

**EXTERNAL DEVELOPMENT WORKS  
DESIGN AND COST ESTIMATES**

**FOR**

**REVISED BUILDING PLAN OF COMMERCIAL  
COLONY MEASURING 10.4375 ACRES  
(LICENCE NO.56 OF 2013 DATED 10.07.2013) IN  
SECTOR -88 , GURUGRAM MANESAR URBAN  
COMPLEX BEING DEVELOPED BY AMB  
INFRABUILD PVT. LTD.**

**DEVELOPED BY:  
M/S AMB INFRABUILD PVT. LTD.**



**REVISED BUILDING PLAN OF COMMERCIAL COLONY MEASURING  
10.4375 ACRES (LICENCE NO.56 OF 2013 DATED 10.07.2013) IN SECTOR -  
88 , GURUGRAM MANESAR URBAN COMPLEX BEING DEVELOPED  
BY AMB INFRABUILD PVT. LTD.**

**REPORT**

ESTIMATE FOR PROVIDING WATER SUPPLY, SEWERAGE, STORM WATER DRAINAGE, ROADS, STREET LIGHTING AND HORTICULTURE IN RESPECT OF REVISED BUILDING PLAN OF COMMERCIAL COLONY MEASURING 10.4375 ACRES (LICENCE NO.56 OF 2013 DATED 10.07.2013) IN SECTOR -88 , GURUGRAM MANESAR URBAN COMPLEX BEING DEVELOPED BY AMB INFRABUILD PVT. LTD.

Gurgaon Manesar Urban Complex of Haryana State situated on N.H.- 8 Highway at a distance of 50 Kms from Delhi. Being the National Capital Region, the town has fast developing tendency and potential. Developed by AMB INFRABUILD PVT. LTD has been developing REVISE BUILDING PLAN OF COMMERCIAL COLONY MEASURING 10.4375 ACRES (LICENCE NO.56 OF 2013 DATED 10.07.2013) IN SECTOR -88 , GURUGRAM MANESAR URBAN COMPLEX BEING DEVELOPED BY AMB INFRABUILD PVT. LTD.

**WATER SUPPLY**

At present the source of water supply in this area is water Tankes/ Temp. Borewells/ HUDA Water Supply. It has been proposed to construct the under ground tanks of capacity as per attached details, and at location for domestic purpose and for fire protection. The underground tanks will be fed from the tankers and HUDA supply, which will feed overhead tanks on the roof of the buildings. The water supply system has been designed as per Hazen Williams formula.

**DESIGN**

The scheme has been designed for population of approx 3195 persons for Commercial Building. The rate of water supply per head / day has been taken as (Staff = 45 liters , Visitor & Auditorium = 15 liters , Restaurant = 70Litre , Food court & kiosk = 35liters) as per HUDA norms in addition to above necessary provision of water for club and parks etc. have been taken into account for calculating the maximum quantity of water requirement.

**PUMPING REQUIREMENTS**

It has been proposed to install pumping set as described with standby of equal capacity. The provision for standby generating set has also been provided in case of any electricity failure.



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**UNDERGROUND STORATE TANK**

Underground storage tank provision has been made in two compartments, which cater for the domestic as well as for fire fighting requirement. The water for fire water compartment shall overflow to the domestic compartment so that the water in the fire compartment also remain full & fresh and will not contaminate.

**BOOSTING STATION**

The boosting station is being planned near underground storage tank catering to above requirement.

**DISTRIBUTION SYSTEM**

The distribution system for this development has been designed to supply @ (Staff = 45 liters, Visitor=15Litre, Restaurant = 70Litre , Food court = 35liters) per head per day @ 3 times the average rate of flow on Hazen William formula. Necessary provision for laying CI/DI pipes confirming to relevant IS standard along with valves and special has been made in the project. The minimum terminal head at any point will be more than 55 so that it can be serve the floors construction envisaged in the plan. Minimum pipe dia. for distribution is kept as 100 mm dia.

**RISING MAIN**

Raising main from HUDA water main or sector road to water work have also been proposed as provision has been made in this estimate.

**SEWERAGE SCHEME**

This scheme has been designed for sewer connecting to STP & over flow of STP connected to HUDA sewer main. The sewerage system has been marked on respective plans.

The sewer lines have been designed for three times average D.W.F. in relation to water supply demand. It has been assumed that about 80% of the domestic water supply shall find its way into the proposed sewer. Sewer lines shall be laid to a gradient maintaining minimum 2.46 ft/sec self cleaning velocity. Necessary provision for laying S.W./R.C.C. pipe sewer line, construction of required number of manholes etc. has been made in the estimate.

Necessary design statement for entire sewerage system has been prepared and attached with estimate. Manning's formula has been used for the design of sewerage system.



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**STORM WATER DRAINAGE**

Since the Master Scheme has been proposed with pipe drain, we proposed to lay pipe drains with required number of catch basins for disposal of storm water. The intensity of rain fall has been taken as 40 mm per hour. A minimum size of 400 mm dia pipe storm water pipe will be provided and desianed as per Manning's formula.

**FIRE**

As per N.B.C. (National Buiding Code), fire tanks & required capacity pumps have been provided the plan as shown on the plan. Similarly irrigation pumps of required capacity provided as shown on the plan.

**SPECIFICATIONS**

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

**ROADS**

The raods in the colony have been planned as minimum 6 M wide. The following specification have been adopted which are reproduced below:

The specification of 6M wide roads:

- <sup>200</sup>  
1. GSB-100 mm in one layer.  
2. WBM-<sup>250</sup> mm in Three layer.  
3. C BM-50 mm thick.  
4. MSS-20 mm thick. BC - 30 mm thick.

The above constructon shall be done on well compacted sub grade as per specifications. Complete work will be carried out as per MORTH specification, IRC guide lines or HUDA specification, which ever applicable.

**STREETLIGHTING**

Provision of lighting on surrounding area has been made.

**HORTICULTURE**

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

**RATES**

The estimate has been prepared based on the present market rates.



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**COST**

**1420.57**

**137.15**

The total cost of the scheme, including cost of all services works out to Rs 449.78 Lacs Including 3% contingencies and 49% departmental charges, price escalation & other unforeseen charges. Cost of per Acres Rs 111.91 Lacs.

~~10895~~ → **Rs 136.10 Labh.**

M/S AMB INFRABUILD PVT. LTD.

(AUTHORIZED SIGNATORY)



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<b>(I) DAILY WATER REQUIREMENT</b>			
<b>A)</b>	<b>Commercial</b>		
a)	Shops at Upper basement + Ground floor $(3850+15500 = 19350 \text{ sqm} @ 3 \text{ sqmt/ person})$	=	6450 Persons
b)	Shops at 1st to 2nd Floor ( $13200+10850 = 24050 \text{ sqm}$ $@ 6 \text{ sqmt/ person}$ )	=	4008.33 Persons
c)	<b>Total</b>	=	<b>10458.33 Persons</b>
a)	Shopkeepers @ 10% of Population $@ 45 \text{ LPCD}$	=	1046 Persons
		=	47070 Liters/ Day
b)	Visitors @ 90% of Population $@ 15 \text{ LPCD}$	=	9413 Persons
		=	141195 Liters/ Day
c)	Food Court 4000 sqm (Food Court) total area = 4000 sqm @ 1.8 sqm per person water requirement @ 35 LPCD	=	2222 person
		=	77778.00 Liters/ Day
d)	1350+400=1750 sqm (Restaurant) total area = 1750 sqm @ 1.8 sqm per person Visitors @ 90% of Population @ 70 LPCD Restaurant staff @ 10 % of Population @ 45 LPCD	=	972 1750.00 person 61250 45500.00 Liters/ Day 4365 3240.00 Liters/ Day
e)	650 sqm (Entertainment zone) total area = 650 sqm @ 1.4 sqm per person water @ 15 LPCD	=	464 464.29 person 6964.29 Liters/ Day 6960
f)	Maintenance Staff (Such as Gardener, ESS Staff, Security Guards etc.) $@ 45 \text{ LPCD}$	=	100 Persons 4500 Liters/ Day
g)	Auditorium seats 1960 nos water @ 15 LPCD	=	1960.00 person 29400.00 Liters/ Day



