

RESIDENTIAL GROUP HOUSING PROXIMA -01 (5.44 ACRE)

AT

SECTOR -89,

GURUGRAM (HARYANA)

**SERVICE COST ESTIMATE FOR
EXTERNAL DEVELOPMENT WORKS**

Client

SIGNATURE GLOBAL (INDIA) PVT.LTD.

**1304, 13th Floor, Dr. Gopal Das Bhawan,
28, Barakhamba Road, New Delhi - 110001**

Service Consultant

CONSUMMATE ENGG.SERVICES (P) LTD.

PLUMBING, ELECTRICAL & FIRE

B-67, SECTOR-67, NOIDA (U.P.), PH. (0120)-2303500

PROJECT REPORT / ESTIMATES FOR PROVIDING EXTERNAL SERVICES E.G. WATER SUPPLY, SEWERAGE & STORM WATER DRAINAGE ETC. IN RESPECT OF RESIDENTIAL COLONY "PROXIMA 1" BEING DEVELOPED IN 5.444 ACRE AT SECTOR - 89, GURUGRAM.

INTRODUCTION

Gurugram town of Haryana state is situated on Delhi Jaipur National Highway No.8 at a distance of 30 km for Delhi. Being in the national capital Region, the town has the fast developing tendency and potential. Further it has started sharing the growing Industrial load of Delhi. It has been decided by the Haryana Government to establish various residential sectors in Gurgaon. This report and estimate is for 5.444 acre, Group Housing scheme at sector-89, Gurugram, Haryana Licenses No 89 of 2019, dated 02/08/2019 & Licence No. 02 of 2022 dated 06.01.2022. The demarcation and zoning plans were sanctioned. The details of the services are as follows:

WATER SUPPLY

At present the source of water supply in this area is borewell. As the underground water is potable, provision for two numbers of tubewell has been made in this estimate for each part. It has been proposed to construct the underground 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 borewell 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

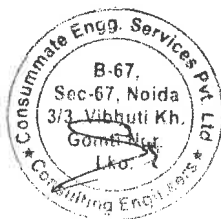
The scheme has been designed for population of approx. 3910 persons considering 5 persons for each Unit. The rate of water supply per head/day has been taken as $150 + 22.50 \text{ (U.F.W.)} = 172.50$ liters per head per day as per HUDA norms in addition to above necessary provision of water for club & parks etc. have been taken into account for calculating the maximum quantity of water requirement.

PLUMBING EQUIPMENTS

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.

PUMPING CHAMBER & PLUMBING EQUIPMENTS

It has been proposed to quip each tubewell with an electrically driven set electro type or submersible pump capable of driven 27000 liters / hour. The provision for standby generating set has also been provided in case of any electricity failure. Generator will be provided separately or added to the capacity of main generator.



UNDERGROUND STORAGE TANK

Underground storage tank provision has been made in 4 compartments, which cater for the Raw & Treated as well as water for Fire Fighting requirement. The water from Fire water compartment shall overflow to the raw water compartment so that the water in the Fire compartment also remains 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 @ 150+15% UFW = 172.50 liters per head per day @ 3 times the average rate of flow on Hazen William formulae. Necessary provision for laying DI pipes conforming to relevant IS standard along with valves & special has been made in the project. Minimum pipe dia. for distribution is kept as 100 mm dia.

RISING MAIN

Rising 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 is designed for sewer connecting to sewer treatment plant with a provision of By pass connection to HUDA sewer scheme. The sewer lines have been designed for three times average D.W.F. in relation to water supply to water supply demand. It has been assumed that about 75% of the domestic water supply shall find it's way into the proposed sewer. Sewer lines shall be laid to a gradient maintaining minimum 2.46 ft/sec self cleaning velocity. Sewer line up-to 300mm dia has been designed to run half full at peak flow. Necessary provision for laying SW pipe sewer line, construction of required number of manholes etc. have 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 on the design of sewerage system.

STORM WATER DRAINAGE

It is proposed to lay underground RCC pipe drains with required number of catch basins for disposal of storm water which will be connected to the Huda drain. The intensity of rainfall has been taken as 6.25mm per hour. A minimum size of 400mm dia RCC storm water line will be provided and designed as per manning's formula. Necessary rain water harvesting arrangement also has been provided.



FIRE

As per N.B.C (National Building Code), fire tanks have been 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 Govt. /Huda.

ROADS

Roads have been provided to above zones and estimate is prepared as revised specifications adopted by HUDA.

STREET LIGHTING

Provision for lighting on surrounding area has been made.

HORTICULTURE

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

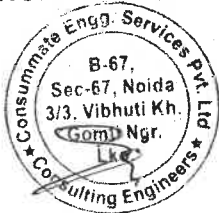
RATES

The estimate has been on the present market rates.

