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.

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 & kisok = 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.



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

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 provisiton 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.



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 designed as per Manning's formula.

FIRE

As per N.B.C. (National Building 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:

- 1. GSB-100 mm in one layer.
- 2. WBM-150 mm in Three layer.
- 3. BM-50 mm thick.
- 4. MSS-20 mm thick.

The above construction 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.



COST

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 unforseen charges. Cost of per Acres Rs 43.9 Lacs.

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(AUTHORIZED SIGNATORY)



	(l)	DAILY WATER REQUIREMENT			
4)		Commercial			
	a)	3850+15500 = 19350 sqm @ 3 sqmv person	=	6450	Persons
	b)	Shops at 1st to 2nd Floor (13200+10850 =24050 sqm @ 6 sqmt/ person	=	4008.33	Persons
	c)	Total	=	10458.33	Persons
	-	Shopkeepers @ 10% of Population	=	1046	Persons
	ω,	@ 45 LPCD	=	47070	Liters/ Day
_	b)	Visitors @ 90% of Population	=	9413	Persons
		@ 15 LPCD	=	141195	Liters/ Day
	c)	Food Court			
_	/	4000 sqm (Food Court)			
	-	total area = 4000 sqm @ 1.8 sqm per person	=	2222	person
		water requirement @ 35 LPCD	=		Liters/ Day
_	d)	1350+400=1750 sqm (Restaurant)			
-	-/	total area = 1750 sqm @ 1.8 sqm per person	=	1750.00	person
		Visitors @ 90% of Population @ 70 LPCD	=	45500.00	Liters/ Day
		Restaurant staff @ 10 % of Population @ 45 LPCD	=		Liters/ Day
	e)	650 sqm (Entertainment zone)			
-		total area = 650 sqm @ 1.4 sqm per person	=	464.29	person
		water @ 15 LPCD	=		Liters/ Day
	f)	Maintenance Staff (Such as Gardener, ESS Staff, Security Guards etc.)	=	100	Persons
		@ 45 LPCD	=	4500	Liters/ Day
	g	Auditorium			
		seats 1960 nos	=		person
		water @ 15 LPCD	=	29400.00	Liters/ Day
_	h) Back Wash Filters - L.S.	=	20760	Liters/day

		Service Staff for food court, Restaurant and auditorium	=	450	
-		water @ 45 LPCD	=	20250.00	Liters/ Day
		water @ 45 Er OD		20200.00	Enoror Day
		Total water demand	=	396657.06	Liters/day
		SAY	=	400	KLD
)		Horticulture & Road Work			
	a)	Area under Green area 4632.463 sqmt	=	4632.463	SQMM
		@ 5 Ltrs./Sqmt	=	23162	Liters
	b)	Area under road + Paved area =13696.728 sqm	=	3.38454	Acres
		@ 25 K.L./Acre	=	84613.51	Liters
		Total Water Demand	=	107776	Liters
		Say	=	107800	Liters
		The demand of horiculture & road work will met from recirculates water after treatment at S.T.P.			
		Total water demand	=	396657	Liters/day
			=	396.657	KLD
		Say	=	400	KLD
		Domestic water demand			
		60% of AV/WD of (A)	=	237994	Liters/day
		Domestic water demand (KLD)	=	237.99	KLD
		Or Say	=	238.00	KLD
		Flushing water demand			
		40% of AV/WD	=	158663	Liters/day
		Flushing water demand (KLD)	=	158.66	KLD
		Or Say	=	159,00	KLD -
		Sewage Treatment Plant Capacity			
		Average Sewerage Contribution Considering 80% of AV domestic water demand & 80% of AV/Flushing demand		317600	Liter / Day
		Sewage Treatment Plant Capacity (KLD)	=	317.60	KLD
		Or Say			KLD
-:-	-	Sewage scheme			

Peak discharge @3 times of sewage discharge plus sub soil infiltration @ 10% of total water demand	=	991000	Liters
	=	220222	GPD
sav	=	0.408	Cusces



	E:		
(l)	BOREWELLS		
	Approx. discharge of borewells @ 18 KL/hour and working 16 hours/da	ıy	
(a)	Total domestic water demand = KLD	=	238.00
(b)	Number of borewells 35/(18 x 16)	=	0.83
	Add 10% extra	=	0.08
	Total	=	0.91
	Say	=	1.00
	So, it is proposed to provide Two No. (1W+1S) of tube well (One vistandby). Moreover, the water demand for horticulture purposes i recirculated water after treatment at STP and ultimate water supply is HUDA.	s to	met fron