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<b>h)</b>	<b>Back Wash Filters - L.S.</b>	=	<b>20,000</b>	<b>20760</b>	Liters/day
	Service Staff for food court, Restaurant and auditorium	=		450	
	water @ 45 LPCD	=	20250.00	20250.00	Liters/ Day
				<b>412768</b>	
	<b>Total water demand</b>	=		<b>396657.06</b>	Liters/day
	<b>SAY</b>	=		<b>420</b>	<b>400</b> KLD
<b>C)</b>	<b>Horticulture &amp; Road Work</b>	=	<b>1.449</b>	<b>acres</b>	
	a) Area under Green area 4632.463 sqmt	=	4632.463	4632.463	SQMM
	@ 5 Ltrs./Sqmt → <b>5000 liters/ acre</b>	=	<b>5725</b>	<b>23162</b>	Liters
	b) Area under road + Paved area =13696.728 sqm	=	3.38454	3.38454	Acres
	@ 25 K.L./Acre	=	8461.850	8461.850	Liters
	Total Water Demand	=	<b>90339</b>	<b>107776</b>	Liters
	<b>Say</b>	=	<b>90400</b>	<b>107800</b>	Liters
	The demand of horticulture & road work will met from recirculates water after treatment at S.T.P.			<b>91 KL</b>	✓
	<b>Total water demand</b>	=	<b>412768</b>	<b>396657</b>	Liters/day
		=	<b>41277</b>	<b>396.657</b>	KLD
	<b>Say</b>	=	<b>420</b>	<b>400</b>	KLD
	<b>Domestic water demand</b>				
	60% of AV/WD of (A)	=	<b>947661</b>	<b>237994</b>	Liters/day
	Domestic water demand (KLD)	=	<b>947.66</b>	<b>237.99</b>	KLD
	<b>Or Say</b>	=	<b>250.00</b>	<b>238.00</b>	KLD
	<b>Flushing water demand</b>				
	40% of AV/WD	=	<b>165107</b>	<b>158663</b>	Liters/day
	Flushing water demand (KLD)	=	<b>165.11</b>	<b>158.66</b>	KLD
	<b>Or Say</b>	=	<b>170</b>	<b>159.00</b>	KLD



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<b>Sewage Treatment Plant Capacity</b>		
Average Sewerage Contribution Considering 80% of AV domestic water demand & 80% of AV/Flushing demand <i>Adel 5% 420 x 80% marginal factor</i>	=	<b>336 KLD</b> 317600 Liter / Day
Sewage Treatment Plant Capacity (KLD)	=	<b>353</b> 317.60 KLD
Or Say	=	<b>360</b> 317.00 KLD
<b>Sewage scheme</b>		
Peak discharge @3 times of sewage discharge plus sub soil infiltration @ 10% of total water demand	=	<b>1031920</b> 991000 Liters
	=	<b>220222 GPD</b>
say	=	<b>0.408 Cusces</b>

*0.42 Cusces.*



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(I)	<b>BOREWELLS</b>	
	Approx. discharge of borewells @ 18 KL/hour and working 16 hours/day	
(a)	Total domestic water demand = KLD 250	= 238.00
(b)	Number of borewells $35/(18 \times 16)$	= 0.86 = 0.83
	Add 10% extra	= 0.09 = 0.08
	Total	= 0.95 = 0.91
	Say	= 1.00
	So, it is proposed to provide Two No. (1W+1S) of tube well (One working & One standby). Moreover, the water demand for horticulture purposes is to be met from recirculated water after treatment at STP and ultimate water supply is to be provided by HUDA.	



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<b>(I)</b>	<b>Pumping Machinery for Borewell</b>		
Gross working Head	=	18.0 Meters	
Average Fall in S.L.	=	5.0 Meters	
Depression Head	=	5.0 Meters	
Friction loss in main + Positive head	=	10.0 Meters	
Total	=	38.0 Meters	
<b>Or Say</b>	=	<b>40.0 Meters</b>	
Pump HP = $\frac{18000 \times 40 \times 100}{60 \times 60 \times 75 \times 70}$	=	3.81 H.P. ✓	
<b>Or Say</b>	=	<b>5.00 H.P. ✓</b>	
It is proposed to provide 2 Nos. of 5HP motors 40 Mtr head (1 Working & 1 standby)			
<b>(II)</b>	<b>Plumbing Machinery for Domestic &amp; Flushing Tank</b>		
a) Total Domestic Water Demand	=	237994 Liters	
Day Storage (Equal to one day) <i>[half]</i> $\frac{237994}{2} = 118997$	=	118997 KLD	
<b>Or Say</b> $\rightarrow @ 60\%$	=	118997 $\times 0.6 = 71398$ KLD	
Fire Tank provided as per N.B.C. Norms	=	550.00 KLD	
<i>Flushing tank = 170 + 91 = 261 KL X 60% = 156.60 KL</i>	=	156.60 KL	
Hence it is proposed to construct an underground tank of 1250 KLD having 200 KLD for treated water, 200 KLD as raw water, 300 KLD for fire fighting purpose as per location shown on plan i.e. Total $200 + 200 + 300 = 700$ KLD			
<b>(III)</b>	<b>Boosting Machinery</b>		
a) For Under Ground Tank		<b>700</b>	
Total water demand (Domestic)	=	238.00 KLD	
L.P.M. for 6 hour pumping	=	661.11 LPM	
<b>Or Say</b>	=	<b>700</b> 660.00 LPM	
Gross Working Head		<b>700</b>	
- Suction lift	=	3.00 Meters	
- Delivery head	=	5.00 Meters	
- Frictional loss in Mains & Specials+ Positive head	=	7.00 Meters	
- Clear head required	=	33.0 Meters	
Total	=	48.0 Meters	
<b>Or Say</b>	=	<b>50.0 Meters</b>	
Pump HP = $\frac{660 \times 50 \times 100}{60 \times 75 \times 70}$	=	11.4 H.P.	
<b>Or Say</b>	=	<b>12.50 - 11.00 H.P.</b>	
It is proposed to provide 2 nos. of motors of 11.0 HP sets of 660 LPM discharge at 50 M head (One pumps working and One as standby for domestic supply & generator set of same capacity in case of electric failure) for domestic purpose.			