COST

The total cost o scheme, including cost of all services works out to be **846.32** lacs including 3% contingencies @ 49% departmental charges. Cost comes 155.45 Lacs / acre.

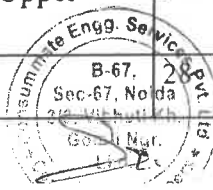
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**PROJECT - AFFORDABLE HOUSING DEVELOPED BY SIGNATURE GLOBAL AT
SECTOR 89 (5.444 ACRE), GURUGRAM (HARYANA)**

**Design
Calculation**

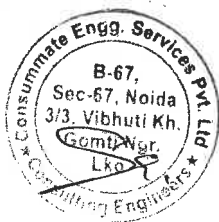
1	(Part - 1)						
A)	Requirement of Water :-						
	e) No. of Apartments	782					
	Population @ 5 Persons Per Apartment	782	x	5.00	=	3910	Person
		Total Population			=	3910	Person
	Daily Requirement @ 172.50 (150 + 15% Unaccounted W/S) Lit. / Head / day	3910	x	172.50	=	674475	Lit.
				Say (A)		674	KL
i	Community building	376.0 86	Sqm.				
	Population @ 1.4 Sqm. Per Person	376.0 86	/	1.40	=	268	Person
	Daily requirement @ 45 lpcd	268	x	45.00	=	12060	Lit.
	Total Water Requirement				=	12060	Lit.
				Say		12.00	KL
ii	Commercial-1	Sq.m					
	Population @ 3 Sqm. Per Person for Street Floor	798.633	/	3.00	=	266	Person
	20% Staff / Shopkeepers @ 45 lpcd	53	x	45.00	=	2385	Lit.
	80% visitors @ 15 lpcd	213	x	15.00	=	3195	Lit.
	Total Water Requirement				=	5580	Lit.
				Say		6.00	KL
iii	Commercial-2	Sq.m					
	Population @ 3 Sqm. Per Person for Street Floor	379.39	/	3.00	=	126	Person
	Population @ 6 Sqm. Per Person for Upper Floor	372.686	/	6.00	=	62	Person
	20% Staff / Shopkeepers @ 45 lpcd	38	x	45.00	=	1710	Lit.
	80% visitors @ 15 lpcd	150	x	15.00	=	2250	Lit.
	Total Water Requirement				=	3960	Lit.
				Say		4.00	KL
iv	Commercial-3	Sq.m					
	Population @ 3 Sqm. Per Person for Street Floor	222.625	/	3.00	=	74	Person
	Population @ 6 Sqm. Per Person for Upper Floor	395.815	/	6.00	=	66	Person
	20% Staff / Shopkeepers @ 45 lpcd		x	45.00	=	1260	Lit.



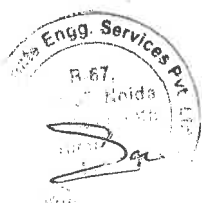
	30% visitors @ 15 lpcd	112	x	15.00		1680	Lit.
	Total Water Requirement				=	2940	Lit.
					Say	3.00	KL
v	Maintenance Staff (Such as Gardener, ESS Staff, Security Guards etc.)				=	180	Person
	Water Requirement 45 Lit. / day	180	x	45	=	8100	Lit.
					Say	8.00	KL
vi	Filter Back Wash L.S.					15.00	KL
					Say	15	KL
vii	Floating Population 10% of Population	3910	x	10%	=	391	Person
	Daily requirement @ 15 lpcd	391	x	15.00	=	5865	Lit.
	Total Water Requirement				=	5865	Lit.
					Say	6.00	KL
	Total Commercial Water Requirement Per Day (i+ii+iii+iv+v+vi+vii)				=	54.00	KL
	Total Commercial Daily Water Requirement				Say (B)	54	KL
B)	Horticulture & Road Side Plantation						
i	Area under Green Area (Sqm.)	5109.968					
	Water Requirement 6.17 Litre/Sqm./day	5109.968	x	6.17	=	31528	Lit.
				Total	=	31528	Lit.
					Say	31.5	KL
ii	Area under road & paved Area (Acre)	3.09					
	Water Requirement 5 KL/Acre/day	3.09	x	5.00	=	15.45	KL
					Say	15.5	KL
	Total Treated Water Requirement (i + ii)				=	47.00	KL
					Say (C)	47	KL
	The demand of Horticulture & Road work will meet from recirculated water after treatment at S.T.P.						