l)		Pumping Machinery for Borewell			
		Gross working Head	=		Meters
		Average Fall in S.L.	=		Meters
_	_	Depression Head	=		Meters
		Friction loss in main + Postive head	=		<u>Meters</u>
		Total	=	<u>38.0</u>	<u>Meters</u>
-	_	Or Say		40.0	Meters
-		Pump HP = 18000 x 40 x 100	_	3.81	H P
		60 x 60 x 75 x 70			250
		Or Say	=	5.00	H.P.
		It is proposed to provide 2 Nos. of 5HP moters 40 Mtr head	1		
1		(1 Working & 1 standby)			
11)		Plumbing Machinery for Domestic & Flushing Tank			
a	a)	Total Domestic Water Demand	=	237994	
		Day Storage (Equal to one day)	=	237.99	
		Or Say	=	240.0	KLD
		Fire Tank provided as per N.B.C. Norms	=	550.00	KLD
		Hence it is proposed to construct an underground tank of treated water, 200 KLD as raw water,soft -300kl and 550 k per location shown on plan i.e. Total 1250 K.L.D.	1250 K (LD for	LD having 2 fire fighting	200 KLD f
Ans		Hence it is proposed to construct an underground tank of treated water, 200 KLD as raw water,soft -300kl and 550 k per location shown on plan i.e. Total 1250 K.L.D.	1250 K (LD for	LD having 2 fire fighting	200 KLD f
-		Hence it is proposed to construct an underground tank of treated water, 200 KLD as raw water,soft -300kl and 550 k per location shown on plan i.e. Total 1250 K.L.D. Boosting Machinery	1250 K (LD for	LD having 2 fire fighting	200 KLD f
(111)	a)	Hence it is proposed to construct an underground tank of treated water, 200 KLD as raw water,soft -300kl and 550 k per location shown on plan i.e. Total 1250 K.L.D. Boosting Machinery For Under Ground Tank	1250 K (LD for	fire fighting	purpose
	a)	Hence it is proposed to construct an underground tank of treated water, 200 KLD as raw water,soft -300kl and 550 kl per location shown on plan i.e. Total 1250 K.L.D. Boosting Machinery For Under Ground Tank Total water demand (Domestic)	(LD for	fire fighting	KLD
	a)	Hence it is proposed to construct an underground tank of treated water, 200 KLD as raw water,soft -300kl and 550 kleer location shown on plan i.e. Total 1250 K.L.D. Boosting Machinery For Under Ground Tank Total water demand (Domestic) L.P.M. for 6 hour pumping	(LD for	238.00 661.11	KLD LPM
-	a)	Hence it is proposed to construct an underground tank of treated water, 200 KLD as raw water,soft -300kl and 550 kl per location shown on plan i.e. Total 1250 K.L.D. Boosting Machinery For Under Ground Tank Total water demand (Domestic)	(LD for	fire fighting	KLD LPM
-	a)	Hence it is proposed to construct an underground tank of treated water, 200 KLD as raw water,soft -300kl and 550 k per location shown on plan i.e. Total 1250 K.L.D. Boosting Machinery For Under Ground Tank Total water demand (Domestic) L.P.M. for 6 hour pumping Or Say	(LD for	238.00 661.11	KLD LPM
	a)	Hence it is proposed to construct an underground tank of treated water, 200 KLD as raw water,soft -300kl and 550 kl per location shown on plan i.e. Total 1250 K.L.D. Boosting Machinery For Under Ground Tank Total water demand (Domestic) L.P.M. for 6 hour pumping Or Say Gross Working Head	(LD for	238.00 661.11 660.00	KLD LPM
-	a)	Hence it is proposed to construct an underground tank of treated water, 200 KLD as raw water,soft -300kl and 550 kl per location shown on plan i.e. Total 1250 K.L.D. Boosting Machinery For Under Ground Tank Total water demand (Domestic) L.P.M. for 6 hour pumping Or Say Gross Working Head Suction lift	= = = =	238.00 661.11 660.00	KLD LPM
-		Hence it is proposed to construct an underground tank of treated water, 200 KLD as raw water,soft -300kl and 550 kl per location shown on plan i.e. Total 1250 K.L.D. Boosting Machinery For Under Ground Tank Total water demand (Domestic) L.P.M. for 6 hour pumping Or Say Gross Working Head Suction lift Delivery head	= = = = = = = = = = = = = = = = = = =	238.00 661.11 660.00 3.00 5.00	KLD LPM LPM
	a)	Hence it is proposed to construct an underground tank of treated water, 200 KLD as raw water,soft -300kl and 550 kper location shown on plan i.e. Total 1250 K.L.D. Boosting Machinery For Under Ground Tank Total water demand (Domestic) L.P.M. for 6 hour pumping Or Say Gross Working Head Suction lift Delivery head Frictional loss in Mains & Specials+ Positive head	= = = = = = = = = = = = = = = = = = =	238.00 661.11 660.00 3.00 5.00 7.00	KLD LPM LPM Meters Meters Meters Meters
-		Hence it is proposed to construct an underground tank of treated water, 200 KLD as raw water,soft -300kl and 550 kl per location shown on plan i.e. Total 1250 K.L.D. Boosting Machinery For Under Ground Tank Total water demand (Domestic) L.P.M. for 6 hour pumping Or Say Gross Working Head Suction lift Delivery head Frictional loss in Mains & Specials+ Positive head Clear head required	= = = = = = = = = = = = = = = = = = =	238.00 661.11 660.00 3.00 5.00 7.00 33.0	KLD LPM LPM Meters Meters
		Hence it is proposed to construct an underground tank of treated water, 200 KLD as raw water,soft -300kl and 550 k per location shown on plan i.e. Total 1250 K.L.D. Boosting Machinery For Under Ground Tank Total water demand (Domestic) L.P.M. for 6 hour pumping Or Say Gross Working Head Suction lift Delivery head Frictional loss in Mains & Specials+ Positive head Clear head required Total	= = = = = = = = = = = = = = = = = = =	238.00 661.11 660.00 3.00 5.00 7.00 33.0 48.0	KLD LPM LPM Meters Meters Meters Meters Meters Meters Meters
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		Hence it is proposed to construct an underground tank of treated water, 200 KLD as raw water, soft -300kl and 550 k per location shown on plan i.e. Total 1250 K.L.D. Boosting Machinery For Under Ground Tank Total water demand (Domestic) L.P.M. for 6 hour pumping Or Say Gross Working Head Suction lift Delivery head Frictional loss in Mains & Specials+ Positive head Clear head required Total Or Say Pump HP = 660 x 50 x 100	= = = = = = = = = = = = = = = = = = =	238.00 661.11 660.00 5.00 7.00 33.0 48.0	KLD LPM LPM Meters Meters Meters Meters Meters Meters Meters
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-		Hence it is proposed to construct an underground tank of treated water, 200 KLD as raw water, soft -300kl and 550 k per location shown on plan i.e. Total 1250 K.L.D. Boosting Machinery For Under Ground Tank Total water demand (Domestic) L.P.M. for 6 hour pumping Or Say Gross Working Head Suction lift Delivery head Frictional loss in Mains & Specials+ Positive head Clear head required Total Or Say Pump HP = 660 x 50 x 100 60 x 75 x 70 Or Say It is proposed to provide 2 nos. of motors of 11.0 HP sets	= = = = = = = = = = = = = = = = = = =	238.00 661.11 660.00 3.00 5.00 7.00 33.0 48.0 50.1	KLD LPM LPM Description Descri
-		Hence it is proposed to construct an underground tank of treated water, 200 KLD as raw water,soft -300kl and 550 k per location shown on plan i.e. Total 1250 K.L.D. Boosting Machinery For Under Ground Tank Total water demand (Domestic) L.P.M. for 6 hour pumping Or Say Gross Working Head Suction lift Delivery head Frictional loss in Mains & Specials+ Positive head Clear head required Total Or Say Pump HP = 660 x 50 x 100 60 x 75 x 70 Or Say	= = = = = = = = = = = = = = = = = = =	238.00 661.11 660.00 3.00 5.00 7.00 33.0 48.0 50.1	KLD LPM LPM Description Descri