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b)	Flushing water supply requirement	=		
(i)	AV water demand	=	396657 liters/day	
(ii)	Flushing water supply demand @40% ]	=	158663 liters/day	
	Flushing water demand (KLD)	=	158.66 KLD → 170 KLD	
	Or Say	=	160.00 KLD	
	L.P.M. for @ 6 hour pumping	=	472.22	
	Say 470	=	444.44 LPM	
	Pump HP = $450 \times 50 \times 100$ $60 \times 75 \times 70$	=	470 450.00 LPM	
	Or Say	=	7.50 7.14 H.P.	
		=	7.50 H.P. ✓	
	It is proposed to provide 2 nos. of motors 7.5 HP sets of 450 LPM discharge at 50 m head (One pump working & one pump stand by & generator set of same capacity in case of electric failure.)	✓	470	
(V)	Irrigation Pumping	=		
a)	Plot Area	=	10.4375 Acres	
		=	42239.00 Sqmt	
	Water Demand of Horticulture + Road Area	=	91000 091 MCL	
4	8 Hours Pumping	=	107800 LPD	
	Say	=	379.17 224.58 LPM	
	Head 280	=	380 230 LPM	
	Pump HP = $230 \times 35 \times 100$ $60 \times 75 \times 70$	=	35 Mtr.	
	Or Say	=	422 2.56 H.P.	
		=	5.00 3.00 H.P.	
	It is proposed to provide 2 Nos. of motors of 3.0 HP sets of 230 LPM discharge at 35 M head (One pump are working and one as standby & generator set of same capacity in case of electric failure.)	✓	500 300	



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<b>(VI) PUMPS FOR FIRE PROTECTION</b>				
S. No.	Parameters	Location	Pump sets	
			Jockey	Main
1	Discharge in lpm	Pump Room	180 lpm	2850 lpm
2	Head in metre		95	95
3	HP		6.750	100
4	Quantity in nos.		2	1
<b>(VII) GENERATING SETS</b>				
S. No	Equipment	QTY	HP	Total HP
1	Borewells	1	5	5.0 ✓
2	For Jockey Pump	2	6.750	12.7 15.0
3	Booster Pump (for domestic) + Flushing+ irrigation pump	1 + 1 + 1	12.5 + 15.0 + 5.0 11 + 7.5 + 3	31.5 25.0
Total			49.2	45.0
Diversity 0.8 & Power factor 0.8			36.68	KW
Or Say			57.31	KVA
<u>In KVA = 45 x 0.746 x .50 = 50.35 KVA say 50 KVA</u>			60.00	KVA
It is proposed to add 60 KVA capacity for above said machinery to the main DG set.				



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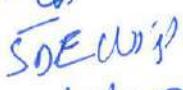
**FINAL ABSTRACT OF COST**

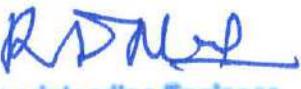
Sub Work	Description	Amount (Rs.) in Lacs
I	Water Supply Scheme	344.80 278.02 214.46
II	Sewerage Scheme	139.45 79.33
III	Storm Water Drainage	112.77 65.66 42.09
IV	Roads	357.78 304.21 35.86
V	Street Lighting	40.03 40.03 16.02
VI	Horticulture	8.15 8.15 2.23
VII	Maintenance Charges for 10 Years including Resurfacing of Roads after 1st 5 year & 1Ind 5 years of mtc	323.7 59.80 417.59
Total (in Lacs)		1420.57 1137.15 449.78
Cost of Per Acre (in Lacs) = 10.4375	Rs. 136.10 Lacs	43.09
	$1137.15 / 10.4375 = 108.94 \text{ Lacs}$	
M/S AMB INFRABUILD PVT. LTD.		say Rs. 108.95 lacs per grass acre.
(AUTHORIZED SIGNATORY)		

Checked subject to comments  
in forwarding letter No. 1141.61  
Dt. 08.07.2012 and notes  
attached with the estimate

  
Executive Engineer  
HSVP Division No.V,  
Gurugram

  
Director  
Town & Country Planning  
Haryana, Chandigarh

  
Superintending Engineer (HQ)  
for Chief Engineer-I  
HSVP, Panchkula  
7.7.2012  
  
  
SOE WIP  
7/7/2012

  
Superintending Engineer,  
HSVP Circle, Gurugram



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Sub Work No.I		Water Supply	
Sub Head	Description	Amount (Rs.) In lacs	
1	Head Works	144.70 98.99	88.16
2	Pumping Machinery	19.56 17.50	
3	Rising Main	16.50	
4	Distribution System	+3.44 4.04	
5	Fire Fighting	43.97 37.22	
6	Irrigation	-32.17 84.93	
	Say (In Lacs)	24.51 16.31 3.52	
		214.46 204.69	
		278.92	

Add 3% contingency charges → 6.74

Total - 314.41

Add 4% deptt. charges → 113.39

Total 344.80

Director  
Tawar Group of Builders  
Hissas, Commercial Building

Gurgaon Building Engineers,  
HSAB Circle, Gurugram



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Sub Work No-1				Water Supply Head Works		
SI No	DESCRIPTION	Qty	Rate			AMOUNT (In Lacs.)
1	Boring and installing 200 mm i/d tubewell with reverse rotary rig complete with pipe and strainer to depth of about 80 m in all respect 3 Nos. @ Rs. 80000/- each	2	12.50 300000	15,00,000/-	Rs.	25.00 -6.00 30.00
2	Provision for Rising Main connecting Bore well with water main and by-pass arrangement.	80	1200/-			4.80-0.96
2.1	80 mm dia. G.I. Pipe	40	750/-	Rs.	0.30	
2.2	100 mm dia. G.I. Pipe	0	900/-	Rs.	0.00	
3	Providing Boosting arrangement by pumps (5.00 HP) (capacity 300 lpm at 40 M head, 3 Nos. @ Rs. 50,000/- each (for Tube Well)	2	25000/- 50000	Rs.	5.00 -1.00 3.00	
4	Providing Boosting arrangement by pumps 11.0 HP, capacity 660 LPM at 50 M head, 2 Nos. each & @ Rs. 3,00,000/- each (For UGT) complete with panel, foundation etc.	2	12.50 HP 300000	Rs.	5.00 -6.00	
5	Provision for carriage of materials and other unforeseen items (LS)	860	4500/-	Rs.	0.50	38.70
6	Construction of U.G. tanks of total cap. 1250 KL @ Rs. 4000/KL	1250	4500/- (Dom. + Fire training)	Rs.	50.00	
7	Provision for borewell chamber of size 1.5 x 1.5 x 1.5 m For Housing borewell 2 Nos. @ Rs. 35,000/- each	2	150000/- 35000	Rs.	0.70	7.00
<b>TOTAL</b>				Rs.	64.50	94.30
Add 3% contingencies				Rs.	1.94	2.82
<b>TOTAL</b>				Rs.	66.44	97.12
Add 49% Department charges, Price Escalation & other unforeseen Charges.				Rs.	32.55	47.58
<b>TOTAL COST</b>				Rs.	98.99	144.70
<b>Material Statement of Borewells Rising Mains</b>						
S. No.	Name of line		Length of 80 mm dia. pipe	Length of 100 mm dia. pipe	Length of 150 mm dia. pipe	Length of 200 mm dia. pipe
1	B.W. No. 1 to A		25			
2	A to UGT		15			
	Total		40	0	0	0

fr 2 Nos T/W = 40 X 2 = 80 mtr.