C)	Total Water demand (A+B) 674+54				728	KL
				Say	728.00	KL
	Domestic Water demand					
	65% of (A) + 35% of (B=i+ii+iii+iv+v+vii) + 100% of (B=vi)				466.75	KL
				Say	467.00	KL
	Flushing Water demand					
	35% of (A) + 65% of (B=i+ii+iii+iv+v+vii)				261.25	KL
				Say	261.00	KL
D)	Sewage Treatment Plant Capacity					
	Average Sewerage Contribution Considering 75% of AV domestic water demand & 75% of AV flushing demand				= 546	KL
				Say	550	KLD
E)	Tube wells :-					
	Assuming working hours of Tube Well				16	Hours
	Assuming discharge / hour of each Tube Well				27.00	KL/Hour
	Total domestic water demand				467.00	KL
	No. of Tube wells required = $467 / 16 \times 27$				1.08	Nos.
				Total	1.08	Nos.
				Say	1	Nos.
	It is proposed to provide 2 nos. (1w+1s) Tube well. 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.					



F)	Pumping Machinery for Tube wells :-					
	Gross working head				45	M.
	Average fall in spring level				5.00	M.
	Depression head				5.00	M.
	Friction loss in main + Positive Head				10.00	M.
				Total	65.00	M.
				Say	70	M.
	$BHP = (27000 \times 70 \times 1) / (60 \times 60 \times 75 \times 0.60)$				11.67	HP
G)				Say	12.5	HP
	Under Ground Tank :-					
	Daily Water Requirement				467	KL
	Taking 16 hours storage = $467 \times 16 / 24$				311.33	KL
				Say	320	KL
	Fire Tank provided as per NBC Norms				450	KL
It is proposed to provide an UGT of capacity 770 KL. Having 160 KL for treated water, 160 KL for Raw water and 450 KL for Fire						
H)	Boosting Machinery for Flushing:-					
	Daily Water Requirement (261+47)				308	KL
	Assuming working hours				8	Hours
	By providing one set of pumping at 8 Hrs of pumping.				1	Nos.
	The pumping capacity = $308 / 8$				38.5	KL/Hr
	However, it is proposed to provide			Say	640	LPM
	Gross Working Head :-					
	i) Suction lift				6.0	M.
	ii) Delivery head				5.0	M.
	iii) Friction loss in main & Specials + Positive head				8.0	M.
	iv) Clear head (OHT height)				80.0	M.
	v) Add 10% for wear / tear				9.9	M.
				Total	108.9	M.
				Say	110	M.
	$HP = (640 \times 110) / (60 \times 75 \times 0.60)$				26.07	HP
				Say	27.5	HP
	It is proposed to provide 2 Nos. of motors of 27.5 HP. (1 W + 1 S) sets of 640 LPM discharge at 110 Head for flushing supply					



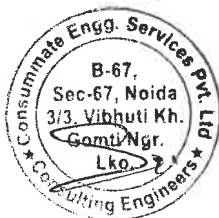
I)	Boosting Machinery for Domestic Water:-					
	Average Water demand				728	KL
	Domestic Water demand				467	KL
				Total	467.0	KL
	Assuming working hours				8	Hours
	By providing one set of pumping at 8 Hrs of pumping.				1	Nos.
	The pumping capacity = $467 / 8$				58.375	KL/Hr
	However, it is proposed to provide				975	LPM
	Gross Working Head :-					
	i) Suction lift				6.0	M.
	ii) Delivery head				5.0	M.
	iii) Friction loss in main & Specials + Positive head				8.0	M.
	iv) Clear head (OHT height)				80.0	M.
	v) Add 10% for wear / tear				9.9	M.
				Total	108.9	M.
				Say	110	M.
	HP = $(975 \times 110) / (60 \times 75 \times 0.60)$				39.72	HP
				Say	40	HP
	It is proposed to provide 2 Nos. of motors of 40 HP. (1 W + 1 S) sets of 975 LPM discharge at 110 M Head for Domestic water supply					
J)	Capacity of Generator Set					
	(i) Booster Machinery (For Domestic Water)	2 (1+1)	No	40 HP	40	HP
	(ii) Tube Well	1	No	12.5 HP	12.5	HP
	(iii) Booster Machinery (For Flushing Water)	2(1+1)	No	27.5 HP	27.5	HP
	(vi) Lighting				8	HP
				Total	88.0	HP
	Total KVA =	$88.0 \times 0.746 \times 1.5 =$			98.47	KVA
				Say	100.0	KVA
	Hence, 100 KVA capacity D.G. Set to be added to provide Standby supply					



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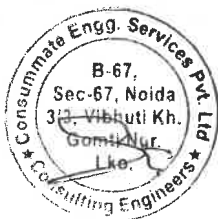
FINAL ABSTRACT OF COST

