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PROPOSED REVISED ESTIMATE FOR PROVIDING INTERNAL DEVELOPMENTS WORKS IN COMMERCIAL PLOTS (SCO) OVER AN AREA MEASURING 3.15625 (2.98125+0.175) ACRES IN SECTOR – 73, GURUGRAM, MANESAR, URBAN COMPLEX.

DEVELOPED BY

M/s DLF HOME DEVELOPERS LTD.

GSP DESIGN CONSULTANT New Delhi

PROPOSED REVISED ESTIMATE FOR PROVIDING INTERNAL DEVELOPMENTS WORKS IN COMMERCIAL PLOTS (SCO) OVER AN AREA MEASURING 3.15625 ACRES (2.98125+0.175) IN SECTOR – 73, GURUGRAM, MANESAR, URBAN COMPLEX

DESIGN REPORT:

proposed project is for Plotted Commercial (SCO) at Gurgaon. Everyone knows the fact why Gurgaon is developing so fast, the main reason behind it is that Gurgaon is hardly 25 to 30 KM away from Delhi. Being in the National Capital Region the Gurgaon town has fast developing tendency and potential, further Haryana Govt. has also started sharing the growing industrial/commercial load of Delhi and Faridabad. Keeping in view of the above facts Haryana Govt, has decided to establish various sectors for Institutional, Group Housing, Mall Multiplex and Commercial Complex buildings in Gurgaon. The above-mentioned commercial colony project is being developed by DLF. The client is submitting the same for your reference and approval. This report and estimate are for area measuring approximately 3.15625acres.

The Total Services have been designed with a view to Integrate any further extension of area with the presently licensed area under development and with master / external services to be laid by HSVP/GMDA, with the salient features given as under:

Previously this estimate was sanctioned for 2.98125 Acres vide memo no. LC-4719/JE (DS)/2022/ 34091 dated 14.11.2022 for licenced area measuring 2.98125 acres (Licence no. 139 of 2022 dated 09.09.2022) and now additional license no. 237 of 2023 dated 03.11.2023 has been approved for setting up of Commercial Plotted (SCO) Colony on an additional area of 0.175 acres to already licenced area. The total area of Commercial Plotted (SCO) Colony layout plan at Sector 73, Gurugram is now 3.15625 (2.98125 + 0.175) acres. There are minor changes in the layout shown with Yellow colour as additional land and 2nos. SCO Plots shown in Pink color in the layout.

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1. WATER SUPPLY SCHEME:

i) SOURCE:

The source of water supply shall be HSVP/GMDA water supply connection, water supply shall be through, and this water is potable. It has been proposed to construct underground water in this area is potable and fit for domestic & drinking purposes and at location as per drawing for the purpose of domestic and fire protection. It has been proposed to construct underground tanks of capacity as per attached details and at location for domestic purposes. The underground tanks will be fed from HSVP/GMDA supply, from there water will be pumped each plot using hydro-pneumatics pumps.

It has been proposed a centralized UGT of the total required capacity for domestic 160 KLD purpose. Provision of Firefighting static tank also been provided adjacent to Dom. UGT as recommended in the 'Manual on Water supply & Water Treatment' published by CPHEEO, Ministry of Urban Development, GOI.

ii) DESIGN:

The Water supply distribution Scheme has been designed for a total ultimate population of 3257 persons approx., for the Commercial Plots. The rate of water supply per head per day has been taken assumed as 45 liter per head per day for staff & 15 liter per head per day for visitor, D.I (Ductile Iron) pipelines have been designed on 'Hazen-William formula' with C Value of 140 & peak factor of 3.0 is considered as per the Manual & guidelines. Minimum pipe size of 100mm Dia is taken.

iii) PUMPING MACHINERY:

It has been proposed the municipal supply shall be stored in the UGT as referred to in the plan of the required capacity. Through a Separate pumping system, the water shall be supplied to individual plots. Provision of pumping set as described with standby of equal capacity pumps have been considered for entire project, Provision of DG set of required capacity also been made for essential & emergency load as power-back up.

2. SEWERAGE SCHEME:

i) DESIGN OF SEWERS:

The proposed sewers have been designed by using "Manning's Formula' with running Half-full of peak flow, i.e. 3 x DWF of Domestic Water demand. It has been considered

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that about 80% of the Domestic Water supply shall find its way into the Sewerage system.

SW Pipe/ HDPE DWC Pipe is considered in sewerage system, and these lines are laid in such a way that the required slope (gradients) to minimum required self-cleansing velocity is maintained. The Hydraulic Design Sheets have been prepared and attached along with the Estimate.

ii) STP & Re-cycling of Treated Effluent:

It is also proposed to install 1 no STP of required Cap. 75 KLD at appropriate location in the Project and Treated effluent from this STP shall be used in Horticulture/ Washing, etc. Surplus Treated effluent is taken to discharge into existing HSVP/GMDA Sewerage System.