	Flushing water supply requirement		00000	114 7-1 - 10
(i)	AV water demand	=		liters/day
(ii)	Flushing water supply demand @40%	=		liters/day
	Flushing water demand (KLD)	_ =	158.66	
	Or Say	=	160.00	KLD
	L.P.M. for @ 6 hour pumping	<u> </u>	444.44	1 DM
		=	450.00	
	Say	=_	450.00	LFIVI
	Pump HP = $450 \times 50 \times 100$	=	7.14	H.P.
	60 x 75 x 70 Or Say	=	7.50	H.P.
_	Of Say			
	(One pump working &one pump stand by & generator selectric failure.	set of so	ame capacity	in case
/)		set of so	ame capacity	in case
	electric failure. Irrigation Pumping			
	electric failure.		10.4375	Acres
	electric failure. Irrigation Pumping			Acres
	electric failure. Irrigation Pumping Plot Area		10.4375	Acres Sqmt
	electric failure. Irrigation Pumping Plot Area Water Demand of Horticulture + Road Area	= =	10.4375 42239.00	Acres Sqmt
	electric failure. Irrigation Pumping Plot Area Water Demand of Horticulture + Road Area 8 Hours Pumping	= =	10.4375 42239.00 107800 224.58	Acres Sqmt LPD LPM
	electric failure. Irrigation Pumping Plot Area Water Demand of Horticulture + Road Area	= = =	10.4375 42239.00 107800 224.58 230	Acres Sqmt LPD LPD LPM LPM Mtr.
	electric failure. Irrigation Pumping Plot Area Water Demand of Horticulture + Road Area 8 Hours Pumping Say Head Pump HP = 230 x 35 x 100	= = = =	10.4375 42239.00 107800 224.58 230	Acres Sqmt LPD LPM
	electric failure. Irrigation Pumping Plot Area Water Demand of Horticulture + Road Area 8 Hours Pumping Say Head Pump HP = 230 x 35 x 100 60 x 75 x 70	= = = = = = = = = = = = = = = = = = = =	10.4375 42239.00 107800 224.58 230 35 2.56	Acres Sqmt LPD LPD LPM LPM Mtr.
	electric failure. Irrigation Pumping Plot Area Water Demand of Horticulture + Road Area 8 Hours Pumping Say Head Pump HP = 230 x 35 x 100	= = = = = = = = = = = = = = = = = = = =	10.4375 42239.00 107800 224.58 230 35 2.56	Acres Sqmt LPD LPM LPM Mtr. H.P.
	electric failure. Irrigation Pumping Plot Area Water Demand of Horticulture + Road Area 8 Hours Pumping Say Head Pump HP = 230 x 35 x 100 60 x 75 x 70 Or Say		10.4375 42239.00 107800 224.58 230 35 2.56	Acres Sqmt LPD LPM LPM Mtr. H.P.
	electric failure. Irrigation Pumping Plot Area Water Demand of Horticulture + Road Area 8 Hours Pumping Say Head Pump HP = 230 x 35 x 100 60 x 75 x 70	= = = = = = = = = = = = = = = = = = =	10.4375 42239.00 107800 224.58 230 35 2.56 3.00	Acres Sqmt Characteristics Sqmt Sqmt Characteristics Sqmt Sqmt Sqmt Sqmt Sqmt Sqmt Sqmt Sqmt



(VI)	PUMPS FOR FIRE PROTECTION			Dump ooto	
S. No.	Parameters	Location		Pump sets	
140.			Jockey	Main	Diesel
1	Discharge in lpm	Pump Room	180 lpm	2850 lpm	2850 lpm
2	Head in metre		95	95	95
3	HP		6	100	100
4	Quantity in nos.		2	2	1
(VII)	GENERATING SETS				
S. No	Equipment	QTY	НР	Total HP	
1	Borewells	1 1	5	5.0	
2	For Jockey Pump	2	6	12.7	
3	Booster Pump (for domestic) + Flushing+ irrigation pump	1+1+1	11+7.5+3	31.5	
	Total			49.2	
				36.68	KW
	Disversity 0.8 & Power factor 0.8			57.31	KVA
	Or Say			60.00	KVA



		JILD PVT. LT				
	FINAL ABS	STRACT OF C	OST			-
					Amount	+
Sub Work	Desc	ription			(Rs.) in Lacs	
1	Water Supply Scheme				214.46	
II	Sewerage Scheme				79.33	
111	Storm Water Drainage			V	42.09	
IV	Road				35.86	İ
V	Street Lighting				16.02	t
Vi	Horticulture				2.23	
VII	Maintenance Charges for 10 Years including Remote	surfacing of R	oads after Is	t 5 year & lind 5 years of	59.80	
	Total (in Lacs)				449.78	
	Cost of Per Acre (in Lacs) = 10.4375				43.09	1
						1
M/S A	MB INFRABUILD PVT. LTD.					1
						+
						+



		INFRABUILD PVT. LTD.	PLEX BEING DEVELOPED BY AMB	
Sub Wo	ork No.I		Water Supply	
			Amount	
Sub Head		Description	(Rs.). In lacs	
1	Head Works		98.99	
2	Pumping Machinery		16.50	
3	Rising Main		7.52	1
4	Distribution System		43.97	
5	Fire Fighting		32.17	
6	Irrigation		15.31	
	Say (In Lacs)		214.46	