Sl No		DESCRIPTION		AMOUNT (In Lacs.)
1	Sub Work No.I	Water Supply Scheme	Rs.	248.58
2	Sub Work No.II	Sewerage Scheme	Rs.	138.90
3	Sub Work No.III	Storm Water Drainage.	Rs.	84.35
4	Sub Work No.IV	Road	Rs.	156.00
5	Sub Work No.V	Street Lighting.	Rs.	14.60
6	Sub Work No.VI	Horticulture.	Rs.	6.20
7	Sub Work No.VII	Maintenance Charges for 10 Years including Resurfacing of Roads after Ist 5 year & IInd 5 years of mtc	Rs.	197.69
		TOTAL COST	Rs.	846.32
		Cost / Gross Area (In lacs. / Acre)	Rs.	155.45
				Lacs.



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Sub Work No. I		WATER SUPPLY ABSTRACT OF COST		
Sl No		DESCRIPTION		AMOUNT (In Lacs.)
1	Sub Head No. I	Head Works	Rs.	71.58
2	Sub Head No. II	Pumping Machinery	Rs.	47.25
3	Sub Head No. III	Rising Mains	Rs.	3.60
4	Sub Head No. IV	Distribution System	Rs.	39.55
		TOTAL	Rs.	161.98
		Add 3% contingencies & P E charges	Rs.	4.85
		TOTAL	Rs.	166.83
		Add 49% Departmental, price escalation, unforeseen & adm charges	Rs.	81.75
		TOTAL COST	Rs.	248.58
				Lacs.

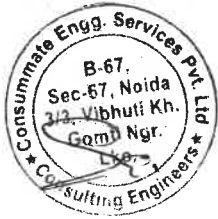


PROJECT - AFFORDABLE HOUSING DEVELOPED BY SIGNATURE GLOBAL AT SECTOR 89(5.444 ACRE), GURUGRAM (HARYANA)						
Sub Work No.I			Water Supply			
Sub Head No. I			Head Works			
Sl No	DESCRIPTION	Qty		Rate		AMOUNT (In Lacs.)
1	Boring and installing 200 mm i/d tubewell with reverse rotary rig complete with pipe and strainer to depth of about 50 m in all respect 1 No. @ Rs. 10,00,000/- each				Rs.	10.00
2	Provision for Rising Main connecting Bore well with Water main and Bye pass arrangement					
	100 mm dia. D.I. Pipe	30	@	1250	Rs.	0.38
3	Providing Boosting arrangement by pumps (40 HP) (capacity 975 lpm at 110 M head, 2 nos. @ Rs. 400000/- each (For UGT) complete with Panel, Foundation etc.				Rs.	8.00
4	Provision for carriage of materials and other unforeseen items				Rs.	1.00
5	Construction of U.G. tanks of total cap. (770 KL) including 450 KL for Fire, 320 KL for Domestic @ Rs. 6000/ KL				Rs.	46.2
6	Provision for borewell chamber of size 1.5 x 1.5 x 1.5 m For Housing borewell 1 No.			L.S.	Rs.	1.00
7	Construction of boosting chamber of suitable size			L.S.	Rs.	5.00
	TOTAL				Rs.	71.58
						Lacs.



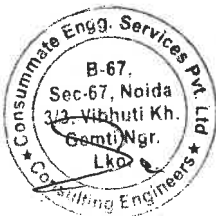
Material statement of Borewell Rising Mains

Sl No	Name of Line	Length of 100 mm dia. Pipe	Total Length of Pipe (M.)
1	Borewell No. T1 to UGT	30	30
TOTAL			30



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Sub Work No. I		Water Supply	
Sub Head No. II		Pumping Machinery	
Sl No	DESCRIPTION		AMOUNT (In Lacs.)
1	Providing and installing electricity driven Submersible pumping set capable of delivery about 27 KL / Hr. of water against a total Head of 70 M complete with motor and other accessories, 1 No @ 2,00,000/-	Rs.	2.00
2	Provision for diesel engine genset each for standby arrangements for T.W. of booster pump complete with gear head arrangement. - 1 No. 100 KVA	Rs.	12.00
3	Providing for chlorination plant complete. 1 No @ 1,00,000/-	Rs.	1.00
4	Provision for making foundations and erection of Pumping machinery.	Rs.	1.50
5	Provision for pipes, valves and specials inside boosting chamber - 1 Set (L.S.)	Rs.	3.0
6	Provision for electric services connection including electric fitting for tube wells & boosting chamber etc. 1 set (L.S.) along with transformer	Rs.	2.50
7	Provision for carriage of material and unforeseen item. L.S.	Rs.	0.75
8	Providing and installing fire pump set.	Rs.	24.50
	TOTAL	Rs.	47.25
			Lacs.