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Sub Work No-1		Water Supply		
Sub Work No-2		Pumping Machinery		
SI No	DESCRIPTION	Qty	Rate	AMOUNT (In Lacs.)
1	Providing and installing electricity driven Submersible pumping set capable of delivery about 18 KL / Hr of water against a total Head of 40 M complete with motor and other accessories. 3 No @ 1.00,000/-	2	x 100000	Rs. 2.00
①	Provision for diesel engine genset each for standby arrangements for T.W. of booster pump complete with gear head arrangement. 1 No.60 KVA @ 500000/-	1	x 600000	Rs. 7.50
②	Providing for chlorination plant complete. 1 No. @ 50,000/-	1	x 50000	Rs. 0.50
③	Providing for making foundations and erection of Pumping machinery @ Rs. 50000/200000/-	1	x 50000	Rs. 0.50
④	Provision for pipes, valves and specials inside boosting chamber - 1 Set (L.S.) for Rs. 50000/-	1	x 50000	Rs. 0.50
⑤	Provision for electric services connection including electric fitting for tube wells & boosting chamber etc. 1 set (L.S.) Rs. 100000/-	1	x 75000	Rs. 0.75
⑥	Provision for carriage of material and unforeseen item. L.S. for Building Rs. 50000/-	1	x 50000	Rs. 0.50
<b>TOTAL</b>				Rs. 12.75
Add 3% contingencies				Rs. 0.38
<b>TOTAL</b>				Rs. 13.11.07
Add 49% Department charges, Price Escalation & other unforeseen Charges.				Rs. 6.43
<b>TOTAL COST</b>				Rs. 19.56

⑦ Prov. & Installation of

(i) Fire Protection Pumps

Sockey Pump = 2 Nos 7.50 HP 95m Head 4.00

@ Rs 2.00 Lakh each

(ii) Hydulent Pump 2 Nos, 100 HP, 95m Head 18.00.

@ Rs 9.00 Lakh each.

(iii) D.G. Set 1 Nos, 100 HP 45m Head 10.00

@ Rs 10.00 Lakh each Total 47.50



**REVISED BUILDING PLAN OF COMMERCIAL COLONY MEASURING 10.4375 ACRES (LICENCE NO.56 OF 2013  
DATED 10.07.2013) IN SECTOR -88 , GURUGRAM MANESAR URBAN COMPLEX BEING DEVELOPED BY AMB  
INFRABUILD PVT. LTD.**

Sub Work No-1					Water Supply	
Sub Work No-03					Rising Main from HUDA	
SI No	DESCRIPTION	Qty	Rate		AMOUNT (In Lacs)	
1	Providing, laying, jointing & testing 80 mm dia. G.I. pipe lines including cost of excavation complete in all respects.	130	@ 4000	1500/- 1460	Rs. 1.95 1.90	
2	Providing and fixing 100 mm dia. sluice valves including cost of surface boxes and masonry chambers etc., complete in all respects.	1	@ 75000	12000/- 9000	Rs. 0.12 0.02	
3	Providing and Fixing indicating plates for sluice valves, Air valves & fire hydrant	1	@ 40000	40000	Rs. 0.10	
4	Provision for carriage of material & other foreseen items etc., L.S.	1	@ 50000	200000/- L.S.	Rs. 0.50	
5	Provision for making connection with HUDA main (L.S.) 1 job 1 complete in all respect	1	@ 175000	175000/- L.S.	Rs. 1.75	
6	Provision for cutting road and making good the same (L.S.) 1 job	1	@ 50000	200000/- L.S.	Rs. 0.50	
<b>TOTAL</b>					Rs. 8.55	
<b>Add 3% contingencies</b>					4.90 0.25	
<b>TOTAL</b>					Rs. 8.80	
<b>Add 4% Department charges, Price Escalation &amp; other unforeseen Charges.</b>					6.05 2.47	
<b>TOTAL COST</b>					Rs. 13.11	

**Material Statement and design statement of HUDA Rising Mains**

S. No.	Name of line	Dia. in mm	Length in m from municipal to U.G.T.
1	Municipal Main To UGT	100 80	130



**REVISED BUILDING PLAN OF COMMERCIAL COLONY MEASURING 10.4375 ACRES (LICENCE NO.56 OF 2013  
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INFRABUILD PVT. LTD.**

Sub Work No-1					Water Supply
Sub Head No-04					Distribution system
SI No	DESCRIPTION	Qty	Rate		AMOUNT (In Lacs)
1	Providing, laying, jointing & testing D.I. pipes including cost of excavation complete as per ISI marked.				
1.1	100 mm I/D	2300	@ 1200	Rs.	27.60
1.2	150 mm I/D	0	@ 1450	Rs.	0.00
2	Providing and Fixing sluice valves including cost of brick masonry chamber complete in all respect.	10	12000/-		1.20
2.1	100 mm I/D	5	@ 8000	Rs.	0.40
2.2	150 mm I/D		@ 10000	Rs.	0.00
3	Providing and Fixing air valves and scour valves including cost of brick masonry chamber complete.	2	@ 10000	Rs.	0.20
4	Providing and Fixing indicating plates for sluice valves	12	2000/-		0.24
5	Provision for carriage of material & other unforeseen items etc., (L.S). 1 Job including cutting of road and making the same.	1	@ 50000	Rs.	0.00
	<b>TOTAL</b>			Rs.	28.65
	<b>Add 3% contingencies</b>			Rs.	0.86
	<b>TOTAL</b>			Rs.	29.51
	<b>Add 49% Department charges, Price Escalation &amp; other unforeseen Charges</b>			Rs.	14.46
	<b>TOTAL COST</b>			Rs.	43.97



**REVISED BUILDING PLAN OF COMMERCIAL COLONY MEASURING 10.4375 ACRES (LICENCE NO.56 OF 2013  
DATED 10.07.2013) IN SECTOR -88 , GURUGRAM MANESAR URBAN COMPLEX BEING DEVELOPED BY AMB  
INFRABUILD PVT. LTD.**

S. No.	Description	300 mm	200 mm	150 mm	100 mm	BRANCHES 100 mm	80 mm	65 mm	50 mm
(A)	<b>Domestic</b>								
1	UGT-W1	-	-	-	575	-	-	-	-
2	UGT-W1	-	-	-	575	-	-	-	-
	<b>TOTAL</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1150</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
(A)	<b>Flushing</b>								
1	STP-F1	-	-	-	575	-	-	-	-
2	STP-F2	-	-	-	575	-	-	-	-
	<b>TOTAL</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1150</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	<b>GRAND TOTAL</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2300</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

✓



**REVISED BUILDING PLAN OF COMMERCIAL COLONY MEASURING 10.4375 ACRES (LICENCE NO. 56 OF 2013 DATED 10.07.2013) IN SECTOR -48, GURUGRAM MANESAR URBAN COMPLEX BEING DEVELOPED BY AMB INFRABUILD PVT. LTD.**

DOMESTIC WATER SUPPLY - HYDRAULIC DESIGN										
S. No/Ref of line	Length in mts	Self	Additional AV/ND			Peak Demand @ 3 time of AV/ND	Dia of Pipe (mm)	Velocity m/sec	Loss of Head in 1000 M (mts)	Level in start
			Food & Beverage Staff @ 35 LP/CB & Restaurant @ 45LP/CB	Shopkeepers + Food Court Staff @ 45LP/CB	Domestic Water Demand @ 60% KLD					
1	A1 - UGT	-	Food & Beverage Staff @ 35 LP/CB & Restaurant @ 70LP/CB	Shop Visitor & Food Court Visitor @ 15LP/CB	50 % of Food Court & 77777 Lts Restaurant @ 70LP/CB	237.780	237.79	715.38	-	Section head=3.0 m Delivery head=5.0 m friction loss=7.0 m Clear head=33.3 m Total=38 m Stay=50 meter.
2	UGT-W1	575	-	-	50 % of (Shopkeeper = 7570-14195 Rrs) + 59.000 Rrs Back wash.	20250.000	172.815	118.90	0.75	0.00
3	UGT-W1	575	-	-	1/2 of 60 % of (Shop keeper = 7570-14195 Rrs) + 59.000 Rrs Back wash.	20250.000	172.815	118.90	0.75	0.00

NOTE: 1. Water supply Line shall be laid as per NBC / HUDA Norms.