	ED 10.07.2013) IN SECTOR -88 , GURUGRAM MA INFRABUI	LD PVT. LTD.					
	ork No-1				Water Supply		-
	ad No-01				Head Works		
	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. 300000/- each.	2		300000	Rs.	6.00	
2	Provision for Rising Main connecting Bore well with water main and by-pass arrangement.		e ²⁰				
2.1	80 mm dia. G.I. Pipe	40	х	750	Rs.	0.30	
2.2	100 mm dia. G.I. Pipe	0	Х	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		50000	Rs.	1.00	
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	×	300000	Rs.	6.00	
5	Provision for carriage of materials and other unforseen items (LS)				Rs.	0.50	
6	Construction of U.G. tanks of total cap. 1250 KL @ Rs. 4000KL	1250	x	4000	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	x	35000	Rs.	0.70	
	TOTAL				Rs.	64.50	
	Add 3% contingencies				Rs.		
	TOTAL				Rs.	66.44	
	Add 49% Department charges, Price Esclation	& other unforse	en Charg	jes.	Rs.	32.55	
					-	0000	
	TOTAL COST				Rs.	98.99	
	Material Statement of Borew	alla Disina Mai:	10		-		
	iviaterial Statement of Borew	ens visinā man		Length			
S. No	. Name of line		of 80	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	



	INFRABUILD	PVT. LTD.			DEVELOPED		
ub Wo	Pumping Machinery Pumping Machinery Pumping Machinery						
	No DESCRIPTION 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/- 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 / Provision for chlorination plant complete. 1 No. @ 50,000/- Provision for making foundations and erection of Pumping machinery @ Rs. 50000/ Provision for pipes, valves and specials inside boosting chamber - 1 Set (L.S.) for Rs. 50000/ Provision for electric services connection including electric fitting for tube wells & boosting chamber etc. 1 set (L.S.) Rs. 100000/						
SI No	DESCRIPTION	Qty		Rate			
1	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	
,	standby arrangements for T.W. of booster pump complete with gear head arrangement	1		600000	Rs.	6.00	
3	Providing for chlorination plant complete. 1 No.	1	x	50000	Rs.	0.50	
4		1	х	50000	Rs.	0.50	
5		1	х	50000	Rs.	0.50	
6	including electric fitting for tube wells & boosting chamber etc. 1 set (L.S.) Rs.	1	x	75000	Rs.	0.75	
7	Provision for carriage of material and unforeseen item. L.S. for Building Rs. 50000/	1	х	50000	Rs.	0.50	
	TOTAL				Rs.	10.75	
	Add 3% contingencies		80		Rs.	0.32	
	TOTAL				Rs	11.07	
	Add 49% Department charges, Price Esclation & o	ther unforse	en Char	ges.	Rs	5.43	
					l.	1	

bo



<u> </u>	ED 10.07.2013) IN SECTOR -88 , GURUGRAM MANE INFRABUILD	PVT. LTD.					
ub Wo	ork No-1			Ç¢.	Water Supply		
ub W	ork No-03				Rising Main fr	om 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	@	1000	Rs.	1.30	
2	Providing and fixing 80 mm dia. sluice valves including cost of surface boxes and masonary chambers etc., complete in all respects.	1	@	75000	Rs.	0.75	
3	Providing and Fixing indicating plates for sluice valves, Air valves & fire hydrant.	1	@	10000	Rs.	0.10	
4	Provision for carriage of material & other foreseen items etc., LS	1	@	50000	Rs.	0.50	
5	Provision for making connection with HUDA main (L.S.) 1 job1 complete in all respect	1	@	175000	Rs.	1.75	
6	Provision for cutting road and making good the same (L.S.) 1 job	1	@	50000	Rs.	0.50	
	TOTAL				Rs.	4.90	
	Add 3% contingencies				Rs.	0.15	
	TOTAL				Rs.	5.05	
	Add 49% Department charges, Price Esclation & o	ther unforse	en Char	ges.	Rs.	2.47	
	TOTAL COST				Rs.	7.52	
Materi	ial Statement and design statement of HUDA Rising	Mains					
S. No	. Name of line		145	Dia. in mm		n m from I to U.G.T.	
1	Municiple Main To UGT			80	1:	30	



2111	ED 10.07.2013) IN SECTOR -88 , GURUGRAM MANE INFRABUILD	PVT. LTD.					
ub W	ork No-1				Water Supply		
ub He	ead No-04				Distribution s	/stem —	
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		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.		72/9				
				0000	D.	0.40	
2.1	100 mm I/D 150 mm I/D	5	<u>@</u> @	8000 10000		0.40 0.00	-
3	Providing and Fixing air valves and scour valves including cost of brick masonry chamber complete.	1	@	10000		0.10	
4	Providing and Fixing indicating plates for sluice valves	5	@	1000	Rs.	0.05	
5	Provision for carriage of material & other foreseen items etc., (L.S). 1 Job including cutting of raod and making the same.	1	@	50000	Rs.	0.50	
	TOTAL				Rs.	28.65	
	Add 3% contingencies	*			Rs.	0.86	
	TOTAL				Rs.	29.51	
	Add 49% Department charges, Price Esclation & a	other unforse	en Char	jes.	Rs.	14.46	
	TOTAL COST		92.		Rs.	43.97	
	1.5		1				



DAT	SED BUILDING PLAN OF COM ED 10.07.2013) IN SECTOR -88	MERCIAL COLONY ME GURUGRAM MANESA INFRABUILD PY	R URBA	3 10.4375 N COMPL	EX BEING	LICENCE NO.5 S DEVELOPED	6 OF 2013 BY AMB		
S. No.	Description	300 mm	200 mm	150 mm	100 mm	BRANCHES 100 mm	80 mm	65 mm	50 mm
(A)	Domestic								
1	UGT-W1	30			575	1.25		1 7 0	
2	UGT-W1	() *	-		575	170	2	-	-
	TOTAL	0	0	0	1150	0	0	0	0
(A)	Flushing								
1	STP-F1		-	102	575	¥);		
2	STP-F2	-	745	72	575	<u>.</u>	F₩()		-
	TOTAL	0	0	0	1150	0	0	0	0
	GRAND TOTAL	0	0	0	2300	0	0	0	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.