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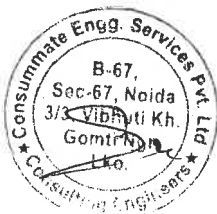
Sub Work No. I					Water Supply	
Sub Head No. III					Rising Mains from HUDA	
Sl No	DESCRIPTION	Qty		Rate		AMOUNT (In Lacs.)
1	Providing, laying, jointing & testing 100 mm dia.D.I pipe lines including cost of excavation complete in all respects.	98	@	1475	Rs.	1.44
2	Providing and fixing 100 mm dia. sluice valves including cost of surface boxes and masonry chambers etc., complete in all respects.	1	@	12000	Rs.	0.12
3	Providing and Fixing indicating plates for sluice valves, air valves and fire hydrants.	1	@	2000	Rs.	0.02
4	Provision for carriage of material and other unforeseen item. L.S.				Rs.	0.50
5	Provision for making connection with HUDA main (L.S.) 1 job				Rs.	1.00
6	Provision for cutting road, making good the same L.S.				Rs.	0.50
TOTAL					Rs.	3.58
SAY					Rs.	3.60
						Lacs.

Material statement of HUDA Rising Mains				
Sl No	Name of Line	Length of 100 mm dia. Pipe		Total Length of Pipe(M.)
1	Municipal Mains to UGT	98		98
TOTAL				98



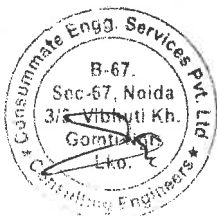
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Sub Work No. I						Water Supply Dom.+Flushing
Sub Head No. IV						Distribution system
SI No	DESCRIPTION	Qty		Rate		AMOUNT (In Lacs.)
1	Providing, laying, jointing & testing D.I. pipes including cost of excavation complete as per ISI (Dom. + Flu.)					
	100 mm I/D (358+290)	648	@	1475	Rs.	9.55
2	Providing, laying, jointing and testing. PVC pipe line confirming to I.S 4985 including cost of excavation etc., complete in all respects					
	20 mm O/D	20	@	200	Rs.	0.04
	65 mm O/D	526	@	750	Rs.	3.95
3	Providing and Fixing sluice valves including cost of brick masonry chamber complete in all respect.					
	100 mm I/D	6	@	12000	Rs.	0.72
4	Providing and Fixing Fire Hydrant complete with masonry chamber with Fire ring for firefighting line.			L.S.	Rs.	20.00
5	Providing and Fixing air valves and scour valves including cost of brick masonry chamber complete.	2	@	10000	Rs.	0.20
6	Providing and Fixing indicating plates for valves	8	@	1000	Rs.	0.08
7	Provision for carriage of material & other foreseen items etc., (L.S). 1 jobs				Rs.	2.00
8	Provision for cutting road and making good the same (L.S.) 1 jobs				Rs.	1.00
9	Provision for Irrigation hydrants 20 / 25 mm				Rs.	2.00
	TOTAL				Rs.	39.54
	SAY				Rs.	39.55
						Lacs.



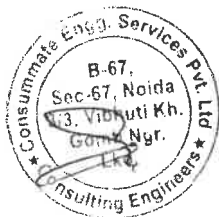
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Sub Work No. II		Sewerage Scheme				
SI No	DESCRIPTION	Qty		Rate		AMOUNT (In Lacs.)
1	Providing, jointing, cutting and testing. S.W pipe class 'A' and lowering into trenches including cost of excavation, bed concrete, cost of manhole etc., complete in all respects.					
	200 mm I/D Avg. depth upto 2.0 M	414	@	1600	Rs.	6.62
	250 mm I/D Avg. depth upto 3.0M	134	@	1900	Rs.	2.54
	300 mm I/D Avg. depth upto 3.0M	45	@	2400	Rs.	1.08
2	Provision for lighting and watching L.S				Rs.	0.50
3	Provision for timbering and shoring L.S.				Rs.	1.00
4	Provision for temporary connection with HUDA On master road L.S.				Rs.	1.00
5	Providing Boosting arrangement by pumps for Flushing water supply (27.5 HP) (capacity 640 lpm at 110 M head, 2 nos. @ Rs. 250000/- each (For UGT) complete with Panel, Foundation etc.				Rs.	5.00
6	Provision for making STP @ 550 KLD up to tertiary level.				Rs.	68.75
7	Provision for carriage of material & other foreseen items etc., (L.S). 1 job				Rs.	1.00
8	Provision for cutting road, making good the same in original condition (L.S.)				Rs.	1.00
9	Provision for vent pipe as per requirement (L.S.)				Rs.	2.00
	TOTAL				Rs.	90.49
	Add 3% contingencies & P E charges				Rs.	2.71
	TOTAL				Rs.	93.20
	Add 49% Departmental, price escalation, unforeseen & adm charges				Rs.	45.67
	TOTAL				Rs.	138.87
	SAY				Rs.	138.90
						Lacs.



