

# PIONEER PARK "ARAYA" GROUP HOUSING AT SECTOR 62, GURGAON

## SUBMISSION REPORT ON SERVICES PLAN / ESTIMATE

For Pioneer Park Infrastructure Limited

  
Authorised Signatory

  
M.K. Gupta  
RMC No. 045780/3  
MKG Consultants  
A-8, Paryavaran Complex  
IGNOU Road  
New Delhi-110 030

  
ANURAAG CHOWFLA  
CA Registration No. 79/5

### **ARCHITECTS**

**M/s Manichowfla Architects**  
**56/3, Friends Colony,**  
**New Delhi - 65**

### **PLUMBING CONSULTANTS**

**M/s MKG CONSULTANTS**  
**A -8, Paryavaran Complex**  
**IGNOU Road,**  
**New Delhi - 110030.**  
**Tel. : 011 - 29532720**

**PROJECTS**  
**PIONEER PARK "ARAYA" GROUP HOUSING**  
**AT SECTOR 62, GURGAON**

**SUBJECTS**  
**ESTIMATE FOR PROVIDING WATER SUPPLY, SEWERAGE AND STORM WATER**  
**DRAINAGE FOR PIONEER PARK "ARAYA" GROUP HOUSING ,GURGAON**

Gurgaon town is an important town of Haryana State situated on Delhi-Jaipur National Highway No. 8 at a distance of 35 kms from Delhi. Being in the national capital region, the town has fast developing tendency and potential. Further it has also started sharing the growing industrial load of Delhi & Faridabad. In order of relieve the growing pressure of population in Delhi, it has been decided by the Haryana Govt. to establish various residential sectors along with infrastructure facilities in Gurgaon. Keeping in view the colony for residential development scheme has been planned. *in Est. Pn. 10.30 acre area has already been approved and we have by apply for balance area of land 14.306 Acres*

**Water Supply**

**1. Source**

The source of water supply in this area is tube well as underground water is sweet and fit for human consumption, moreover, the water is available at reasonable depth, the average yield of Tube wells, with approximate 60 ' to 80; strainer will be about 15 KL per hour. 2 Nos. Tube wells are required to cope with the daily requirement of water for the initial period of 5 years by which time canal water is expected.

**2. Tube wells**

The proposed tube wells shall be 510 mm bore drilled with reverse rotary rig and installed with 80 mm i/d housing pipe and 50 mm i/d slotted tube as strainer. The provision taken in the estimate under the sub-head tube well includes the cost of pea gravel packing. The lift of tube well is limited due to incrustation and rusting of strainer. Therefore, out of these tube wells the drilling of tube wells will be done for 6 Nos. tube wells and further tube wells will be drilled as the demand develops till the scheme is handed over the department or till the canal filtration scheme starts supplying water, whichever is earlier.

**3. Pump Chambers and Pumping Machinery**

It is proposed to equip each tube well with an electricity driven pumping set-Ejecto type or submersible pump capable of delivering about 15,000 Ltrs per hour. It is also proposed to equip 2 Nos. pumping sets with stand by diesel gen set engines for operation during failure of electricity at four locations.

**4. Ground Storage**

Underground storage tank for One day of total daily demand of water supply have been proposed at two locations in the scheme. The same shall be fed by 6 Nos. of tube wells at present and shall be later augmented through HUDA mains canal supply at later date.

**6. Distribution System**

The distribution system for this development are has been designed for 172.5 Liters per person per day @3.0 times the average rate of flow on "Hazen Williams" formula with C-100. Necessary provision for laying C.I./D.I. pipes only conforming to relevant IS standards along with valves and specials has been made in this Estimate.

7. **Rising Main**

Rising mains from HUDA water main on sector road to water works have also been designed and provision for C.I. (class LA)/DI KA pipe line has been made in this estimate

8. **Sewerage**

This colony has a terrain which is mainly flat with a gentle slopes with one side dropped by avg. 2 meter. Sewerage network has been proposed to slope towards the South providing for self cleaning velocities without any deep excavation. It would thus be possible to connect the internal sewers in the plans with HUDA main sewer proposed on the development plan road in close proximity of the last manhole without any pumping being involved. At Gurgaon normally it is possible to get 2.0 ft. / sec velocity.

The internal sewer lines have also been designed for three times average D.W.F in relation to water supply demand. It has been assumed that about 75 % of the domestic water supply shall find its way into the proposed sewer. All the SW / RCC pipes, sewer has been designed to run half/full/three fourth full.

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

Necessary provision for laying SW/~~RCC~~ pipes sewer lines and manholes etc. has been made in this estimate.

9. **Storm water drainage**

It has been proposed to lay underground RCC pipe drains on the road widths 40 ft. and above where it is possible to lay underground drains. The intensity of rain fall has been taken as ¼ the inch per hour. The internal storm water drains will be jointed into external storm water drainage to be laid by HUDA on sector dividing roads. Necessary provision for kerbs and channels has been made in the estimate. The estimate for these closed drains has been included as sub work No. III A minimum size of 400 mm RCC storm water line will be provided.

10. **Specifications**

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

11. **Rates**

The estimate has been based on the present market rates and probable escalation in prices.

12. **Cost**

The total cost of the Scheme including cost of all services works out to **Rs. 690.46 Lakhs** including 3% contingencies and 14% departmental charges. *Price, 49% escalation unforeseen, Admin. Charges*

*704.27*  
*911.09*  
*884.75*

-:-

PIONEER PARK GROUP HOUSING "ARAYA" AT SECTOR - 62, GURGAON

I. DESIGN CALCULATION :

S. N.	Daily requirement	Units in Tower	Height of the building	Population	Service Population	Water Requirement Per Person	Total Water requirement ( in Ltr)	
<b>A. DOMESTIC WATER REQUIREMENT</b>								
					48 X 2		73485	
1	TOWER F	66	116.95	330	96	172.5	56985	
2	TOWER G	66	116.95	330		172.5	56925	
3	TOWER H	66	116.95	330		172.5	56925	
4	TOWER J	56	100.60	280		172.5	48300	
5	COMMUNITY SHOPPING CENTRE						10000	
	EWS	88			440	135.0	59400	
6	CLUB Community Center						50000	25000
							295635	
	TOTAL						292035	LPD 330035
	GRAND TOTAL						292035	LPD
	SAY (CUM/DAY)						300	CUM/DAY
							330 KLD	
<b>B. HORTICULTURE WATER REQUIREMENT</b>								
	10.00 Acres @ 25000 l/acre						250	KL
	3.00						75	

$$330 + 75 = 405 \text{ KLD}$$

I. TOTAL WATER DEMAND IN M<sup>3</sup> / DAY

- (a) For Domestic Purpose - Part 1  
Say

300 m<sup>3</sup>/day  
300 m<sup>3</sup>/day

II. TUBEWELLS

- (a) Yield  
(b) Working Hours per Day

20 15 KL/hr  
12 Hours per Day

- (c) Total water demand  
(d) Number of Tubewells reqd.  
( =Water Demand/Discharge/Hours working per day)  
(e) Add 10% as standby

405 300 m<sup>3</sup>/day

1.26 1.67

0.12 0.17

1.38 1.83


2.00

Nos.  
Nos.