Provision of uPVC/ HDPE Distribution lines are taken for flushing purpose of plots Horticulture from this STP Treated Effluent Tank. The Estimate is prepared accordingly.

3. STORM WATER DRAINAGE SCHEME:

It is proposed to lay underground piped storm water drainage system with RCC NP-2 pipes. In order to improve the ground water table/sub soil aquifer, It is proposed to harvest the storm run-off in to Rain Water Harvesting Structures which are proposed with de-silting chambers for Pre-Filtration along the SWD System, so that maximum rain water is harvested into the sub-soil aquifer and the surplus/ overflow run–off shall be taken & connected to existing HSVP/GMDA S W Drain System. This will also minimize pumping requirements of storm run-off from the colony to HSVP/GMDA SW Drain. For design of piped SWD system, the intensity of rainfall has been taken as **6.25mm per hour** and SWD pipes have been designed as running – full of Manning 's formula. A minimum size of 400 mm I /d RCC pipe has been proposed. The estimate has been framed accordingly. The Hydraulic Design Sheets have been prepared and attached along with the Estimate.

IV. ROADS:

Roads have been proposed in the colony as per an approved layout plan of the colony with road levels & road gradients designed to achieve smooth flow of traffic to & fro as well.

Necessary provisions have been made in the estimate accordingly as per revised specifications for roads by HSVP/GMDA.

VI. HORTICULTURE:

Estimate includes the necessary provisions for plantation, landscaping, signage's etc.

VII. SPECIFICATIONS:

The work will be carried out in accordance with the standard specifications as laid down by HSVP/GMDA

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VIII. RATES:

The estimate has been prepared on the rates as per recently approved estimates by HSVP/GMDA.

IX. COST:

The total cost of the "Internal Development Works" including cost of all services works out to **Rs. 570.61 Lacs** (@ Rs.180.78 Lacs / acre) including 3 % contingencies & PE charges, and 49% administrative, price escalation & other unforeseen charges.

Please note that this estimate is based on the information available to us at this stage. Any changes or additional requirements may impact on the estimate at the time of Completion certificate.

For **M/S DLF HOME DEVELOPERS LTD.**

Authorized signatory

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	DESIGN CALCULATION		For COMMERCIAL PLOTS (SCO) OVER AN AREA MEASURING 3.15625 ACRES IN SECTOR – 73, GURUGRAM,				
	Daily water requirement						
		Total Plots	Total FAR	Population	Total Population	Water demand / day/ person (in liters)	Total Water Demand (in KLD)
	ind Floor						
	Staff		4393.66	10 % of 3Sqm/Person	146	45	6.59
	Visitors		4393.66	90 % of 3Sqm/Person	1318	15	19.77
	1st floor						
	Staff		3609.39	10 % of 6Sqm/Person	60	45	2.71
	Visitors	42	3609.39	90 % of 6Sqm/Person	541	15	8.12
	Typ. Floor (2nd,3rd & 4th floor)						
	Staff		10828.1775	10Sqm/Person	1083	45	48.73
	Visitors		10828.1775	10% of total staff of offices	108	15	1.62
	Total	**42**	**18831.23**		**3257**		**87.54**
1	**Therefore Total Populations**				**3257**	**Nos**	
	Total daily Water requirement for 45 liter per head per day for staff & 15 liter per head per day for visitor,		**@**		**87.54**	**KLD**	
	Total 1 =				**87.54**	**KLD**	
2	Area under Parks				0.47	Acre	
	Daily water requirement		@		25.00	kl/acre/day	
	Therefore daily water requirement				11.75	kl/day	
	Total 2 =				**11.75**	**KL**	