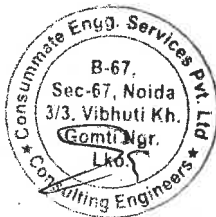
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Sub Work No. III					Drainage Scheme RCC Main Pipe Drain	
Sl No	DESCRIPTION	Qty		Rate		AMOUNT (In Lacs.)
1	Providing, lowering, laying and jointing R.C.C NP-3 pipes and specials with cement joints in trenches including manholes, chambers etc., excavation, back filling and disposal of surplus earth complete in all respects.					
	400 mm I/D Avg. depth upto 2.0 M.	925	@	2700	Rs.	24.97
2	Provision for Road Gullies L.S. with pipe connection				Rs.	1.50
3	Provision for lighting and watching L.S.				Rs.	0.50
4	Provision for timbering and shoring L.S.				Rs.	1.00
5	Provision for carriage of material & other foreseen items etc. the same (L.S.) 1 jobs				Rs.	2.00
6	Provision for Rain water harvesting arrangements 6 Nos. @ 3.0 lakh/each				Rs.	18.00
7	Provision for connection with HUDA main on master road. L.S.				Rs.	1.00
8	Provision for temporary disposal arrangement till HUDA services are provided (L.S.)				Rs.	5.00
9	Provision for cutting road, making good the same in original condition (L.S.)				Rs.	1.00
	TOTAL				Rs.	54.97
	Add 3% contingencies & P E charges				Rs.	1.64
	TOTAL				Rs.	56.61
	Add 49% Departmental, price escalation, unforeseen & adm charges				Rs.	27.74
	TOTAL				Rs.	84.35
	SAY				Rs.	84.35
						Lacs.



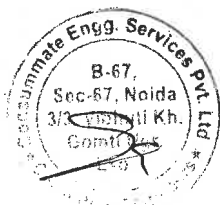
**PROJECT - AFFORDABLE HOUSING DEVELOPED BY SIGNATURE GLOBAL AT
SECTOR 89 (5.444 ACRE), GURUGRAM (HARYANA)**

Sub Work No. IV		Roads Work		
	Width of Road	Length of Road (in Mtrs.)	Metalled Width (Mtrs.)	Area in Sqm.
	A	B	C	B x C
	6.0 M Wide	990	6.0	5940
				5940
			Add 10% curves	594.0
			Total Area	6534
			Say	6540
				Sqm.
	Total Length	990		
	Add 10% curves	99		
	Total Length	1089		
	Say	1090		
		Mts.		



**PROJECT: AFFORDABLE HOUSING DEVELOPED BY SIGNATURE GLOBAL AT
SECTOR 89 (5.444 ACRE), GURUGRAM (HARYANA)**

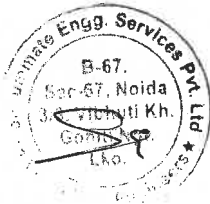
Sl No	DESCRIPTION	Qty		Rate		AMOUNT (In Lacs.)
1	Provision for leveling - earth filling / cutting as per site conditions. (In Acre)	5.444	@	150000	Rs.	8.16
2	Construction of road of hardly by providing: Provision for Granular sub base 200 mm, 250 mm thick stone aggregate, 50 mm thick B.M. 40 mm thick pre mix carpet with seal coat	6540	@	1200	Rs.	78.48
3	Provision for Kerbs & channels of CC 1:2:4	1090	@	600	Rs.	6.54
4	Provision of Guide map & other unforeseen & indicator boards L.S				Rs.	0.50
5	Provision for traffic lights arrangement (L.S.)				Rs.	1.00
6	Provision for carriage of material & other foreseen items etc. the same (L.S.) 1 jobs				Rs.	2.00
6	Provision for making approach to each block (L.S.) 1 jobs				Rs.	5.00
	TOTAL				Rs.	101.68
	Add 3% contingencies & P E charges				Rs.	3.05
	TOTAL				Rs.	104.73
	Add 49% Departmental, price escalation, unforeseen & adm charges				Rs.	51.31
	TOTAL				Rs.	156.04
	SAY				Rs.	156.00
						Lacs.



**PROJECT - AFFORDABLE HOUSING DEVELOPED BY SIGNATURE GLOBAL AT
SECTOR 89 (5.444 ACRE), GURUGRAM (HARYANA)**

Estimate for Provision of Street Lighting

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 with LED.					
	Area = 5.444 Acre	5.444	@	175000	Rs.	9.52
	TOTAL				Rs.	9.52
	Add 3% contingencies & P E charges				Rs.	0.28
	TOTAL				Rs.	9.80
	Add 49% Departmental, price escalation, unforeseen & adm charges				Rs.	4.80
	TOTAL				Rs.	14.60
	SAY				Rs.	14.60
						Lacs.