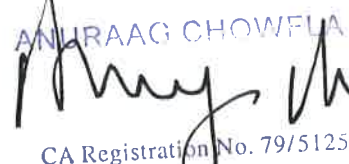
Total  
Say

Water to the proposed development is to be supplied by HUDA and it is proposed to install the tube-wells for augmentation/standby purposes.

For Pioneer Urban Land & Infrastructure Limited

  
Authorised Signatory

M. K. Choudhary  
MIE No. 005780/3  
MKG Consultants  
A-8, Paryavaran Complex  
IGNOU Road  
New Delhi-110 030

ANURAAG CHOWDHURY  
  
CA Registration No. 79/5125

PIONEER PARK GROUP HOUSING "ARAYA" AT SECTOR - 62, GURGAON

It is proposed to provide 2 Nos. of pumps (2 working + 1 standby) of 12.50 HP Each

S. No.	Parameters	Location in pump room				Location at Terrace & Service Area
		Main	Sprinkler	Diesel	Jockey	Fire Pump
a)	Discharge in lpm	2850 lpm	2850 lpm	2850 lpm	180 lpm	180 lpm
b)	Head in meters	180	180	180	180	35
c)	HP	110	110	110	15	12
d)	Quantity in Nos.	1	1	1	2	10

VI. GENERATING SETS:

HP of Tubewell pump  $2 \times 12.5^0$   
 HP of Domestic Pump  $2 \times 2^0$   
 HP of Jockey Pump  $2 \times 12.5^0$   
 HP of Terrace Fire Pump  
**Total**  
**in KVA**  
**Say**

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 MIE No. 045780/3  
 MKG Consultants  
 A-8, Paryavaran Complex  
 IGNOU Road  
 New Delhi-110 030

20.00 → 25.00  
 25.00 → 40  
 30.00 → 25  
 120.00  
 195.00 → HP  
 141.30 → KVA  
 150 → KVA  
 268.56  
 275 KVA

CA Registration No. 79/5125

# **FINAL ABSTRACT OF COST**

		Amount in Rs. Lacs
SUB WORK NO. I	WATER SUPPLY SCHEME	203.28 <del>247.20</del> 254.53
SUB WORK NO. II	SEWERAGE SCHEME	103.63 <del>117.34</del> 124.54
SUB WORK NO. III	STORM WATER DRAINAGE	60.31 <del>68.70</del> 72.44
SUB WORK NO. IV	ROADS & FOOT PATHS	110.97 <del>207.10</del> 168.45
SUB WORK NO. V	STREET LIGHTING	46.04 <del>21.96</del> 21.96 Lacs
SUB WORK NO. VI	HORTICULTURE	14.66 <del>26.60</del> 25.76 Lacs
SUB WORK NO.	MTC CHARGES INCL RESURFACING OF ROADS AFTER 1st 5 YEARS AND 2nd YEAR	151.67 <del>190.40</del> 217.04 Lacs
	TOTAL	911.04 <del>690.46</del> 704.27

(Rupees Six Hundred Ninety Lacs And Fourty Six Thousand Only)/-

(Rupees Seven Zero four Lacs And Twenty Seven Thousand Only)/-

For Pioneer Urban Land & Infrastructure Limited

B. Aline Hundred Eleven Lacs and Four Hundred only

M. K. Gupta  
Consultants  
A-8, Paryavaran Complex  
10800 Road  
New Delhi-110 030

Cost Estimate = 911.04 - 63.18 Lacs = 847.86 Lacs  
14.42  
14.306

Authorised Signatory

AUTHORISED SIGNATORY  
in for  
Dt. 2/5/14  
with the estimate

Executive Engineer,  
HDA Division No. 1  
GURGAON.

ANURAAG CHOWLA  
CA Registration No. 79/5125

Executive Engineer (W)  
for Chief Engineer  
HUDA Faridkot

Director General  
Town & Country Planning,  
Haryana, Chandigarh

Superintending Engineer  
HUDA Circle, Gurgaon



## SUB WORK No. 1 (Abstract of Cost)

## Water Supply &amp; Fire Fighting

(Rs. in Lacs)

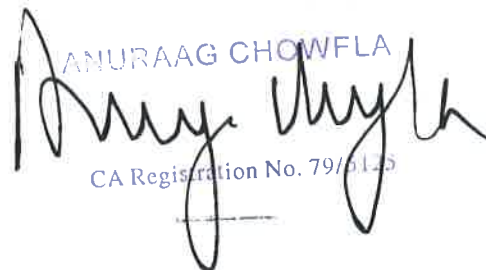
1	Sub Head No. 01	Head Works	36,79,000/-	Rs. 3,679,000	63,00,000/-
			37.29		
2	Sub Head No. 02	Pumping Machinery	63,00,000/-	Rs. 4,600,000	15,38,000/-
			74.25		
3	Sub Head No. 03	Rising Main	15,38,000/-	Rs. 1,088,000	15,42,750/-
			5.69		
4	Sub Head No. 04	Distribution System	18,42,750/-	1,530,750	18,26,500/-
		(Dom and Flushing)	27.56		
5	Sub Head No. 05	External Fire Hydrant	18,26,500/-	1,626,500	18,107,500/-
			13.74		
6	Sub Head No. 06	Irrigation	92,12,500/-	721,250.00	4,88,225/-
			7.32		
		TOTAL	165.95	Rs. 13,245,500	16,107,500/-
		Add 3% contingencies & PH Charges	4.98	Rs. 397,365.00	4,83,225/-
		TOTAL	170.83 Lacs	Rs. 13,642,865	165,90,725/-
		Add 49% Departmental charges + Price escalation	83.70	Rs. 6,685,003.85	8,129,455/-
			2,54.53 Lacs		
		TOTAL		Rs. 20,327,869	247,20,180/-
		Say in lacs		203.28	247.20

For Pioneer Urban Land &amp; Infrastructure Limited



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MEE No. 045780/3  
MKG Consultants  
A-8, Paryavaran Complex  
IGNOU Road  
New Delhi-110 030

ANURAAG CHOWFLA  
  
 CA Registration No. 79/0145

Sub Work No. 1  
Sub Head No. 01

Water Supply & Fire Fighting  
Head Works

Amount in Rs.