2. Levels have been taken with Reference to Road Level = 00



**REVISED BUILDING PLAN OF COMMERCIAL COLONY MEASURING 10.4375 ACRES, LICENCE NO.56 OF 2013 DATED 10.07.2013 IN SECTOR -88, GURUGRAM MANESAR**

**FLUSHING WATER SUPPLY-HYDRAULIC DESIGN**

S. No	Ref. of line	Length in mts	Self	Average	Average	Flushing Water demand @ 20% commercial K.I.D.	Dia of Pipe 3 time of AV/NPD	Head in Hand in 1000 N (mts)	Loss of head in the line (mts)	Level in start	Remarks
1	Shopkeepers staff @ 10% of 45LPD	Floating Population @ 10% of 15LPCD	Shopkeepers + Food Court Staff @ 45LPCD	Floating Population @ 10% of 15 LPCD	KLD						
1	AT - STP	-	-	-	-	40 % CI 1500G Court 49 17777 Lts Restaurant 18740-5954-44 Keeper 300 Ltr-Audi- 5 litre)	237.78	713.36	-	-	Suction head=3.0 m Delivery head=5.0 m Friction loss =1.0 m Clear head reqd=3.3 m Total=8 m Say=50 meter.
2	STP-F1	575	-	-	-	40 % of (Shop keeper =7070-14-18 +5 litre)	169.563			0.00	0.00
2						207.60-45 Staff 202500Ltrs				0.00	0.00
2						77777 Lts Restaurant 18740-5954-44 Keeper 300 Ltr-Audi- 5 litre)	79.332	237.98	130	0.29	-0.29
3	STP-F2	575	-	-	-	1/2 of 40 % of (Shop Keeper =7070-14-18 +5 litre)	79.33	237.98	100	0.50	0.00
3						77777 Lts Restaurant 18740-5954-44 Keeper 300 Ltr-Audi- 5 litre)	79.332			0.29	-0.58

NOTE: 1. Flushing Water supply shall be laid as per NBC / HUDA Norms.

2. Levels have been taken with Reference to Road Level ≈ 00

3:



**REVISED BUILDING PLAN OF COMMERCIAL COLONY MEASURING 10.4375 ACRES (LICENCE NO.56 OF 2013 DATED 10.07.2013) IN SECTOR -88 , GURUGRAM MANESAR URBAN COMPLEX BEING DEVELOPED BY AMB INFRABUILD PVT. LTD.**

Sub Work No-1				Water Supply	
Sub Work No-05				Fire fighting	
SI No	DESCRIPTION	Qty	Rate		AMOUNT (In Lacs.)
1	Providing, laying jointing & testing M.S. pipe lines for rising main including cost of fitting, valves, connection etc., complete in all respects.			204.0	24.68
	150 mm I/D for Ring Main	1210	@ 1200.00	Rs. 14.52	
	100 mm I/D for Tanker Inlet	15	@ 1460.00	Rs. 0.22	0.15
	80 mm I/D for Yard Hydarnt pipe	52	@ 1200.950.00	Rs. 0.49	
2	Providing & fixing valve including cost of surface boxes and masonry chambers etc. complete in all respects			(15000/-)	0.63
	- 150 mm dia.	20	@ 14000.00	Rs. 0.42	
	- 100 mm dia.	1	@ 12000.00	Rs. 0.12	0.10
	- 80 mm dia.	26	@ 1000.00	Rs. 0.20	0.08
3	Providing and fixing fire Hydrant with accessories	26	@ 15000.00	Rs. 0.90	2.60
4	Providing for carriage of material (L.S.) 1 jobs	1	@ 50000.00	Rs. 0.50	
5	Providing and fixing Indicating plate	49	@ 9000.00	Rs. 0.98	0.10
<b>TOTAL</b>			<i>Total Rs 34.23</i>	<b>Rs. 20.96</b>	
<i>Add 3% contingencies</i>				<b>Rs. 0.63</b>	
<b>TOTAL</b>				<b>Rs. 21.59</b>	
<i>Add 49% Department charges, Price Escalation &amp; other unforeseen Charges.</i>				<b>Rs. 10.58</b>	
<b>TOTAL COST</b>				<b>Rs. 32.17</b>	

**Material Statement of Fire ring – MS – 150mm dia**

S. No.	Location	200 mm dia pipe	150 mm dia pipe	100 mm dia pipe	80 mm dia pipe	Fire Hydrant
1	UGT to Fire Ring	-	20	-	-	-
2	Fire Ring Pipe	-	1150	-	-	-
3	Tanker inlet connection	-		26	-	-
4	Fire Brigade 4 way	-	20	-	-	-
5	Fire Brigade 2 way	-	20	-	-	-
6	Yard Hydrants = 26 Nos. x 2 Meters	-	-	-	52	26
	<b>Total</b>	<b>0</b>	<b>1210</b>	<b>26</b>	<b>52</b>	<b>26</b>
<b>Fire Hydrant System</b>						
1	Valves 150mm dia			30	3 Nos.	
2	Valves 100mm dia				1 No.	
3	Valves 80mm dia			26	26 Nos.	
4	Fire Hydrants				26 Nos.	
5	Fire Brigade Connections 4 Way				1 No.	
6	Fire Brigade Connections 2 Way				1 No.	



**REVISED BUILDING PLAN OF COMMERCIAL COLONY MEASURING 10.4375 ACRES (LICENCE NO.56 OF  
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BY AMB INFRABUILD PVT. LTD.**

Sub Work No-1			Water Supply		
Sub Work No-06			Irrigation		
SI No	DESCRIPTION	Qty	Rate		AMOUNT (In Lacs)
1	Providing, laying, jointing and testing uPVC pipe line confirming to I.S 4985 including cost of excavation etc., complete in all respects.				0.22
	20 mm O/D for Garden Hydrants <i>line</i>	88	200	Rs. 0.18	7.76
	63 mm O/D UPVC Pipe for Ring Main	1150	500	Rs. 5.75	
	75 mm O/D from STP to Ring Main <i>80mm dia</i>		650	Rs. 0.00	
2	Providing and fixing Irrigation hydrant valve complete in all respect.	44	2000	Rs. 0.88	1.54
3	Provision for carriage of material & other foreseen items etc., (L.S.) 1 jobs		L.S	Rs. 0.50	0.50
4	Providing & fixing ball valve 20 mm	44	250	Rs. 0.11	
5	Providing & fixing sluice valve complete with chamber.		L.S.	Rs. 0.50	
	- 75 mm dia.	44	4500	Rs. 1.98	
	- 100 mm dia.	1	8000	Rs. 0.08	
6	Providing and fixing Irrigation pump 2 nos., 2.0 HP, 60 LPM @ 35 Mtr. Head complete with foundation & control panel etc.	2	25000	Rs. 0.50	3.00
	<b>TOTAL</b>		<b>150,000/-</b>	Rs. 9.98	15.98
	Add 3% contingencies		Total	Rs. 0.30	0.47
	<b>TOTAL</b>			Rs. 10.28	16.45
	Add 49% Department charges, Price Escalation & other unforeseen Charges.			Rs. 5.03	8.06
	<b>TOTAL COST</b>			Rs. 45.31	24.51
<b>Material statement of Irrigation System</b>					
S. No.	Line Name	75 mm	63 mm OD	50 mm OD	20 mm OD
1	Pump Room to G1	20			
2	Irrigation Ring		1150		
3	GARDEN HYDRANT (12 Nos x 2 M)				88 44
	<b>Total</b>	20	1150	0	88 44



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BY AMB INFRABUILD PVT. LTD.**

