ordinary soil upto depth of 60 cm. Including removal & packing of serviceable material & disposing at a lead of 50 M and making up the trenched area to proper level by filling with earth mixed with manure before & after flooding trench with water including cost of imported earth & manure.				
	b) Rough dressing of trenched area.				
	c) Grassing including watering & maintenance of lawns free from weeds & fit for mowing in rows including hedges, shrubs & green belts (as per HUDA Norms)				
	10.744 acres @ Rs. 1.5 lacs.	per acre	10.7440	150000.00	16,11,600
	80 trees @ Rs. 1800/- each				1,44,000
					<b>1755600.00</b>
	Add 3% contingency charges				<b>52668.00</b>
				<b>Total</b>	<b>1808268.00</b>
	Add 49% Deptt. Charges				<b>886051.32</b>
				<b>Total</b>	<b>2694319.32</b>
				<b>Say</b>	<b>26.94</b>

Sub Work VII				Maintenance Charges & Resurfacing of Roads	
S. No.	Description	Unit	Qty	Rate (Rs.)	Amount (Rs.)
1	Provision for maintenance charges for water supply, sewerage, storm water drainage, roads, street light, horticulture etc. complete including operation & establishments charges as per HUDA norms after completion & resurfacing of roads after 10 years or 1st phase.	per acre	10.7440	800000.00	8595200.00
2	Provision for resurfacing & strengthening of road (with 50mm thick BM + 50 mm thick BC) after five years of 1st phase.	Sq. mtr.	9400.0	660.00	6204000.00
3	Provision for resurfacing & strengthening of road (with 50mm thick BM + 50 mm thick BC) after ten years of 2 <sup>nd</sup> phase.	Sq. mtr.	9400.0	825.00	7755000.00
				<b>Total</b>	<b>22554200.00</b>
Add 3% contingency & PE charges					676626.00
				<b>Total</b>	<b>23230826.00</b>
Add 49% Departmental charges					11383104.74
				<b>Total</b>	<b>34613930.74</b>
				say	<b>346.14</b>