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I	**Total daily requirement**						
a)	For (1)				87.54	KL	
b)	Area under Parks				11.75	KL	
	Total Daily Requirement				**99.29**	**KL**	
	Total Domestic Water requirement@25 liter for staff		32235.74		32.24	KLD	
	Total Domestic Water requirement@5 liter for visitors		9838.94325		9.84	KLD	
			Say Total Domestic water demand =		**42.07**	**KLD**	
	al Flushing Water requirement@20 liter for staff		25788.59		25.79	KLD	
	Total Flushing Water requirement@10 liter for visitors		19677.8865		19.68	**KLD**	**83.33**
			Say Total Flushing water demand =		**45.47**	**KLD**	
			Total Recycled water demand =		**57.22**	**KLD**	
II	**Underground Tank**						
a	Daily requirement for domestic use and other except fire fighting		=		**42.07**	KLD	
b	Capacity of under ground tank storage except fire fighting		=		42.07	KLD	
		Say	=		**60.00**	KLD	
c	Fire Tank Capacity as / NBC Code 100 sqrt(P) =100 sqrt (3.126)x1/3		=		60.16	KLD	
		Say	=		**100.00**	KLD	
		Total (b+c)			**160.00**	**KLD**	
				Say	**160.00**	**KLD**	
	It is proposed to provide 1 no. under ground tank of capacity **160 KLD** which also includes **100 KL** capacity for **fire fighting**.						
	Tank will have compartments, one for fire, one for domestic use. The water first enters the fire compartment, then over flows to the domestic water use compartment so						
	It is proposed to provide under ground tank of following capacity						
a)	Capacity of Fire tank-01				**100.00**	KLD	
b)	Capacity of Domestic tank- (including 1 No. x 30KL Raw + 1 No. x 30 KL Domestic Tank, Total = 60 KLD)				**60.00**	KLD	
c)	Flushing Tank (Horticulture + Flushing), THE FLUSHING TANK IN STP				**57.22**	KLD	
				Say	**60.00**	**KLD**	
III	**BOOSTING MACHINERY (Domestic water)**						
	UG. Tank						
	Daily requirement for domestic use			=	42.07	KLD	
	Assuming 8 hours running, 2 pumps (1 Working +1 standby)						
	Discharge/hour			=	5.26	KL/HR	

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				=	87.66	LPM	
				Or Say	100.00	LPM	Each
	Head of pump						
i)	Suction lifts			=	4.00	m	
ii)	Friction loss in M<main & specials			=	4.00	m	
iii)	Clear head			=	15.00	m	
iv)	Residual head			=	20.00	m	
				=	43.00	m	
	Say			=	45.00	m	
	of motor (100*45*1)/(60*75*0.6)			=	1.67	HP	
				Or Say	2.00	HP	Each
IV	**Gen Set**	Nos.	HP				
	Pumps for Domestic Water Supply	1	2.0	=		2	HP
	Pumps for Flushing Water Supply	1	2.0	=		2	HP
	Lighting(LS)			=		0.5	HP
				Total		4.5	HP
	or					5.0	KVA
			Say			**5**	KVA
I	**Sewage Treatment Plant capacity**						
	Total water requirement/day				87.54	Litres	
	Sewage flow will be 80% of total load				70.03	Litres	
					70.03	KLD	
	STP Capacity (Or Say)			**Say**	**75.00**	**KLD**	
VII	**STP Treated Tank**						
	Daily requirement for flushing & horticulture		=		**57.22**	KLD	
	Flushing Tank (Horticulture + Flushing), THE FLUSHING TANK IN STP		=		57.22	KLD	
		Say	=		**60.00**	KLD	
VIII	**BOOSTING MACHINERY (Flushing water)**						
	Near/in STP						
	Daily requirement for Flushing & Horticulture use			=	57.22	KLD	
	Assuming 8 hours running, 2 pumps (1 Working +1 standby)						
	Discharge/hour			=	7.15	KL/HR	

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					119.20	LPM	
				Or Say	120.00	LPM	Each
	Head of pump						
i)	Suction lifts			=	4.00	m	
ii)	Friction loss in M<main & specials			=	4.00	m	
iii)	Clear head			=	15.00	m	
iv)	Residual head			=	20.00	m	
				=	43.00	m	
	Say			=	45.00	m	
	of motor (120*45)/(60*75*0.6)			=	2.00	HP	
				Or Say	2.00	HP	
IX	**HSVP Panchkula Main Water Supply Calculation**						
i)	Required Fresh Water per Day		42.07	KL			
ii)	Supply Duration		8	Hrs			
iii)	Line Flow Rate		0.088	(Cum/min)			
iv)	Flow Velocity.		1.2	(m/sec)			
v)	Dia. Of pipe		39	mm			
vi)	Proposed line dia.		100	mm			
vii)	Length of line		540	Mtr			
viii)	Friction Head Loss mtr/1000mtr		0.86	Mtr			
ix)	Total Head Loss		0.47	Mtr			

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REVISED ESTIMATE FOR PROVIDING INTERNAL DEVELOPMENTS WORKS IN COMMERCIAL PLOTS (SCO) OVER AN AREA MEASURING 3.15625 ACRES IN SECTOR – 73, GURUGRAM

FINAL ABSTRACT OF COST	Amount (Lacs.) For 3.15625 Acres
Sub Work 1- Water Supply	97.12
Sub Work 2- Sewerage	43.05
Sub Work 3- Storm water drainage	54.75
Sub Work 4- Roads	199.75
Sub Work 5- Street Lighting	12.11
Sub Work 6- Horticulture	6.56
Sub Work 7- Maintenance of services for 10 years including resurfacing of roads after 1st 5 years & II. Phase i.e. 10 years maintenance (as per HSVP/GMDA norms)	157.26
TOTAL	570.60
COST PER ACRE (570.60/ 3.15625)	180.79

For M/S DLF HOME DEVELOPERS LTD.