r				Jak		Additional	Additional	AV/WD							Le	Level in start	-	
vi S	Ref of line	Length in mts	Ref of line Length in Shopkeep mts ers staff @ 45LPCD	Food Bewer Staff @ LPCD Restau @ 70 LI	Shop Visitor & Food Court Visitor @ 15LPCD	Shopkee + Food C Staff (Food & Bewerage Staff @ 35 LPCD & Restaurant @ 70 LPCD	KLD	Domestic Water demand @ 60% KLD	Peak Demand @ 3 time of AV/WD	Dia of Pipe (mm)	Velocity mt/sec	Lose of Head in 1000 M (mts)	Loss of head in the line (mts)	HL (Mts)	GL (Mts)	TH (Mts)	Remarks
	AT - UGT	а	Ķ.	, а	c	60 % of (Shop keeper =47070+1411 95 litre)	60 % of (Food Court 49 77777 Lts Restaurant 48740+6964+4 500 Ltr-Audi- 59400ltrs-Back wash- 20760+Staff- 20750-Itss]	237.790	237.79	713.38	2		, y ; =	×	0.00	0.00	0.00	Suction head-3.0 m Delivery head-5.0 m Friction loss -7.0 m Clear head req-33 m Total=48 m Say=50 meter.
N	UGT-W1	575	8		3.	1/2 of 60 % of (Shop keeper =47070+1411 95 litre)	1/2 of 60 % of Food Court 49 7777 Lts Restaurant 48740-6964+4 500 Ltr-Audi-59400lts-Back wash-	118.895	118.90	356.69	100	0.75	0.53	0.29	-0.29	00.00	-0.29	
г,	UGT-W1	575	(4**	3 96		1/2 of 60 % of (Shop keeper =47070+1411 95 litre)	1/2 of 60 % of Food Court 49 77777 Lts Restaurant 48740+6964+4 500 Ltr-Audi- 59400[trs-Back wash-	118.895	118.90	356.69	100	0.75	E 0.53	0.29	-0.58	0.00	-0.58	
75	E: 1. Wa 2. Le	ter supp vels hav	oly Line sl	hall be lai	NOTE: 1. Water supply Line shall be laid as per NBC / HUDA Norms.	HUDA Norn	ms. = 00											



1					FLI	FLU	FLUSHING WATER SUPPLY - HYDRAULIC DESIGN	TER SUP	PLY - HYDI	SAULIC E	ESIGN							USHING WATER SUPPLY - HYDRAULIC DESIGN
S	Ref of line Length in	Length in		Self		Additional	ional	AV/WD	Flushing				Lose of	Loss of	Fe	Level in start	_	
8	1	mts		Floating Population @ 10% of Population @ 15 LPCD	Shop Visitor & Food Court Visitor @ 15LPCD	Shopkeepers + Food Court Staff @ 45LPCD	Floating Population @ 10% of Population @ 15 LPCD	KLD	Water demand @ 40% commercial K.L.D.	Peak Demand @ 3 time of AV/WD	Dia of Pipe (mm)	Velocity mt/sec	Head in 1000 M (mts)	nead in the line (mts)	HL (Mts)	GL (Mts)	TH (Mts)	Remarks
-	AT - STP	ST.	(8	3	e r	40 % of (Shop keeper =47070+1411 95 litre)	40 % of (Food Court 49 77777 Lts Restaurant 48740+6964+4 500 Ltr-Audi- 59400ltrs+Back wash- 20760+Staff- 20260 (Its)	158,663	237,79	713.38	2	7)Ķ	31	0.00	0.00	00.0	Suction head-3.0 m Delivery head-5.0 m Triction loss -7.0 m Clear head req-33 m Total=48 m Say=50 meter.
2	STP-F1	575	3	18 (17)		1/2 of 40 % of (Shop keeper =47070+1411 95 litre)	1/2 of 40 % of 7777 Lts 7777 Lts Restaurant Restaurant 500 Ltr+Audi-59400ltrs+Back wash-20760-Siaff-	79,332	79.33	79.33 ~ 237.99	100	C.75	0.50	0.29	-0.29	0.00	-0.29	¥.
m	STP-F2	575	0.	32	,	1/2 of 40 % of (Shop keeper =47070+1411 95 litre)	1/2 of 40 % of 7777 Lts Restaurant 48740+6964+4 500 Ltr+Audi-59400ltrs+Back wash-20760+Staff-	79.332	79.33	237.99	00	0.75	0.50	0.29	-0.58	0.00	-0.58	
ō	E: 1. Flu 2. Le	shing W	later sup	ply shall baken with	NOTE: 1. Flushing Water supply shall be laid as per NBC / HUDA Nor 2. Levels have been taken with Reference to Road Level = 00		Norms. = 00					.*						
cr																		



Sub Wo	ork No-1			\	Nater Supp	oly
	ork No-05				ire fighting	g
SI No	DESCRIPTION	Qty	-80	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.		V.			
	150 mm I/D for Ring Main	1210	@	1200.00	Rs.	14.52
	100 mm I/D for Tanker Inlet	15	@	1000.00	Rs.	0.15
	80 mm I/D for Yard Hydarnt pipe	52	@	950.00	Rs.	0.49
2	Providing & fixing valve including cost of surface boxes and masonry chambers etc.					
	complete in all respects					
	- 150 mm dia.	3	@	14000.00	a)	0.42
	- 100 mm dia.	1	@	10000.00	-	0.10
	- 80 mm dia.	26	@	8000.00	,	2.08
3	Providing and fixing fire Hydrant with accessories	26	@	10000.00	Rs.	2.60
4	Providing for carriage of material (L.S.) 1 jobs	1	@	50000.00	Rs.	0.50
5	Providing and fixing Indicating plate	10	@	1000.00	Rs.	0.10
	TOTAL				Rs.	20.96
	Add 3% contingencies				Rs.	0.63
	TOTAL				Rs.	21.59
	Add 49% Department charges, Price Esclation	n & other	unforseer	n Charges.	Rs.	10.58
	TOTAL COST				Rs.	32.17
	Material Statement of	Fire ring	- MS - 150	mm dia		
S No	Location	200 mm	150 mm	100 mm dia	80 mm dia	Fire
0			dia pipe	pipe	pipe	Hydrant
1	UGT to Fire Ring	-	20		-	-
2	Fire Ring Pipe		1150		_	-
3	Tanker inlet connection	-		26	-	-
4	Fire Brigade 4 way	- P	20	-	-	5 .
5	Fire Brigade 2 way	7/2	20	<u>-</u>	-	-
6	Yard Hydrants = 26 Nos. x 2 Meters	-	_		52	26
	Total	0	1210	26	52	26
	Fire Hydrant System	L		2		
1	Valves 150mm dia			3	Nos.	
2	Valves 100mm dia			1	No.	
3	Valves 80mm dia			26	Nos.	
4	Fire Hydrants				Nos.	
	Fire Brigade Connections 4 Way			1	No.	
5	THE DINAGE CONTECTIONS 4 VVAV		1			