Sub Work No-II					Sewerage Scheme
SI No	DESCRIPTION	Qty	Rate		AMOUNT (In Lacs)
1	Providing, jointing, cutting and testing S.W pipe class 'A' / S.W.R. PVC and lowering into trenches including cost of excavation, bed concrete, cost of manhole etc., complete in all respects.				
	200 mm I/D Avg. depth upto 0 - 4.00 M (S.W. Pipe)	0	@ 1100.00	Rs. 0.00	0.94
	250 mm I/D Avg. depth upto 0 - 4.00 M (S.W. Pipe)	1024	@ 1650/- 1200.00 10000/-	Rs. 12.29	16.90
2	Provision for lighting and watching L.S	1.00	@ 1.5 50000.00	Rs. 1.00	0.50
3	Provision for timbering and shuttering L.S.	1.00	@ 1.5 50000.00	Rs. 1.00	0.50
4	Provision of 150 mm dia line from STP to HUDA main by pumping	50	@ 2040 1000.00	Rs. 1.02	0.50
5	Providing boosting arrangement by 2 nos. pump for flushing water supply 7.5 HP capacity 450 L.P.M., 50 Meter Head (For All) 360	2	@ 200000.00 160000/-	Rs. 4.00	51.60
6	Provision for making STP (KLD)	317	@ 10000.00	Rs. 31.70	31.70
7	Provision for making RCC grease trap 1000 x 1800mm complete	1.00	@ 30000.00	Rs. 0.30	0.30
8	Provision for carriage of maternal (L.S.)	1.00	@ 40000.00	Rs. 1.00	0.40
9	Provision of cutting road & making it good as same in original condition - 1 job	1.00	@ 200000.00 1.5 50000.00	Rs. 1.00	0.50
9	Providing Sewage with HUDA	1	@ 100000.00	Rs. 1.00	1.00
<b>TOTAL</b>			<b>90.86</b>	<b>Rs. 51.69</b>	<b>75.72</b>
Add 3% contingencies			2.77	Rs. 1.55	2.27
<b>TOTAL</b>			<b>93.59</b>	<b>Rs. 53.24</b>	<b>77.79</b>
Add 49% Department charges, price escalation, other for unforeseen charges.			<b>45.86</b>	<b>Rs. 26.09</b>	<b>38.27</b>
<b>TOTAL COST</b>			<b>139.45</b>	<b>Rs. 79.33</b>	<b>116.20</b>

lacs.



**Material statement of Sewerage System – As per drawing sheet**

S. No.	Name of Pipe Line	Length of Pipe in M						
		500 mm	450 mm	400 mm	350 mm	300 mm	250 mm	200 mm
1	S1-S3	-	-	-	-	-	502	
2	S2-S3	-	-	-	-	-	502	
3	S3-STP	-	-	-	-	-	20	
	<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1024</b>	<b>0</b>

**Material statement of Drainage System – As per drawing sheet**

S. No.	Name of Pipe Line	Length of Pipe in M						
		500 mm	450 mm	400 mm	350 mm	300 mm	250 mm	200 mm
1	D1-D2	-	54	-	-	-	-	-
2	D2-RWH-1	-	5	-	-	-	-	-
3	RWH-1-D4	-	63	-	-	-	-	-
4	D4-RWH-2	-	5	-	-	-	-	-
5	D5-D6	-	64	-	-	-	-	-
6	D6-RWH-3	-	5	-	-	-	-	-
7	RWH-3-O/F	-	5	-	-	-	-	-
8	D7-D8	-	60	-	-	-	-	-
9	D8-RWH-4	-	5	-	-	-	-	-
10	D9-D10	-	132	-	-	-	-	-
11	D10-RWH-5	-	5	-	-	-	-	-
12	D11-D12	-	85	-	-	-	-	-
13	D12-RWH-6	-	5	-	-	-	-	-
14	D13-D14	-	62	-	-	-	-	-
15	D14-RWH-7	-	5	-	-	-	-	-
16	D15-D16	-	164	-	-	-	-	-
17	D16-RWH-8	-	5	-	-	-	-	-
18	D17-D18	-	110	-	-	-	-	-
19	D18-RWH-9	-	5	-	-	-	-	-
20	D19-D20	-	92	-	-	-	-	-
21	D20-RWH-10	-	5	-	-	-	-	-
22	RWH-10- OVERFLOW	-	5	-	-	-	-	-
	<b>Total</b>	<b>0</b>	<b>966</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>



**REVISED BUILDING PLAN OF COMMERCIAL COLONY MEASURING 10.4375 ACRES (LICENCE NO.56 OF 2013 DATED 10.07.2013) IN SECTOR -88 , GURUGRAM MANESAR URBAN COMPLEX BEING DEVELOPED BY AMB INFRABUILD PVT. LTD.**

Sl. No.	Name of Line	Length in Meter	Self			Additional			Design Sewerage Scheme			Design of Pipe			Level at Start					
			shopkeepers + office staff @ 45LPCD	Food & beverage staff @ 35LPCD	shop visitor, cinema visitor @ 15LPCD	Food & beverage staff @ 45LPCD	shop visitor, cinema visitor @ 35LPCD	Average Daily Water Demand SDP of flushing	Sub Soil Infiltration @ 10% Of AW W.D	Peak Discharge @ 3 Times of AW Discharge including Sub Self infiltration	Size of pipe (dia)	Capacity in cusec	Velocity	Gradient	Drop	G.L.	M.R.	Min. Hgt.	S.L. (ft)   L.L. (ft)	
1	S1-S3	502	50 % of total Commercial Food Court & Restaurant = 203000 Lts	-	-	-	-	200,000	160.00	20.00	0.206	260.000	0.456	0.750	1.190	2.64	0.00	-0.90	0.00	-3.54
2	S2-S3	502	50 % of total Commercial Food Court & Restaurant = 203000 Lts	-	-	-	-	200,000	160.00	20.00	0.206	250.000	0.458	0.750	1.190	2.84	0.00	-0.90	0.00	-3.54
3	S3-STP	20	-	-	-	LINE = S1-S2 50 % of total Commercial Food Court & Restaurant Area = 200000 Lts	-	-	-	-	-	-	-	-	-	-	-	-	-	
						LINE = S3-STP 50 % of total Commercial Food Court & Restaurant Area = 203000 Lts	400,000	320.00	40.00	0.412	250.000	0.655	0.750	1.190	0.111	0.00	-3.54	0.00	-3.65	

Note:-

- 1 The Man hole shall be constructed as per HUDA N.B.C Norms
- 2 All the level have been taken with Reference to road level = 0



**REVISED BUILDING PLAN OF COMMERCIAL COLONY MEASURING 10.4375 ACRES (LICENCE NO.56 OF 2013 DATED 10.07.2013) IN SECTOR -88 , GURUGRAM MANESAR URBAN COMPLEX BEING DEVELOPED BY AMB INFRABUILD PVT. LTD.**