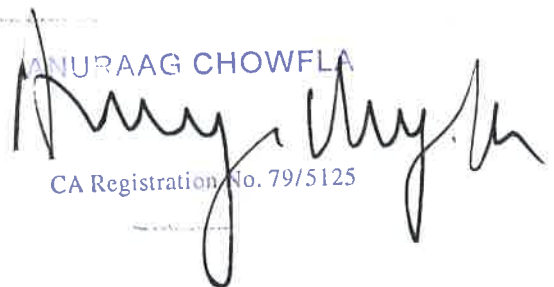
1. Boring and installing tubewell with reverse rotary rig  
Complete with pipe and strainer to a depth of about 120 metre in all respect  
2 Nos. @ Rs. ~~500,000/-~~ <sup>7.00</sup> each. 14.00 Lacs  
Rs. 1,000,000 ✓
  2. Provision for rising mains, connecting tubewells with water main  
and Bye-pass arrangements.  
a) 100 mm dia - 95m @ Rs. 1200/- Rs. 114,000 ✓  
b) 150 mm dia - 110m @ Rs. 1500/- Rs. 165,000 ✓
  3. Providing Tubewell Submersible Pumps :  
Capacity ~~15000~~ <sup>12.50 HP</sup> lph at 98 M head , 2 Nos. @ Rs. ~~200,000/-~~ <sup>1.25</sup> each 2.50 Lacs  
Rs. 400,000 ✓
  4. Constrution of UG Tanks 500 KL @Rs. 3000/KL  
(300 Domestic + 200 Fire) Rs. 1,500,000 ✓
  5. Provision of Constrution of Tubewell Chambers of  
Size 1.5x1.5x1.5 m for Housing tubewell - 2Nos @ Rs. ~~125000/-~~ <sup>1.00</sup> 2.00 Lacs  
Rs. 250,000 ✓
  6. Provision for unforeseen items/carriage of material 1.00 Lacs  
Rs. 250,000 ✓
- TOTAL**  
(C/O To Abstract of Cost for Subwork No.1)  
Rs. 3,679,000 ✓  
37.29 Lacs

For Pioneer Urban Land & Infrastructure Limited



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CA Registration No. 79/5125



Sub Work No. 1  
Sub Head No. 02

~~Water Supply & Fire Fighting~~  
Pumping Machinery

Amount in Rs.

1. Providing and installing electricity driven pumping Set capable of delivering about 250 LPM of water against a total Head of 145 M complete with motor and other accessories (12.50 HP)

1 Set ( 2w+1 sby) 3 Nos. @ 10.00 Lacs Each 20

Dom Plug. (2+1sby) 3 No. @ Rs. 2.00 Lacs

2. Provision for diesel engine genset each for standby arrangements For Pumps complete with gear head arrangements of following capacities.

2 No. 80 KVA @ Rs.150,000/- Each (L-3.)

(150) x 2 = 300,000/-

3. Provision for making foundations and erection of Pumping Machinery:

- Lump Sum

4. Provision for pipes, valves and specials inside boosting chamber.

- Lump Sum

5. Provision for electric service connection including electrical Fittings for tube-well and boosting chamber etc.

- Lump Sum

6. Provision for carriage of material and other unforeseen Items etc. L/S

30,00,000/-  
Rs. 3,000,000 6.00  
3.75

Rs. 300,000 30.00 Lacs  
16,00,000/-

Rs. 300,000 2.00 Lacs  
5,00,000/-

Rs. 300,000 2.00 Lacs  
5,00,000/-

Rs. 500,000 2.50 Lacs

Rs. 200,000 1.00 Lacs

**TOTAL**  
(C/O To Abstract of Cost for Subwork No.1)

Rs. 4,600,000-  
63,00,000/-

For Pioneer Urban Land & Infrastructure Limited



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M.C. Gupta  
MIE No. 045780/3  
MKG Consultants  
A-8, Paryavaran Complex  
IGNOU Road  
New Delhi-110 030

Providing and installing pumping set of following capacity for fire protection 180 LPM (110) m Head 2 No. Jockey Pump

@ 1.50 Lacs

3.00 Lacs CA Registration No. 79/512

HP 2850 LPM 2 (main + Sprinkler) 180 m Head

@ 7.50 Lacs

15.00 Lacs

10HP 2850 LPM on cno. diesel at 18 mtrs.

Head @ 9.00 Lacs

9.00 Lacs

74.25 Lacs

Sub-Work No. 1  
Sub Head No. 03

Water Supply & Fire Fighting

Rising Main from HUDA Connecting line.

from existing In Ph. I to UGT. in  
Ph. II

Amount in Rs.

- Providing , laying , jointing and testing pipe lines including Cost of excavation etc. complete in all respects.  
50 mm dia. G.I. pipe 330m @ Rs. 2000/Mtr-  
100 1200/-
- Providing and fixing sluice valve including cost of surface box and masonry chamber etc. complete in all respects.  
50 mm i/d 1 No. @ Rs. 17000/-  
100 12000/-
- Providing and fixing indicating plates for sluice valve and air Valves. - 1 No. @ Rs. 1000/- each
- Providing and fixing air release valve and scour valve 1 Nos. @ Rs. 10000/- each
- Provision for carriage for materials and other unforeseen items( Lump Sum)
- Making Water Supply Connection
- Provision for cutting of roads and making good to its original Conditions.