Sub Wo	ork No-1				Water Supp	ly
Sub Wo	ork No-06				Irrigation	
SI No	DESCRIPTION	Qty	* IA-1	Rate		AMOUNT (In Lacs)
	Providing, laying, jointing and testing uPVC pipe line confirming to I.S 4985 including cost of excavation etc., complete in all respects.					
	20 mm O/D for Garden Hydrants	88	@	200	Rs.	0.18
	63 mm O/D UPVC Pipe for Ring Main	1150	@	500	Rs.	5.75
	75 mm O/D from STP to Ring Main		@	650	Rs.	0.00
2	Providing and fixing Irrigation hydrant valve complete in all respect.	44	@	2000	Rs.	0.88
3	Provision for carriage of material & other foreseen items etc., (L.S.) 1 jobs				Rs.	0.50
4	Providing & fixing ball valve 20 mm	44	@	250	Rs.	0.11
5	Providing & fixing sluice valvle compelte with chamber.					
	- 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, 50 LPM @ 35 Mtr. Head complete with foundation & control panel etc.	2	@	25000	Rs.	0.50
	TOTAL				Rs.	9.98
	Add 3% contingencies				Rs.	0.30
	TOTAL				Rs.	10.28
	Add 49% Department charges, Price Esclation	on & other	unforse	en Charges.	Rs.	5.03
	TOTAL COST				Rs.	15.31
	Material statement of Irrigation System					
S. No.	Line Name	75 mm	63 mm OD	50 mm OD	20 mm OD	Irrigation Hydrants
1	Pump Room to G1	20				
2	Irrigation Ring		1150			
3	GARDEN HYDRANT (12 Nos x 2 M)				88	44
	Total	20	1150	0	88	44



Sub W	ork No-II				Sewerage S	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.			10		
	200 mm I/D Avg. depth upto 0 - 4.00 M (S.W. Pipe)	0	@	1100.00	Rs.	0.00
	250 mm I/D Avg. depth upto 0 - 4.00 M (S.W. Pipe)	1024	@	1200.00		12.29
2	Provision for lighting and watching L.S	1.00	@	50000.00		0.50
3	Provision for timbering and shuttering L.S.	1.00	@	50000.00	Rs.	0.50
4	Provision of 150 mm dia liine form STP to HUDA main by pumping	50	@	1000.00	Rs.	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	2	@	200000.00	Rs.	4.00
6	Provision for making STP (KLD)	317	@	10000.00	Rs.	31.70
7	Provision for making RCC grease trap 1000 x 1800mm complete	1.00	· @	30000.00	Rs.	0.30
8	Provision for carriage of maternal (L.S.)	1.00	@	40000.00	Rs.	0.40
9	Provision of cutting road & making it good as same in original condition - 1 job	1.00	@	50000.00	Rs.	0.50
9	Providing Sewage with HUDA	1	@	100000.00	Rs.	1.00
	TOTAL				Rs.	
	Add 3% contingencies				Rs.	
	TOTAL				Rs.	53.24
	Add 49% Department charges, price esclation, other for unforseen charges.				Rs.	26.09
	TOTAL COST				Rs.	79.33



	M	laterial statem	ent of Sew	erage Syste	em – As pe	r drawing	sheet	
S.	Name of	:		Lengt	h of Pipe ir	ı M		
No.	Pipe Line	500 mm	450 mm	400 mm	350 mm	300 mm	250 mm	200 mm
1	S1-S3	a=	-) e :	:=:	-	502	
2	S2-S3) H	-	=	_:=:		502	
3	S3-STP	3	-	2	(4)	5 - -	20	
	Total	0	0	0	0	0	1024	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.

Second Court & Food Court & Restaurant Area = Food Court & Res					al o			Additional	a company	600				٥	Design of Pipe			-1-	Level at Start	Start		
Mir LPD LPD LPD LPD LPD LPD KLD KLD KLD Cueers mm m Titlee Mir. Mir. Mir. Mir. Mir. Mir. Mir. Mir.	Si. No.	Name of Line	Length in Meter	shopkeepers + office staff @ 45LPCD			shopkeepers + office staff @ 45LPCD	Food & bewerage staff@35 LPCD	shop visitor, cinema visitor @ 15LPCD	Average Daily Water Demand	Average Discharge 80% of Domestic + 80% of flushing		Peak Discharge @ 3 Times of AV Discharge including Sub			Velocity	Gradient	Drop	G.L	Ⅎ	Level a	t End
Mirr LPD LPD LPD LPD LPD LPD LPD MLD MLD											4 5	6	200311	E	Ε	ff/sec		Mtr.	Mtr.		3.L (Mtr)	I.L (Mtr)
S1-S3 502 Restaurant = 200000 Lts Restaurant = 200000 Lts Restaurant = 200000 Lts S2-S3 502 S0			Mtr	CPO	LPD	CPD	LPD	CPO	8	KLD	Q.	r. r.	casera									
S2-S3 50% of total Commercial Food Court & Restaurant Area = S1-S2 50% of total Commercial Food Court & Restaurant Area = 200000 Lts S3-STP 20 % of total Commercial Food Court & Restaurant Area = 200000 Lts The Man hole shall be constructed as per HUDA N.B.C Norms 1 The Man hole shall be constructed as per HUDA N.B.C Norms 1 The Man hole shall be constructed as per HUDA N.B.C Norms 1 The Man hole shall be constructed as per HUDA N.B.C Norms 1 The Man hole shall be constructed as per HUDA N.B.C Norms 1 The Man hole shall be constructed as per HUDA N.B.C Norms 1 The Man hole shall be constructed as per HUDA N.B.C Norms 1 The Man hole shall be constructed as per HUDA N.B.C Norms 1 The Man hole shall be constructed as per HUDA N.B.C Norms 1 The Man hole shall be constructed as per HUDA N.B.C Norms	- P. S.	S1-S3	502	50 % of total Rest	l Commercia aurant =2000	al ,Food Court & 000 Lts		V))		200.000				250.000		0.750	1:190	2.64		06.0-	0.00	-3.54
S2-S3 502 Restaurant = 200000 Lts S3-STP 20																						
LINE = S1-S2 50 % of total Commercial	N	S2-S3	502	50 % of total Rest	Commercia aurant =200	al Food Court &	24			200.000				250.000		0.750	7:190	2.64		06 0-	0.00	-3.54
LINE = S1-S2 50 % of total Commercial Food Court & Restaurant Area = Food Court & Restaurant Area = LINE = S3-S2 50 % of total Commercial 400.000 320.00 40.00 0.412 250.000 0.659 0.750 1:190 0.11 0.00 -3.54 0.00 0.00																						
•	, eo	S3-STP			9	er	LINE = S1-5 , Food Co LINE = S3-S , Food Co	52 50 % of tol burt & Restau 200000 Lts 12 50 % of tot burt & Restau 200000Lts	rant Area = rant Area = s al Commercial rant Area =		145.			250.000		0.750				-3.54	0.00	-3.65
	Note:-		The Man ho	ole shall be co	instructed at	s per HUDA N	d level =00															