Sub Work No-III		Storm water drain		
S. No.	DESCRIPTION	Qty	Rate	AMOUNT (In Lacs)
1	Providing, lowering, laying and jointing R.C.C NP-3 pipes and specials into trenches including manholes, chambers etc., excavation, back filling and disposal of surplus earth complete in all respects. 450 mm I/D Avg. depth upto 2.0 M	966	Rs. 14.49 @ 4500/- 2500/-	24.15 <del>26.08</del>
2	Provision for Road Gullies L.S. <i>Including Pipe connection L.S.</i>	LS	Rs. 0.50	5.00
3	Provision for lighting and watching	LS	Rs. 0.60	3.60
4	Provision for timbering and shoring L.S.	LS	Rs. 0.50 2.00+	1.00
5	Provision for carriage of material & other foreseen items etc., L.S.	LS	Rs. 0.50 2.00+	1.00
6	Provision for Rain water harvesting arrangements for 10.4375 Acres @ 1.50 Lac / Acres. <i>10.4375 Acres @ 1.50 Lac / Acres. 2.50 Lakh each</i>	10.4375	Rs. 10.44 @ 100000/-	35.00
7	Provision for temporary connection with HUDA		Rs. 0.50	1.00
8.	<i>Prov. for overflow RCC Pipe 500mm dia 100mtr.</i> <b>TOTAL Add 3% contingencies</b>	3400/- <i>@ Rs. 2100/- mtr.</i>	Rs. 27.43 2.79	73.48 <del>81.00</del>
	<b>TOTAL</b>		Rs. 28.25	44.07 <del>51.00</del>
	Add 49% Department charges, price escalation, other for unforeseen charges.		Rs. 13.84	21.58 <del>27.09</del>
	<b>TOTAL</b>		Rs. 42.09	62.60 <del>75.68</del>
				112.77 <del>131.69</del>



**REVISED BUILDING PLAN OF COMMERCIAL COLONY MEASURING 10.4375 ACRES (LICENCE NO.56 OF 2013 DATED 10.07.2013) IN SECTOR -88, GURUGRAM MANESAR URBAN COMPLEX BEING DEVELOPED BY AMB INFRABUILD PVT. LTD.**

<b>STORM WATER DRAIN</b>				
S. No	Name of Drain	450mm dia RCC pipe	200mm dia Crossing pipe	500mm dia RCC pipe
	<b>TOTAL</b>	<b>966</b>		



**REVISED BUILDING PLAN OF COMMERCIAL COLONY MEASURING 10.4375 ACRES [LICENCE NO.56 OF 2013 DATED 10.07.2013] IN SECTOR -38 , GURUGRAM  
MANESAR URBAN COMPLEX BEING DEVELOPED BY AMB INFRABUILD PVT. LTD.**

**Hydrant Design Chart**

**Storm Water Drain**

Calculations are based on Manning Formula  $V = (1.486/n) \times m^{2/3} \times S^{1/2}$  in F.P.S System

Sl. No.	Name of Line	Length in Meter	Catchment Area in segment		Total Area (Sqmtr.)	Discharge in Proposed Casec {1 Acre = 1 Cusec}	dia of pipe (mm)	Velocity (m/sec)	Design Capacity of Drain (Cusecs)	Gradient	Drop (Mtr.)	G.L. (Mtr.)	I.E. (Mtr.)	Level at Start (Mtr.)	Level at End (Mtr.)	I.L. Depth (Mtr.)	
			Self	Additional													
1	D1-D2	54	4000		4000	0.988	450	0.75	3.48	1.500	0.11	0.00	-0.90	0.90	0.00	-1.01	1.01
2	D2-RWH-1	5	200		4200	1.038	450	0.75	3.48	1.500	0.01	0.00	-1.01	1.01	0.00	-1.02	1.02
3	RWH-1-D4	83	4000		5200	2.026	450	0.75	3.48	1.500	0.17	0.00	-1.02	1.02	0.00	-1.16	1.16
4	D4-RWH-2	5	200		8400	2.076	450	0.75	3.48	1.500	0.31	0.00	-1.18	1.18	0.00	-1.19	1.19
5	D5-D6	64	4000		12400	3.064	450	0.75	3.48	1.500	0.13	0.00	-1.18	1.18	0.00	-1.32	1.32
6	D6-RWH-3	5	200		12600	3.113	450	0.75	3.48	1.500	0.01	0.00	-1.32	1.32	0.00	-1.33	1.33
7	RWH-3-OFF	5	200		12800	3.163	450	0.75	3.48	1.500	0.01	0.00	-1.33	1.33	0.00	-1.34	1.34
8	D7-D8	60	4000		16800	4.151	450	0.75	3.48	1.500	0.12	0.00	-1.34	1.34	0.00	-1.46	1.46
9	D8-RWH-4	5	200		17000	4.201	450	0.75	3.48	1.500	0.01	0.00	-1.46	1.46	0.00	-1.47	1.47
10	D9-D10	122	4000		21000	5.189	450	0.75	3.48	1.500	0.26	0.00	-1.47	1.47	0.00	-1.74	1.74
11	D10-RWH-5	5	200		21200	5.238	450	0.75	3.48	1.500	0.01	0.00	-1.74	1.74	0.00	-1.75	1.75
12	D11-D12	85	4000		25200	6.227	450	0.75	3.48	1.500	0.17	0.00	-1.75	1.75	0.00	-1.92	1.92
13	D12-RWH-6	5	200		25400	6.276	450	0.75	3.48	1.500	0.01	0.00	-1.92	1.92	0.00	-1.93	1.93
14	D13-D14	62	4000		29400	7.265	450	0.75	3.48	1.500	0.12	0.00	-1.93	1.93	0.00	-2.05	2.05



**REVISED BUILDING PLAN OF COMMERCIAL COLONY MEASURING 10.4375 ACRES (LICENCE NO.56 OF 2013 DATED 10.07.2013) IN SECTOR -88 , GURUGRAM  
MANESAR URBAN COMPLEX BEING DEVELOPED BY AMB INFRABUILD PVT. LTD.**

**Hydraulic Design Chart**

**Storm Water Drain**

**Calculations are based on Manning Formula  $V = (1.486/n) \times H^{2/3} \times S^{1/2}$  in F.P.S System**

15	D14-RWH-7	5	200		23600	7.314	4.55	0.75	3.48	1.500	0.01	0.00	-2.05	2.05	0.00	-2.05	2.05
16	D15-D6	184	4000		33500	8.302	450	0.75	3.48	1.500	0.33	0.00	-2.06	2.06	0.00	-2.06	2.06
17	D16-RWH-8	5	200		33600	8.352	450	0.75	3.48	1.500	0.01	0.00	-2.39	2.39	0.00	-2.40	2.40
18	D17-D18	110	4000		37800	9.340	450	0.75	3.48	1.500	0.22	0.00	-2.40	2.40	0.00	-2.52	2.52
19	D18-RWH-9	5	200		38000	9.390	450	0.76	3.48	1.500	0.01	0.00	-2.62	2.62	0.00	-2.63	2.63
20	D18-D20	92	4000		42200	10.378	450	0.75	3.48	1.500	0.16	0.00	-2.63	2.63	0.00	-2.61	2.61
21	D22-RWH-10	5	200		42200	10.427	450	0.75	3.48	1.500	0.01	0.00	-2.81	2.81	0.00	-2.82	2.82
22	RWH-10- OVERFLOW	5	200	955	42400	10.477	450	0.76	3.48	1.500	0.01	0.00	-2.82	2.82	0.00	-2.83	2.83

NOTE:- 1. STORM WATER LINE SHALL BE LAID AS PER NBCRUDA NORMS.  
2. LEVEL HAVE BEEN TAKEN WITH REFERENCE TO ROAD LEVEL=00



REVISED BUILDING PLAN OF COMMERCIAL COLONY MEASURING 10.4375 ACRES (LICENCE NO.56 OF 2013 DATED 10.07.2013) IN SECTOR -88 , GURUGRAM MANESAR URBAN COMPLEX BEING DEVELOPED BY AMB INFRABUILD PVT. LTD.