3.96 Lacs  
Rs. 660,000

12000 Lacs  
Rs. 17,000

Rs. 1,000

Rs. 10,000

Rs. 50,000

Rs. 250,000 5,00,000/-

Rs. 100,000 3,00,000/-  
1.00

Rs. 1,088,000 15,38,000/-  
5.69 Lacs

TOTAL

(C/O To Abstract of Cost for Subwork No.1)

Total Water requirement	300.000	cum/day
hours of Pumping	16.000	hours
Q- Flow	18.750	m3/Hr
	0.005	m3/sec
L- Length of Pipe	330.000	m
Dia of Pipe	50.000	mm
	0.050	m
A	0.002	m2
V	1.250	m/s
f (constant)	0.040	
Friction Losses (Hf)	21.024	m
Fittings, Bends & Other Losses @ 25%	5.256	m
Total	26.000	m
Say	26.000	m

For Pioneer Urban Land & Infrastructure Limited

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New Delhi-110030

CA Registration No. 79/5125

Sub Work No. 1  
Sub-Head No. 04

Water Supply & Fire Fighting  
Distribution System + Flushing

Amount in Rs.

1. Providing , Laying , jointing and testing G.I pipe line including Fittings, valves, cost of excavation etc. complete in all respect.

G.I Pipe 32 mm , 300 M @ Rs.400/- per meter

Rs.120,000/-

G.I Pipe 40 mm , 275 M @ Rs.600/- per meter

Rs.165,000/-

G.I Pipe 50 mm , 555 M @ Rs.750/- per meter

Rs.416,250/-

G.I Pipe 65 mm , 275 M @ Rs.900/- per meter

Rs.247,500/-

G.I Pipe 80 mm , 180 M @ Rs.1200/- per meter

Rs.216,000/-

G.I Pipe 100 mm , 25 M @ Rs.1400/- per meter

Rs.35,000/-

510 @ 800/- per meter

1280 @ 1200/- per meter

2. Provision for carriage of materials and other unforeseen items (Lump Sum)

Rs.200,000/-

3. Providing and fixing valves including chamber:-

- 80 mm dia 2 No. @ Rs. 9500/- each

Rs.19,000/-

- 100 mm dia 2 No. @ Rs. 12000/- each

Rs.24,000/-

3. Provision for air valve(LS)

Rs.100,000/-

**Total**

Rs.1,530,750/-

(C/O To Abstract of Cost for Subwork No.1)

Rs. 3,00,000/-

Prov for Road Cutting & making its original Condition (L.S)  
For Pioneer Urban Land & Infrastructure Limited

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M. K. Gupta  
AGE No. 045780/3  
MEG Consultants  
A-8, Paryavaran Complex  
IGNOU Road  
New Delhi-110 030  
27.56 Lacs

CA Registration No. 79/5125

## FIRE FIGHTING

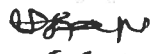
Sub Work No. 1  
Sub-Head No. 05

External Fire Hydrant

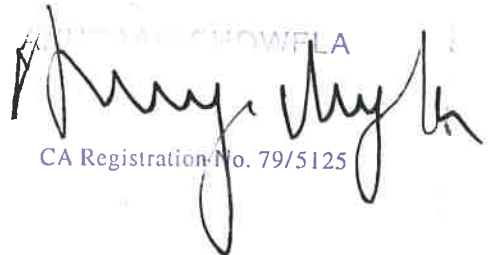
Amount in Rs.

1. Providing , Laying , jointing and testing M.S. pipes lines for fire rising main including cost of fittings, valves, connection etc. complete in all respect .	
(i) 150mm i/d 590 m @ Rs. 1500/ m	Rs.885,000
(ii) 80mm i/d 250 m @ Rs. <sup>1000</sup> 950/ m	Rs.237,500 <sup>250000/-</sup>
2. Providing and fixing fire Hydrant 14 Nos. '@ Rs. 10000/- <i>Complete in all respect</i>	Rs.140,000
3. Providing and fixing of Valve of 150mm Internal Dia. <i>Complete in all respect (L.S.)</i>	Rs.250,000 <sup>50000</sup>
4. Providing for carriage of material (L.S.)	Rs.100,000 <sup>10000</sup>
5. Providing for indication Plates 14Nos. '@ Rs. 1000/- <i>Prov. for Road Cutting and making its original Condition (L.S.)</i>	Rs.14,000
<b>Total</b>	<b>Rs.1,626,500</b> <sup>250000</sup>
(C/O To Abstract of Cost for Subwork No.1)	<b>18,26,500/-</b> <b>13.74 Lacs</b>

For Pioneer Urban Land & Infrastructure Limited

  
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New Delhi-110 030

  
CA Registration No. 79/5125

Sub-work No. I  
Sub-Head No. 06

Water Supply & Fire Fighting  
Irrigation

*Irrigation*

Amount in Rs.

*HDPE*

1. Providing , Laying, Jointing and testing pipe line Confirming to IS 4985 (uPVC) including cost of excavation etc. complete in all respect.

a) 25 mm dia 100 metre @ Rs. 250/- M	Rs.25,000 ✓
b) 32 mm dia 180 metre @ Rs. 350/- M	Rs.63,000 ✓
c) 40 mm dia 250 metre @ Rs. 450/- M	Rs.112,500 ✓
d) 50 mm dia 155 metre @ Rs. 550/ M	Rs.85,250 ✓
e) 65 mm dia 180 metre @ Rs. 750/ M	Rs.135,000 ✓
e) 80 mm dia 110 metre @ Rs. <del>900</del> M	Rs. <del>99,000</del> ✓

*1000*

*110000*

2. Providing and fixing 25 mm dia. irrigation hydrant Valve complete in all respect. 29 Nos. @ Rs. 3500/ each

Rs.101,500 ✓

3. Provision for carriage of Material and other as foreseen items

*50000/-*  
Rs.100,000 ✓

*for. for Road Cutting and making its original Condition (L.S)*

*Rs.200,000/-*  
*50000/-*

TOTAL Rs.721,250

*8,21,250/-*

*7.32 Lacs*

(C/O To Abstract of Cost for Subwork No.1)

For Pioneer Urban Land & Infrastructure Limited

*[Signature]*

Authorised Signatory

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MIE No. 045780/3  
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ANURAG CHOWLA

*[Signature]*

CA Registration No. 79/5125



## Sub-Work No. II

## SEWERAGE SCHEME


Amount in Rs.