.,,,,,	56 OF 2013 DATED 10.07.2013) IN SECTOR -88, GURL BEING DEVELOPED BY AMB INFRAE	BUILD P	VT. L	.TD.			
Sub	Work No-III		Sto	rm water	drair	1	
S. No.	DESCRIPTION	Qty		Rate		AMOUNT (In Lacs)	
	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.						
	400 mm I/D Avg. depth upto 2.0 M.	966	@	1500	Rs.	14.49	
2	Provision for Road Gullies L.S.	LS			Rs.	0.50	
	Provision for lighting and watching	LS			Rs.	0.50	
4	Provision for timbering and shoring L.S.	LS			Rs.	0.50	
5	Provision for carriage of material & other foreseen items etc., L.S.	LS			Rs.	0.50	
6	Provision for Rain water harvesting arrangements for 10.4375 Acres @ 1.50 Lac / Acres.	10.4	@	100000	Rs.	10.44	
7	Provision for temporary connection with HUDA				Rs.	0.50	
	TOTAL				Rs.	27.43	
	Add 3% contingencies				Rs.	0.82	
	TOTAL				Rs.	28.25	
	Add 49% Department charges, price esclation, other charges.	for unfo	rseer	1	Rs.	13.84	
	TOTAL		60		Rs.	42.09	



REV NO.	/ISED BUILDING PLAN OF COMMERCIAL COLONY MEASURING .56 OF 2013 DATED 10.07.2013) IN SECTOR -88 , GURUGRAM MA BEING DEVELOPED BY AMB INFRABUILD PVT	<u>ANESAR URBAN C</u>	COMPLEX		
	STORM WATER DR	AIN			
S. No	Name of Drain		150mm dia RCC pipe	200mm dia Crossing pipe	500mm dia RCC pipe
	TOTAL		966		



						Hydraulic	Hydraulic Design Chart	hart									
						Storm	Storm Water Drain	ii									
			Calc	Calculations are based on Manning Formula V	ed on Man	ning Form	ula V = (1	.486/n)	= $(1.486/n) \times m^{2/3} \times s^{1/2} \text{ in F.P.S System}$	^{1/2} in F.P	S Syste	티					
			Catchmen	Catchment Area in sqmt	Total Area	Discharge in	Proposed	Velocity	Design Capacity of	ir o	Drop	U II	Level at Start		t	Level at End	1
SI. No.	Name of Line	Length in Meter	Self	Additional	(Sqmt)		dia of pipe (mm)	_	Drain (Cusecs)	Gladien	(Mtr.)	G.L (Mtr.)	Mtr.)	Depth (Mtr.) (G.L (Mtr.)	(Mtr.)	(Mtr.)
					0007	880	450	0.75	84.8	1:500	0.11	0.00	06.0-	0.90	00:00	-1.01	1,01
-	D1-D2	54	4000		0004	1 038	450	0.75	3.48	1:500	0.01	00.0	-1.01	1.01	0.00	-1,02	1.02
7	D2-RWH-1	2	200	15%	0000	2.026	450	0.75	3.48	1:500	0.17	0.00	-1.02	1.02	0.00	-1,18	1.18
es .	RWH-1-D4	83	4000		8400	2.076	450	0.75	3 48	1:500	0.01	00.0	-1.18	1.18	00.00	-1.19	1.19
4	D4-RWH-2	က	200		9		0.4	0.75	3.48	1:500	0.13	00:00	-1.19	1.19	0.00	-1.32	1.32
ro.	D5-D6	64	4000		12400	3.064	430	è	2					600	9	23	1 33
9	D6-RWH-3	ນ	200		12600	3.113	450	0.75	3 48	1:500	0.01	0.00	-1.32	ZE.	8	3	5 2
,	RWH-3-O/F	ĸ	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
- 3	000	C	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
80	97-72	3 .	200		17000	4.201	450	0.75	3.48	1:500	0.01	0.00	-1.46	1.46	00.0	-1.47	1.47
o	D8-KWH-4	0			23	بر 200	450	0.75	3.48	1:500	0.26	00.0	-1.47	1.47	0.00	-1.74	1.74
10	D9-D10	132	4000		20014			0.75	2 48	1.500	0 0	0.00	-1.74	1.74	0.00	-1.75	1.75
±	D10-RWH-5	2	200		21200	5.238	450	2	3				1	1,1	5	7 02	1.92
12	D11-D12	85	4000		25200	6.227	450	0.75	G.48	1:500	0.17	00.00	6).1-	0):	8 8	26.1	7
13	D12-RWH-6	r.	200		25400	6.276	450	0.75	5.48	1:500	0.04	0.00	-1.92	1.92	0.00	-1.93	28.
41	D13-D14	62	4000	(29400	7.265	450	0.75	3.48	1:500	0.12	00.00	-1.93	1.93	0.00	-2.05	2.05
. 4	D14-RWH-7	ıc	200		29600	7.314	450	0.75	3.48	1:500	0.01	0.00	-2.05	2.05	0.00	-2.06	2.06
5 6	D15-D16	164	4000	Ø	133600	8.302	450	0.75	3.48	1:500	0.33	00.00	-2.06	2.06	0.00	-2.39	2.39
17	D16-RWH-8	G	200	5.9	33800	8.352	450	0.75	3.48	1:500	0.01	00.00	-2.39	2.39	0.00	-2.40	2.40
					1												