SUB WORK NO. - IV			Road Work		
SI No	DESCRIPTION	Qty	Rate		AMOUNT (In Lacs)
1	Provision for leveling - earth filling / cutting as per site conditions. (In Acres)			175 000/-	18.27
	Area = 10.4375 Acre	200 350	10.43750 @ 100000	Rs. 10.44	
2	Provision for Granular sub base 100mm, 150 mm thick stone aggregate, 50 mm thick B.M., 20 mm thick pre mix carpet with seal coat → B.G	6930 1700	1500/- 500/-	Rs. 8.50	103.95
3	Provision of Paved path of C.C. 1:2:4 L.S	20	300/-	Rs. 0.06	5.00
4	Provision for Kerbs & channels of CC 1:2:4 = (115.3x4) 2310	20	350/- 600/-	Rs. 0.07	13.86
5	Provision for making approach to each block for C.C. pavements L.S.		3000/-	Rs. 0.50	
6	Provision of guide maps at selected place (L.S.)	@ 50000	Rs. 0.50	1.00	
7	Provision for Traffic Lights arrangement - L.S.	@ 30000	Rs. 1.00	0.30	
8	Provision for Demarcating Durgies - L.S.	@ 50000	Rs. 1.00	0.50	
9	Provision for Plot indicator - L.S.	@ 50000	Rs. 1.00	0.50	
10	Provision for Parking Arrangement, L.S. 5770 Sqm. @ 1200/-	1200/- @ 150000	Rs. 69241.50/-	86.55	
11	Provision of carriage of material and unforeseen items - L.S.	P. Sqm. @ 50000	1500/-	Rs. 0.50	
<b>TOTAL</b>			Rs. 283.12	23.37	
Add 3% contingencies			Rs. 6.99	0.70	
<b>TOTAL</b>			Rs. 290.11	24.07	
Add 49% Department charges, price escalation, other for unforeseen charges.			Rs. 117.65	11.79	
<b>TOTAL</b>			Rs. 357.76	33.86	
			357.78	304.24	

Say Rs. 304.24 lacs.



REVISED BUILDING PLAN OF COMMERCIAL COLONY MEASURING 10.4375 ACRES (LICENCE NO.56 OF 2013 DATED 10.07.2013) IN SECTOR -88 , GURUGRAM MANESAR URBAN COMPLEX BEING DEVELOPED BY AMB INFRABUILD PVT. LTD.

S. No.	Name of Road	Length of Road (in Mtrs.)	Road Width	Metalled Width (Mtrs.)	Area in Sqm.
	A	B	C	D	B x D
1	Road No.A	1050		6	6300.00
	<b>Total</b>	<b>1050</b>			6300.00
	Add 10 % for curves				630.00
	<b>Total</b>				6,930.00
	Add for surface plaza/ parking				5,770.00
	<b>Total</b>				12,700.00
	<b>Say</b>				12,700.00
	Total Length of road	1050			
	Add 10% curves	105			
	Total Length	1155			
	<b>Say</b>	<b>1155</b>	<b>Mtrs.</b>		
	No. of CAR Parking = 577 Nos.	577	Nos.		
	Surface Plaza Area =2X5X577	5770	Sqmts.	✓	
	<del>Pave Path 1 Mtr on one side of Road = 20x1 =20</del>	<del>20</del>	<del>Mtrs.</del>		



REVISED BUILDING PLAN OF COMMERCIAL COLONY MEASURING 10.4375 ACRES (LICENCE NO.56 OF 2013 DATED 10.07.2013) IN SECTOR -88 , GURUGRAM MANESAR URBAN COMPLEX BEING DEVELOPED BY AMB INFRABUILD PVT. LTD.

Sub Work No-V				Street Lighting
SI No	DESCRIPTION	Qty	Rate	AMOUNT (In Lacs)
1	Providing street lighting on roads as per standard specifications on HVPN		250000/-	26.10 ✓
	Area = 10.4375 Acre	10.438	@ 100000	Rs. 10.44 ✓
	<b>TOTAL</b>			Rs. 10.44 26.10 ✓
	Add 3% contingencies			Rs. 0.31 0.78 ✓
	<b>TOTAL</b>			Rs. 10.75 26.87 ✓
	Add 49% Department charges, price escalation, other for unforeseen charges.			Rs. 5.27 13.16 ✓
	<b>TOTAL</b>			Rs. 46.02 ✓
				40.03 ✓



REVISED BUILDING PLAN OF COMMERCIAL COLONY MEASURING 10.4375 ACRES (LICENCE NO.56 OF 2013 DATED 10.07.2013) IN SECTOR -88 , GURUGRAM MANESAR URBAN COMPLEX BEING DEVELOPED BY AMB INFRABUILD PVT. LTD.

Sub Work No-V1					Plantation & Road side trees
SI No	DESCRIPTION	Qty	Rate		AMOUNT (In Lacs)
1	Development of Lawn Area :- a) Trenching the ordinary soil upto depth of 60 cm. including removal and packing of serviceable material and disposing at a lead of 50 M. and making up the trenched area to proper level by filling with earth mixed with manure before and after flooding trench with water including cost of imported earth and manure b) Rough dressing of trenched area. c) Grassing with "doob grass" including watering and maintenance of lawns free from weeds and fit for moving in rows 7.50 cm. in either direction including for hedges and grill and barred wire fencing around park and green belts (As per HUDA norms)				
	Area = 01.1449 Acres	1.1449	@ 100000	Rs.	1.14
2	Providing & Planting of trees with tree guards on roads at 12 m intervals ( <i>both side</i> ) Total Road Length (M.) 1155 Trees 192.50 Or Say $(1155 \div 12) \times 2 = 192.50$ Cost of One Tree :- Excavation (Rs.) 30/- 150 Manure (Rs.) 40/- 20 Tree Plants (Rs.) 80/- 40 Tree Guards (Rs.) 600/- 300 Total Cost (each) 1800 Cost of Total trees 482 @ 40				
	TOTAL		1800/-	Rs.	5.32
	Add 3% contingencies		4.92	Rs.	0.15
	TOTAL		1800/-	Rs.	5.47
	Add 49% Department charges, price escalation, other for unforeseen charges.		3.05	Rs.	0.73
	TOTAL		2.23	Rs.	0.68
			9.29	Rs.	8.15



REVISED BUILDING PLAN OF COMMERCIAL COLONY MEASURING 10.4375 ACRES (LICENCE NO.56 OF 2013 DATED 10.07.2013) IN SECTOR -88 , GURUGRAM MANESAR URBAN COMPLEX BEING DEVELOPED BY AMB INFRABUILD PVT. LTD.

SUB WORK NO. VII:				MTC. CHARGES AND RESURFACING OF ROADS.	
SI No	DESCRIPTION	Qty	Rate		AMOUNT (In Lacs)
1	Provision for maintenance charges for water supply, sewerage, storm water, drainage, roads, street light, Hort., etc. complete including operation & establishment charges as per HUDA norms after completion.			8.00 500000/-	83.50 52.19
	Area = 10.4375 Acre	10.438	@ 300000	31.31	
2	Provision for resurfacing of roads after first five years of maintenance i.e. 20mm thick premix carpet with seal coat with mechanical paver (Sqm)	12700	@ 660/- 250	63.50 4.25	83.82
3	Provision for resurfacing of roads after 10 years of Mtc. i.e. 20mm thick premix carpet with seal coat with mechanical paver (Sqm)	12700	@ 825/- 200	95.25 3.40	
	<b>TOTAL</b>			Rs. 272.15 1.17	270.94 6.32
	Add 3% contingencies			Rs. 8.16 40.13	
	<b>TOTAL</b>			Rs. 280.31 137.35	277.26 106.45
	Add 49% Department charges, price escalation, other for unforeseen charges.			Rs. 59.80	
	<b>TOTAL</b>			Rs. 417.59	323.71 Lacs.

Say Rs 417.59 Lacs