1. Providing , jointing , cutting and testing SW pipe class "A" and lowering into trenches including cost of Excavation, bed concrete, cost of manholes etc. complete

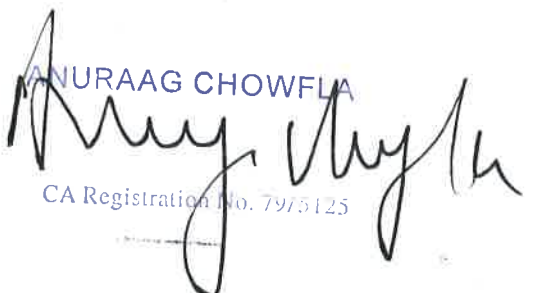
1412 1200 a) SW pipe 200 mm i/d avg. depth 0-2 M 900 M @ Rs. 1500/M 1250	17.63 18,00,000/-	Rs. 450,000 1350000
b) SW pipe 250 mm i/d avg. depth 0-2 M 80 M @ Rs. 1800/M 2.3		Rs. 144,000 ✓
c) SW pipe 300 mm i/d avg. depth 0-2 M 120 M @ Rs. 2100/M 2.3		Rs. 252,000 2.58 Lacs 3,00,000/-
2. Provision for cartage of material		Rs. 200,000 ✓
3. Provision for lighting and watching		Rs. 200,000 ✓
4. Provision for making HUDA Connection on master Road		Rs. 500,000 500000/-
5. Provision for Temp Disposal + STP		Rs. 5,000,000 5.00 Lacs
6. Provision for vent Pipe 450 KLD or 0.45 MLD cu per R.H. at regular interval at suitable place		
Add 3% contingencies & PH charges	81,44,000/- 2,44,320/- 81.13 83,88,320/- 2.43	Total Rs. 6,746,000 7,046,000
Add 49% Price Escalation, Departmental charges	41,10,277/- 83.58 124,98,597/- 40.96 124.54	Total Rs. 6,948,980 7,875,380
Admn. Charges		Rs. 3,404,706 3,859,936
		TOTAL Rs. 10,353,086 11,734,316
	Say in lacs	103.53 117.34

(Cost to Final abstract of cost)

For Pioneer Urban Land &amp; Infrastructure Limited

  
Authorised Signatory

M. A. Choudhary  
MCA No. 045780/3  
MCA Consultants  
A-8, Paryavaran Complex  
IGNOU Road  
New Delhi - 110 030

ANURAAG CHOWLA  
  
CA Registration No. 7975125

Sub-Work No. III

STORM WATER SCHEME

Amount in Rs.

1. Providing and laying R.C.C. pipe drain class NP-2  
With cement joint, manholes excavation etc complete  
in all respect.

1070 Mts.

- a) 400 mm dia 760m @ Rs. 1750/m

1240+170

2. Provision for Road gullies L.S. with 300 mm dia pipes Connection.

3. Providing Rain Harvesting arrangements

5 Nos @ Rs 150,000 14.306 Acro (L.S.)

4. Provision for Shoring & Timbering (L.S.)

5. Provision for Lighting, Watching & Temp. Drain Arrangements (L.S.)

6. Provision for Carriage of Material (L.S.)

7. Provision for Connection with HUDA line on master road

Add 3% for contingencies and PH charges

Add 49% Departmental charges price escalation  
unforeseen Admin. Charges

(Cost to Final abstract of cost)

44,72,581/-  
1,34,175/-  
46,06,756/-  
22,57,271/-  
68,63,946/-

Total	Rs.3,930,000
	Rs.117,900
Total	Rs.4,047,900
	Rs.1,983,471
TOTAL	Rs.6,031,371
Say in lacs	60.31

For Pioneer Urban Land & Infrastructure Limited

Authorised Signatory

M.K. Gupta  
MIE No. 045780/3  
MKG Consultants  
A-8, Paryavaran Complex  
IGNOU Road  
New Delhi-110 030

AG CHOWFLA

CA Registration No. 79/5125

21.70 Lacs  
18,72,581/-

Rs.1,330,000

Rs.1,000,000

Rs.750,000

Rs.250,000

Rs.250,000

Rs.250,000

Rs.100,000

47.20 Lacs  
1.72

48.62  
23.82

72.44

## Sub-Work No. IV


## Road Work

ROAD AREA As Per Drawing Attached			
ROAD NO.	LENGTH	BREADTH	AREA
A	256.00	9.00	2304.00
B	30.8	9.00	277.20
C	21.92	9.00	197.30
D	30.80	9.00	277.20
E	72.30	4.50	325.35
F	31.40	6.00	188.40
G	2.81	8.00	22.50
H	122.13	9.00	1099.20
I	22.12	6.00	132.70
J	46.44	7.00	325.10
	636.73		
TOTAL AREA (SQM)			5149
PARKING (SQM)			
P13	11.00	5.00	55.00
P14	11.00	5.00	55.00
TOTAL PARKING AREA (SQM)			110
TOTAL ROAD LENGTH(M)			636.73

For Pioneer Urban Land &amp; Infrastructure Limited



Authorised Signatory

  
 Mr. K. Gupta  
 No. 045780/3  
 Consultants  
 Paryavaran Complex  
 IGNOU Road  
 New Delhi-110 030

Area for Emergency (Fire Tenders) 1805.00 Sqm

Total Area : 5149 + 110 + 1805 = 7064.00 Sqm

Add 10% for Curves & Junction = 706.40 Sqm

Say : 7770.40 Sqm

  
 RAAG CHOWFLA

CA Registration No. 79/5125

**NOTE: Rates as per HUDA norms**

Amount in Rs.

1. Provision for levelling & earth filling as per site conditions.

As per cut & fill plan ~~14.42 Hc @ Rs. 10.00 Cum~~ 5259CU.M.

~~14.42~~ <sup>14.31</sup>  
~~14,42,000/-~~  
1052000.00

2. i. ~~Selling coat 100 mm thick (63-45) mm~~ 5259SQ. M.  
to 75 mm thick WBM conforming to MOT specification

736400.00

- ii. ~~Wearing coat (Top coat) 100mm thick~~ 5259SQ. M.  
gauge compacted to 75mm thick conforming to MOT specifications (Table 400-6, Grading No. 3)

736400.00

- iii) 25 mm thick pre-mix carpet with seal c 5149SQ. M.