						Hydrauli	Hydraulic Design Chart	Hydraulic Design Chart									MANESAR URBAN COMPLEX BEING DEVELOPED BY AMB INFRABUILD FVI. LID. <u>Hydraulic Design Chart</u>
						Storm	Storm Water Drain	ain									
			Calcu	Calculations are based on Manning Formula $V = (1.486/n) \times m^{2/3} \times s^{1/2}$ in F.P.S System	d on Man	ning Forn	ula V = (1.486/n]	x m ^{2/3} x	s ^{1/2} in F.	P.S Syst	еш					
6	D17-D18	110	4000		37800	9.340	450	0.75	3.48	1:500	0.22	00:00	-2.40	2.40	0.00	-2.62	2.62
2 5	040 01/1/10	ıc	200		38000	9.390	450	0,75	3.48	1:500	0.01	00:00	-2,62	2.62	0.00	-2.63	2,63
6 G	000-040	· 6	4000		42000	10.378	450	0.75	3.48	1:500	0.18	0.00	-2.63	2.63	0.00	-2.81	2.81
3 8	OS WHAT	, c	200		42200	10.427	450	0,75	3.48	1:500	0.01	0.00	-2.81	2,81	00 0	-2.82	2.82
5 8	RWH-10-	о го	200		42400	10.477	450	0,75	3.48	1:500	0.01	0.00	-2.82	2.82	0.00	-2.83	2.83
	OVERFLOW	990															
PE. 4 PTOE	OM WATER IIN	H SHALL	SOCIETA STORM WATER LINE SHALL BE LAID AS PER NBC/HUDA NORMS.	C/HUDA NORMS.													



UB W	ORK NO IV				Road Wo	rk
SI No	DESCRIPTION	Qty		Rate		AMOUNT (In Lacs)
1	Provision for leveling - earth filling / cutting as per					
'	site conditions. (In Acres)					
	Area = 10.4375 Acre	10.43750	@	100000	Rs.	10.44
2	Provision for Granular sub base 100mm, 150 mm thick stone aggragate, 50 mm thick B.M., 20 mm thick pre mix corpet with seal coat		@	500	Rs.	8.50
3	Provison of Paved path of C.C. 1:2:4	20	@	300	Rs.	0.06
4	Provision for Kerbs & channels of CC, 1:2:4	20	@	350	Rs.	0.07
5	Provision for making approach to each block for C.C. pavements L.S.		@	50000	Rs.	0.50
6	Provision of guide maps at selected place (L.S.)		@	50000	Rs.	0.50
7	Provision for Traffic Lights arrangement - L.S.		@	30000	Rs.	0.30
8	Provision for Demarcating Durgies - L.S.		@	50000	Rs.	0.50
9	Provision for Plot indicator - L.S.		@	50000	Rs.	0.50
10	Provision for Parking Arrangment, L.S.		@	150000	Rs.	1.50
11	Provision of carriage of material and unforseen items - L.S.		@	50000	Rs.	0.50
	TOTAL	Rs.	23.37			
	Add 3% contingencies				Rs.	0.70
	TOTAL				Rs.	24.07
	Add 49% Department charges, price esclation, oth charges.	er for unfo	rse	en	Rs.	11.79
	TOTAL				Rs.	35.86



	Road Work					
S. No.	Name of Road	Length (Road (i Mtrs.)	n	Road Width	Metalled Width (Mtrs.)	Area in Sqm.
	Α	В		С	D	BxD
1	Road No.A	1050			6	6300.00
	Total	1050				6300.00
	Add 10 % for curves					630.00
	Total	e.				6,930.00
	Add for surface plaza/ parking					5,770.00
	Total					12,700.00
	Say					1,700.00
	Total Length of road	1050				
	Add 10% curves	105				
	Total Length	1155				
	Say	1155	Mtı	rs.		
	No. of CAR Parking = 577 Nos.	577	No	S.		
	Surface Plaza Area =2X5X577	5770	Sq	mts.		
	Pave Path 1 Mtr on one side of Road = 20x1 = 20	20	Mtı	rs.		



Cub Ma	ork No-V	265			Street Lig	hting
SI No	DESCRIPTION	Qty		Rate		AMOUNT (In Lacs)
1	Providing street lighting on roads as per standard specifications on HVPN					
	Area = 10.4375 Acre	10.438	@	100000	Rs.	10.44
	TOTAL	Rs.	10.44			
	Add 3% contingencies				Rs.	0.31
	TOTAL				Rs.	10.75
	Add 49% Department charges, price esclation, other	er for unfo	orse	en	Rs.	5.27
	TOTAL				Rs.	16.02
			1			



ub Wo	ork No-V1				Plantation trees	& Road side
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					
**	Total Road Length (M.)	1155				
	Trees		\perp			
	Or Say	482	+			
	Cost of One Tree :-		+			
	Excavation (Rs.) 30/-		-			+
	Manure (Rs.) 40/-		-			
	Tree Plants (Rs.) 80/-		-		_	
	Tree Guards (Rs.) 600/-		-		_	
	Total Cost (each)	100	@	64	Rs.	0.31
	Cost of Total trees	482	100	1 04		1.45
	TOTAL				Rs.	
	Add 3% contingencies				Rs.	0.04
	TOTAL				Rs.	1.50
	Add 49% Department charges, price esclation, other charges.	ner for uni	torse	en	Rs.	0.73
	TOTAL				Rs.	2.23



SUB W	ORK NO. VII:			MTC. CHAI RESURFA		
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.	÷,X				
	Area = 10.4375 Acre	10.438	@	300000	Rs.	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)	1700	@	250	Rs.	4.25
3	Provision for resurfacing of roads after 10 years of Mtc. i.e. 20mm thick premix carpet with seal coat with mechanical paver. (Sqm)	1700	@	200	Rs.	3.40
	TOTAL				Rs.	38.96
	Add 3% contingencies				Rs.	1.17
	TOTAL				Rs.	40.13
	Add 49% Department charges, price esclation, oth	er for unf	orse	en	Rs.	19.66
	TOTAL				Rs.	59.80