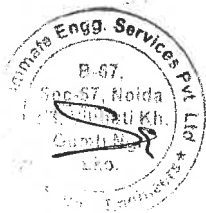
**PROJECT - AFFORDABLE HOUSING DEVELOPED BY SIGNATURE GLOBAL
AT SECTOR 89 (5.444 ACRE), GURUGRAM (HARYANA)**

Sub Work No. VI					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 for 30 days till the grass forms a thick lawn, free from weeds and fit for moving in rows 7.50 cm. apart in either direction, including for hedges and grills and barred wire fencing around park and green					
	Area = 5109.968 sq.m. or 1.262 Acres	1.262	@	150000	Rs.	1.89
2	Providing & Planting of trees with tree guards on roads at 12 m intervals					
	Total Road Length (M.)	990				
	Trees @ 12 M. c/c	83				
	Say (2x83) = 166	166				
	Cost of One Tree :-					
	Excavation (Rs.) 60/-					
	Manure (Rs.) 90/-					
	Tree Plants (Rs.) 150/-					
	Tree Guards (Rs.) 1000/-					
	Total Cost (each)			1300		
	Cost of Total trees	166	@	1300	Rs.	2.15
	TOTAL				Rs.	4.04
	Add 3% contingencies & P E charges				Rs.	0.12
	TOTAL				Rs.	4.16
	Add 49% Departmental, price escalation, unforeseen & adm charges				Rs.	2.03
	TOTAL				Rs.	6.19
	SAY				Rs.	6.20
						Lacs.

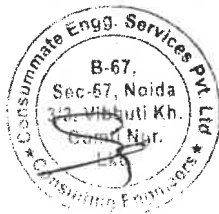


**PROJECT - AFFORDABLE HOUSING DEVELOPED BY SIGNATURE GLOBAL AT
SECTOR 89 (5.444 ACRE), GURUGRAM (HARYANA)**

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 for 10 years completion.					
	Area = 5.444 Acre	5.444	@	750000	Rs.	40.83
2	Provision for resurfacing of roads after first five years of maintenance one layer of 100mm thick WBM compacted to 75 mm thick with 25mm thick premix carpet with seal coat. (Sqm)	6540	@	600	Rs.	39.24
3	Provision for resurfacing of roads after 10 years of Mtc. i.e. 25mm thick premix carpet with seal coat with mechanical paver. (Sqm)	6540	@	750	Rs.	48.75
	TOTAL				Rs.	128.82
	Add 3% contingencies & P E charges				Rs.	3.86
	TOTAL				Rs.	132.68
	Add 49% Departmental, price escalation, unforeseen & adm charges				Rs.	65.01
	TOTAL				Rs.	197.69
						Lacs.



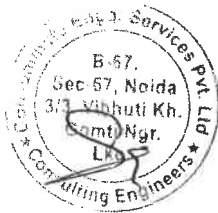
PROJECT - SIGNATURE PROXIMA 1 (5.444 ACRE) AT SECTOR 89, GURUGRAM			
RISING MAIN (FROM MUNICIPAL WATER TO UGT)			
S. No.	Node		80 mm dia.
	From	To	
	FOR UGT		
1	M01	M02	55
2	M02	M03	15
3	M03	M04	25
4	M04	UGT	5
TOTAL LENGTH			100



PROJECT - SIGNATURE PROXIMA 1 (5.444 ACRE) AT SECTOR 89, GURUGRAM							
DOMESTIC WATER CALCULATION SHEET							
S. No.	Node		40mm dia.	50mm dia.	65 mm dia.	80 mm dia.	100 mm dia.
	From	To					
	UGT						
1	D1	D2					5
2	D2	D3					35
3	D3	D4				20	
4	D4	D5			28		
5	D5	D5A			30		
6	D2	D6			20		
7	D6	D7			28		
8	D7	D8			25		
9	D8	D9			59		
10	D9	D9A			20		
TOTAL LENGTH			0	0	210	20	40
	UGT						
1	Da1	Da2			5		
2	Da2	Da3	30				
3	Da3	Da4	60				
4	Da2	Da5			20		
5	Da5	Da6			30		
6	Da6	Da7		25			
7	Da7	Da8		35			
TOTAL LENGTH			90	60	55	0	0