1029788.19

3. Provision for kerbs & channels of CC 1:1½:3

1180 m @ 500/-/mhi  
1400 600

~~5,90,000/-~~ 66.05 Hec  
8.40 Lacs  
954000.00

(Both Side)

4. Provision for making approach and pavement to building (L.S.)

in parking area

3200000 20.00 Lacs

5. Provision for parking arrangement  
- Lump sum

110 Sqmtr

22000

6. Provision for carriage of material (L.S)

100000

**TOTAL**

Add 3% contingency & P.E. charges

TOTAL

~~134,90,500/-~~ 109.76 Lacs  
~~4,04,715/-~~ 3.29 Lacs  
~~138,95,215/-~~ 113.05 Lacs  
Rs. 7,230,588  
Rs. 216,917.65  
Rs. 7,447,505.84

Add 49% depts. Charges

~~68,08,655/-~~ 55.40 Lacs  
Rs. 3,649,277.86

Say (Rs. In Lacs)

(Cost to Final abstract of cost)

Say in lacs

~~207,03,870/-~~ 168.45 Lacs  
Rs. 11,096,784  
110.97

For Pioneer Urban Land & Infrastructure Limited

*Signature*

Authorised Signatory

M.K. Gupta  
M/E No. 045780/3  
MKG Consultants  
I.B. Paryavaran Complex  
IGROU Road  
New Delhi-110 030

*Signature*  
CA Registration No. 79/5125



# Sub Work No. V

## Street Lighting

Prov. Street Lighting for an area = 14.42 Acres  
14.306 @ 1.00 Lac.

Amount in Rs.

- 1) Providing lighting at surrounding Area as per standard specifications of  
Total light poles = 120 @ Rs. 25000- ~~14.306~~ MvPNL with CFL

Rs. 3,000,000 ~~14.31 Lac~~

Add 3% contingencies & P.E. charges

Rs. 90,000 ~~0.43 Lac~~

TOTAL

Rs. 3,090,000

Add 49% Departmental charges price, escalation, unforeseen

Rs. 1,514,100 ~~14.74 Lac~~

TOTAL

Rs. 4,604,100 ~~7.22 Lac~~

Say (Rs. In Lacs)

46.04 ~~21.96 Lac~~

(Cost to Final abstract of cost)

# Sub Work No. VI

## Plantation & Road Side trees

### 1. Development of Lawn Areas:

14.306  
14.42 Acres @ 1.00 lac/acre

Amount in Rs.

- a) Trenching of ordinary soil upto depth of 60 cm i/c removal & stacking of  
b) Rough dressing of turfed area.  
c) Grassing with "DOOB GRASS" i/c watering and maintenance of lawns for 30 days

~~14.42,000/-~~  
14.31 Lacs.

Green area=10000

500000.00

### 2. Providing and planting trees along boundary @ 12 m interval

Total Road length 636.73

No. of trees

(along road)

60

No. of trees

(along

boundary and

others)

265

Total No. of Trees

325

CA Registration No. 79/5125

### Cost Details:

Excavation	75	30
Manure	75	30.60
Tree Plant	500	53.60
Tree Guard	750	600
TOTAL	1400	750/-

CA Registration No. 79/5125

243750  
289250/-

325 Trees @ Rs. 1400

TOTAL

Add 3% contingencies & P.E. charges

TOTAL

M. K. Gupta  
MD No. 045780/3  
MKG Consultants  
A-8, Paryavaran Comp  
IGNOU Road  
New Delhi-110 030

Rs. 455,000- ~~16.75~~

Rs. 955,000- ~~0.53~~

Rs. 28,650- ~~17.25~~

Rs. 983,650- ~~8.45~~

For Pioneer Urban Land & Infrastructure Limited

Authorised Signatory



Add 49% Departmental charges

**TOTAL**

**Say (Rs. In Lacs)**

(Cost to Final abstract of cost)

~~17.83,108/-~~  
~~8,73,762/-~~  
Rs. 481,989  
~~26,56,950/-~~  
Rs. 1,405,639  
~~14.66~~ ~~26.60~~

**SUB WORK - VII - SERVICES & RESURFACING OF ROADS**

**1. Provision of MTC charges for W/s, SWD**

(a) Complete in all aspect, including operational and establishment charges as per

2. Provision of resurfacing of roads after 5 years of MTC one layer of 100 mm thick

(a) Resurfacing of road after 5 years of MTC

(b) Resurfacing of road after 10 years of MTC

**TOTAL**

Add 3% contingencies & P.E. charges

**TOTAL**

Add 49% Departmental charges

**TOTAL**

**Say (Rs. In Lacs)**

(Cost to Final abstract of cost)

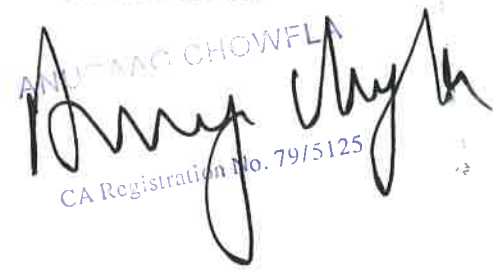
Amount in Rs.

~~54,07,500/-~~ 71.53 Lacs  
~~3,078,750/-~~  
~~46,62,000/-~~ 23.31 Lacs  
Rs. 4,536,000  
Rs. 2,268,000  
Rs. 9,882,750  
Rs. 296,483  
Rs. 10,179,233  
Rs. 4,987,824  
Rs. 15,167,056  
151.67  
Say 190.40 Lacs

For Pioneer Urban Land & Infrastructure Limited

  
Authorised Signatory

M. K. Gupta  
ME No. 545780/3  
MRG Consultants  
R-8, Paryavaran Complex  
IGNOU Road  
New Delhi-110 030

  
ANURAG CHOWLA  
CA Registration No. 79/5125

S.No	SEWER LINE	Tower No.	Total Population	Total Water Requirement	Sewage Discharge (LPD)			Average Sewage Discharge		Size of Pipe	Velocity	Design Discharge	Length of Line	Slope	Fall in Metres		Ground level		Invert Level		Depth of Pipe at		Average depth of pipe
					Self	Branch	Total	LPS	Cusec						As per gradient	As per pipe slope	Start	End	Start	End	Start	End	
1	I - 2	Tower H	464	80040	64 032		64 032	0.7411111	2.22	200	2.42	0.41	60	200	0.000	0.300	243.00	243.00	242.00	241.70	1.00	1.30	1.15
2	2 - 3	Tower G	464	80040	64 032	64 032	1 28 064	1.4822222	4.45	200	2.42	0.41	40	200	0.000	0.200	243.00	243.00	241.70	241.50	1.30	1.50	1.40
3	3 - 7			0		1 28 064	1 28 064	1.4822222	4.45	200	2.42	0.41	70	200	0.000	0.350	243.00	243.00	241.50	241.15	1.50	1.85	1.68
4	7 - 8	Tower F	232	40020	32 016	1 28 064	1 60 080	1.8527778	5.56	250	2.51	0.66	60	250	0.000	0.240	243.00	243.00	241.25	240.95	2.00	2.35	2.17
5	4 - 5	C.S & Shop		70000	56 000		56 000	0.6481481	1.94	200	2.42	0.41	10	200	0.000	0.050	243.00	243.00	242.00	241.95	1.00	1.05	1.03
6	5 - 6	Tower J	384	66240	52 992	56 000	1 08 992	1.2614815	3.78	200	2.42	0.41	120	200	0.000	0.600	243.00	243.00	241.95	241.35	1.05	1.65	1.35
7	6 - 8	Tower F	232	40020	32 016	1 08 992	1 41 008	1.632037	4.90	250	2.51	0.66	20	250	0.000	0.080	243.00	243.00	241.35	241.27	1.65	2.33	1.69
8	8 - 9			0		3 01 088	3 01 088	3.4848148	10.45	300	2.59	0.99	100	300	0.000	0.333	243.00	243.00	240.92	240.69	2.49	2.42	2.19
9	9 - STP			0		3 01 088	3 01 088	3.4848148	10.45	300	2.59	0.99	20	300	0.000	0.067	243.00	243.00	240.92	240.92	2.47	2.48	2.49

For Pioneer Urban Land &amp; Infrastructure Limited

M.K. Gupta  
 MIE No. 045780/3  
 MKG Consultants  
 A-2, Paryavaran Complex  
 110010, New Delhi-110 030

*[Signature]*  
 Authorised Signatory

*[Signature]*  
 ANURAAG CH  
 CA Registration No. 79/5125

## Material Statement -Sewerage System

S.No	SEWER LINE	Size of Pipe mm	Length of Line Meters
1	1 - 2	200	60
2	2 - 3	200	40
3	3 - 7	200	70
5	4 - 5	200	10
6	5 - 6	200	120
Total for 200 mm Dia			300
4	7 - 8	250	60
7	6 - 8	250	20
Total for 250 mm Dia			80
8	8 - 9	300	100
9	9 - STP	300	20
Total for 300 mm Dia			120
10	Branch pipe	200	600

For P/O

Pioneer Limited

Signatory

M. K. Gupta  
 PVT No. 048780/3  
 Consultants  
 A-8, Paryavaran Complex  
 IGNOU Road  
 New Delhi-110 030

For Pioneer Urban Land &amp; Infrastructure Limited

Authorised Signatory

Elws. — 210 M  
 Tower F — 110 + 70 = 180 M  
 G — 110 + 70 = 180 M  
 H — = 80 M  
 I — 18 + 30 = 210 M  
 Sheds and C.S. = 250  
 Sheds and C.S. = 1110 M

Total 200 mm — 300 + 1110 = 1410 M  
 250 mm = 80 M  
 300 mm = 120 M

ANURAAG CHOWLA  
 CA Registration No. 79/5125

S.No	Line No.	Self Area (m2)	Self Area (Acre)	Branch Area (Acre)	Total Area (Acre)	Total Area (Hec)	Rain Fall mm/hr	Discharge @17.36 Ips/Hec	Length In mtr.	Pipe dia in mm	Slope in 1 in	Velocity m/sec.	Cap of pipe in Ips.	Fall in line mtr.	Ground Level		Invert Level		Depth	
															Start	End	Start	End	Start	Average
1	1-RW3	6410	1.60	0.00	1.603	0.65	6.25	11.26	120	400	400	0.72	90.28	0.30	243.00	243.00	242.40	242.10	0.60	0.75
2	RW3-RW2	7470	1.87	1.60	3.470	1.40	6.25	24.37	65	400	400	0.72	90.28	0.16	243.00	243.00	242.10	241.94	0.90	0.98
3	3-RW2	4730	1.18	0.00	1.183	0.48	6.25	8.31	210	400	400	0.72	90.28	0.53	243.00	243.00	242.40	241.88	0.60	0.86
4	RW2-RW1	6500	1.63	4.65	6.278	2.54	6.25	44.09	80	400	400	0.72	90.28	0.20	243.00	243.00	241.88	241.68	1.13	1.22
5	RW1-DISPOSAL	1000	0.25	7.46	7.710	3.12	6.25	54.15	20	400	400	0.72	90.28	0.05	243.00	243.00	241.68	241.63	1.32	1.35
6	2-RW4	6160	1.54	0.00	1.540	0.62	6.25	10.82	80	400	400	0.72	90.28	0.20	243.00	243.00	242.40	242.20	0.60	0.70
7	RW4-RW5	4900	1.23	1.54	2.765	1.12	6.25	19.42	110	400	400	0.72	90.28	0.28	243.00	243.00	242.20	241.93	0.80	0.94
8	RW5-4	2500	0.63	2.77	3.390	1.37	6.25	23.81	55	400	400	0.72	90.28	10.14	243.00	243.00	241.93	241.79	1.07	1.14
9	4-DISPOSAL	1000	0.25	3.39	3.640	1.47	6.25	25.57	20	400	400	0.72	90.28	0.05	243.00	243.00	241.79	241.74	1.21	1.24

M.K. Gupta  
 MIE No. 043780/3  
 MRG Consultants  
 A-8, Paryavaran Complex  
 IGNOU Road  
 New Delhi-110 030

For Pioneer Urban Land & Infrastructure Limited

*[Signature]*

Authorised Signatory

*[Signature]*  
 CA Registration No. 79/5125

**Material Statement -Drainage System**

S.No	Line No.	Length in mtr.	Pipe dia in mm
1	1-RW3	120	400
2	RW3-RW2	65	400
3	3-RW2	210	400
4	RW2-RW1	80	400
5	RW1-DISPOSAL	<del>20</del> 120	400
6	2-RW4	80	400
7	RW4-RW5	110	400
8	RW5-4	55	400
9	4-DISPOSAL	<del>20</del> 30	400
Total for 400 mm dia		870	400
For 200 mm dia		200	
Total for 200 mm dia		1070	

M.K. Gupta  
 MIE No. 046780/3  
 MKG Consultants  
 A-8, Paryavaran Complex  
 IGNOU Road  
 New Delhi-110 030