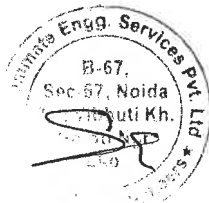
PROJECT - SIGNATURE PROXIMA 1 (5.444 ACRE) AT SECTOR 89, GURUGRAM							
FLUSHING WATER CALCULATION SHEET							
S. No.	Node		Pipe Length (M.)				
	From	To	25 mm dia.	40 mm dia.	50 mm dia.	65 mm dia.	80 mm dia.
1	F1	F2					15
2	F2	F3					38
3	F3	F4					38
4	F4	F5					34
5	F5	F6					20
6	F6	F7					55
7	F7	F8				20	
8	F8	F9			28		
9	F9	F9a			32		
TOTAL LENGTH			0	0	60	20	200
1	Fa1	Fa2		15			
2	Fa2	Fa3		38			
3	Fa3	Fa4		35			
4	Fa4	Fa5		32			
5	Fa5	Fa6	20				
6	Fa6	Fa7	50				
7	Fa7	Fa8	65				
TOTAL LENGTH			135	120	0	0	0



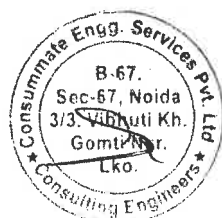
PROJECT - SIGNATURE PROXIMA 1 (5.444 ACRE) AT SECTOR 89, GURUGRAM				
IRRIGATION WATER CALCULATION SHEET				
S. No.	Node		Pipe Length (M.)	
	From	To	50 mm dia.	80 mm dia.
1	R1	R2		18
2	R2	R3		50
3	R3	R4		15
4	R4	R5		85
5	R5	R5A	35	
6	R5	R8		65
7	R8	R9		75
8	R9	R10		40
9	R10	R11		40
10	R11	R12		55
11	R12	R13		20
12	R13	R14		5
13	R14	R4		35
14	R8	R7	32	
15	R7	R6	47	
16	R14	R15		48
17	R15	R16		55
18	R16	R17		44
19	R17	R18	31	
20	R18	R19	25	
TOTAL LENGTH			170	650



PROJECT - SIGNATURE PROXIMA 1 (5.444 ACRE) AT SECTOR 89, GURUGRAM				
SEWERAGE CALCULATION SHEET				
S. No.	Node		Pipe Length (M.)	
	From	To	200 mm dia.	250 mm dia.
1	S1	S2	35	
2	S2	S4	11	
3	S3	S4	20	
4	S4	S5	34	
5	S5	S6	21	
6	S6	S7		42
7	S7	S8		14
8	S8	S9		24
9	S9	S11		47
10	S10	S11	32	
11	S11	S13		14
12	S12	S13	34	
13	S13	S18		26
14	S14	S15	53	
15	S15	S16	43	
16	S16	S18	11	
17	S17	S18	36	
18	S18	S19		44
19	S19	STP		5
TOTAL LENGTH			330	216



PROJECT - SIGNATURE PROXIMA 1 (5.444 ACRE) AT SECTOR 89, GURUGRAM			
DRAINAGE CALCULATION SHEET			
S. No.	Node		Pipe Length (M.)
	From	To	400 mm dia.
1	D1	D2	28
2	D2	D3	30
3	D3	D6	37
4	D4	D5	17
5	D5	D6	31
6	D6	D9	38
7	D7	D8	30
8	D8	D9	13
9	D9	D10	29
10	D10	D12	40
11	D11	D12	24
12	D12	D14	47
13	D13	D14	19
14	D14	OUT-1	10
15	D15	D16	54
16	D16	D17	26
17	D17	D18	13
18	D18	D19	27
19	D19	D22	41
20	D20	D21	20
21	D21	D22	9
22	D22	D26	15
23	D23	D24	26
24	D24	D25	33
25	D25	D26	30
26	D26	D27	42
27	D27	D31	37
28	D28	D29	45
29	D29	D30	45
30	D30	D31	34
31	D31	OUT-2	10
TOTAL LENGTH			900



PROJECT - SIGNATURE PROXIMA 1 (5.444 ACRE) AT SECTOR 89, GURUGRAM			
ROAD NETWORK			
S.No.	Name of Road		6.0 M. Wide Road
	From	To	
			(m)
i	1	2	72
ii	2	3	45
iii	3	4	56
iv	4	1	40
v	1	5	27
vi	5	6	18
vii	6	7	47
viii	7	8	27
ix	8	9	80
x	9	10	22
xi	9	11	32
xii	10	12	27
xiii	11	12	34
xiv	12	13	22
xv	13	14	47
xvi	14	15	42
xvii	14	16	38
xviii	15	19	36
xix	16	17	53
xx	7	20	27
xxi	17	18	18
xxii	18	19	23
xxiii	19	20	12
Total Length			845