For Pioneer Urban Land & Infrastructure Limited

Authorised Signatory

ANURAAG CHOWLA

CA Registration No. 79/5125

Tower H - 50m  
 J - 150m  
 200m



S.No.	Line Designation	Water Requirement (in LPD)	Water Requirement (in KLD)	Self Water requirement (in KLD)	Branch Water requirement (in KLD)	Add 10% Misc..	Total Water Requirement (in KLD)	Discharge per Hour considering 8 Hours	Size of Pipe Provided	Velocity in ft/sec.	Velocity in m/sec.	Head Loss per 1000m	Loss of head as per pipe length	Length of pipe (in metres)	Ground level	Hydraulic Level	Terminal Head
							Total		mm						Start in m	End in m	In m
1	PHASE-1																
2	UGI-1		0	0	366	37	366	45.795	100	5.33	1.62	48	1.189	25	243.00	433.000	431.811
3	1-2		0	0	126		126	15.780	65	4.34	1.32	54	2.160	40	243.00	431.811	429.651
4	2-TOWER J	66240	66	66	0		66	8.280	50	3.85	1.17	59	1.175	20	243.00	429.651	428.476
5	2-3		0	0	60		60	7.500	50	3.49	1.06	49	6.362	130	243.00	429.651	423.289
6	3-C-S	50000	50	50	0		50	6.250	40	4.54	1.39	104	2.071	20	243.00	423.289	421.219
7	4-SHOPS	10000	10	10	0		10	1.250	32	1.42	0.43	16	1.719	110	243.00	423.289	421.570
8	1-5		0	0	240		240	30.015	80	5.45	1.66	65	5.485	20	243.00	431.811	426.326
9	5-TOWER H	80040	80	80	0		80	10.005	50	4.65	1.42	83	1.668	20	243.00	426.326	424.658
10	5-6		0	0	160		160	20.010	80	3.64	1.11	30	2.896	95	243.00	426.326	423.430
11	6-TOWER G	80040	80	80	0		80	10.005	50	4.65	1.42	83	1.668	20	243.00	423.430	421.762
12	6-7		0	0	80		80	10.005	50	4.65	1.42	83	9.174	110	243.00	423.430	414.256
13	7-TOWER F	80040	80	80	0		80	10.005	50	4.65	1.42	83	1.668	20	243.00	414.256	412.588

M. N. Gupta  
 MIE No. 045780/3  
 MKG Consultants  
 A-8, Paryavaran Complex  
 IGNOU Road  
 New Delhi-110 030

For Pioneer Urban Land &amp; Infrastructure Limited

  
 Authorised Signatory

ANURAG CHOWFLA  
  
 CA Registration No. 795125

## Material Statement- Water Supply

S.No.	Line Designation	Size of Pipe Provided mm	Length of pipe(in metres)
<b>DOMESTIC WATER SUPPLY</b>			
1	3-4	<del>32</del> 100	110
2	4-SHOPS	<del>32</del> 65	20
	Total for 32 mm dia		130
3	3-C.S	<del>40</del> 65	<del>50</del> 20
	Total for 40 mm dia		<del>50</del> 20
4	5-TOWER H	50 65	20
5	6-TOWER G	50 65	20
6	6-7	50 100	110
7	7- TOWER F	50 65	20
8	2-TOWER J	50 65	40
9	2-3	50 100	130
	Total for 50 mm dia		340
10	1-2	65 100	40
	Total for 65 mm dia		40
11	1-5	80 100	85
12	5-6	80 100	95
	Total for 80 mm dia		180
13	UGT-1	100	25
	Total for 100 mm dia		25
	G - EWS	65	100
<b>FLUSHING WATER SUPPLY</b>			
1	5 - 6	32 100	110
2	5 - C.S	32 65	40
3	6 - SHOPS	32 65	20
	Total for 32 mm dia		170
4	1 - TOWER F	40 65	20
5	3 - TOWER H	40 65	20
6	4 - 5	40 100	125
7	4 - TOWER J	40 100	50
8	2 - TOWER G	40 65	20

For Pioneer Urban Land &amp; Infrastructure Limited



Authorised Signatory

M.K. Gupta  
 MIE No. 045780/3  
 MKG Consultants  
 A-8, Paryavaran Complex  
 IGNOU Road  
 New Delhi-110 030

ANURAAG CHOWLA

CA Registration No. 79/5125

Material for Garden Hydrant

S.no	Node NO		Dia of Pipe	Length
1	STP 1	1	80	110
2	1	2	40	130
3	2	3	25	40
4	2	4	32	85
6	1	5	65	180
7	5	6	50	155
8	6	7	40	120
9	7	8	32	95
10	8	9	25	60
LL	LO	EW5	40	20
	Total			975

for Pioneer Urban Land &amp; Infrastructure Limited

M. K. Gupta  
 MDS No. 045780/3  
 MKG Consultants  
 A-8, Paryavaran Complex  
 IGNOU Road  
 New Delhi-110 030

Authorised Signatory

25mm dia = 40 + 60 = 100m  
 32mm dia = 85 + 95 = 180m  
 40mm dia = 130 + 120 = 250m  
 50mm dia = 155m = 155m  
 65mm dia = 180m = 180m  
 80mm dia = 110m = 110m

ANURAAG CHOWLA  
 CA Registration No. 79/5125

C.E. No. 5782

Dated 31/5/12

Annexure-A

**SUB: - Approval of service plan / Estimate of the Group Housing Scheme measuring 14.306 acres out of 24.606 acres (Licence No. 268 of 2007 dated 3.12.2007) in Sec-62, Village Ghatta, Gurgaon Manesar Urban Complex being developed by M/S. Pioneer Urban Land & Infrastructure Ltd. (PH- II).**

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 be the same specifications as are being adopted by HUDA and further shall also confirm to such directions, as issued by Chief Engineer, HUDA from time to time.
4. The work shall be carried out according to Haryana PWD specification or such specifications as are being followed by HUDA. Further it shall also confirm to such other directions, as are issued by Chief Engineer, HUDA 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/ HUDA. All link connections with the State Government/ HUDA 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

C.E. No. 5782  
Dated 7/5/11

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.
8. Only C.I/D.I pipes will be used in water supply and flushing system, UPVC/HDPE pipe for irrigation purposes.
9. A minimum 100 i/d C.I/D.I, 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 or HUDA.
11. 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.
12. The specifications for various roads will be followed as per IRC/MORTH specifications.
13. The wiring system of street lighting and specifications of street lighting fixture will be as per relevant standards.
14. This shall confirm to such other conditions as are incorporated in the approved estimate and the letter of approval.

Executive Engineer (W),  
For Chief Administrator, HUDA,  
Panchkula