Authorized Signatory

Executive Engineer
HSVP Division No. V,
Gurugram

Superintending Engineer,
HSVP Circle-I, Gurugram

Checked subject to Comments
In forwarding letter No. 133561
Dt. 20/05/2024...and notes
Attached with the estimate

Executive Engineer (M)
for Chief Engineer-I
HSVP, Panchkula

Director
Town & Country Planning
Haryana, Chandigarh

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WATER SUPPLY HEAD(Abstract of cost Sub-Work-I)	Amount (Lacs.)
	For 3.15625 Acres
Sub Head 1- Head Works	27.10
Sub Head 2- Pumping Machinery	9.35
Sub Head 3- Distribution System Domestic water	16.28
Sub Head 4- Flushing and Irrigation scheme	10.55
Total	63.28
Add 3% contingencies & PE charges.	1.90
TOTAL	65.18
Add 49% Deptt.,price escalation unforeseen and administrator charges.	31.94
TOTAL	97.12
(CO to final abstract of cost)	

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	Sub Head I				Water Supply Head Works Rs.(lakhs)
S. No.	Description	Unit	Qty	Rate	Amount
1	Construction of boosting chambers of suitable size along with under ground tank pumping machinery and generating set etc. complete in all respects.				
	Details of boosting station				
i)	construction of boosting chamber			LS	4.00
ii)	construction of UG Tank Including Fire Tank (60 KL+ 100 KL)	KL.	160KL	5500.00	8.80
iii)	The construction charges of Flushing water Tank near STP	KL.	60.00KL	5500.00	3.30
2	Provision for carriage of material and other unforeseen items .		LS		1.00
5	Provision for boundary wall around the STP sites & water works site,cost of foothpath lawn ets.			LS	2.50
6	Provision for facilities staff Qtrs.for Maintenance staff.			LS	7.50
	(C.O. to abstract of cost of Sub-work No.I)			**TOTAL**	**27.10**
				SAY	**27.10**

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	Sub Work I				Water Supply
	Sub Head No. II				Pumping Machinery
					Amount (Rs.)
S. No.	Description	Unit	Qty	Rate	(in Lakhs)
1	Provision for cheap pressure type chlorination plant complete.	Nos.	1	L.S	1.00
2	Provision for making foundations & erection of pumping machinery.			LS	1.00
3	Provision for pipes, valves & specials inside the pump chamber.			LS	1.50
4	Provision for electric services connection including electric fittings for tubewells chambers complete. Including cost of trasfermer.			LS	2.50
5	Providing and installing centrifugal boosting Domestic pumping set, capable of delivering **100 LPM** of water at **45 M** head complete in all respects. **(2HP)**				
	(1 working + 1 standby)	Nos.	2	40000.00	0.80
6	Providing and installing centrifugal boosting Flushing & irrigation pumping set, capable of delivering **120 LPM** of water at **45 M** head complete in all respects. **(2HP)**				
	(1 working + 1 standby)	Nos.	2	40000.00	0.80
7	Provision of diesel generator set of each for standby arrangements for booster pump complete with gear head arrangements of following capacities(for all machinery)				
		5 per KVA	1	15000 per KVA	0.75
8	Provision for carriage of materials and other unforeseen items.			LS	1.00
	(C.O. to abstract of cost of Sub-work No.I)			**TOTAL**	**9.35**
				SAY	**9.35**

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	Sub Work I				Water Supply
	Sub Head No. III				Distribution System/Rising Main
S. No.	Description	Unit	Qty	Rate	IN LACS
1	Providing, laying, jointing & testing D.I. K-7 pipes including cost of excavation complete as per ISI marked. (For Domestic water supply line)				
i)	100 mm dia	M	560	1460.00	8.18
2	Providing and fixing sluice valves including cost brick masonary chambers complete in all respects.				
i)	100 mm i/d	Nos.	5	12000.00	0.60
ii)	150 mm i/d	Nos.			0.00
3	Providing, fixing and testing butterfly valves including cost of valve chambers complete in all respects.				
i)	100 mm i/d	Nos.	5	10000.00	0.50
4	Providing and fixing 100 mm dia NRV including cost of valve chambers complete in all respects.				
ii)	100 mmm dia	Nos.	2	15000.00	0.30
5	Providing and fixing air valves and scour valves including cost of valve chambers complete in all respects.	Nos.	2	10000.00	0.20
6	Providing and fixing indicating plates for sluice valve, air valve etc.	Nos.	7	2000.00	0.14
8	Provision for carriage of material & other unfoeseen items			LS	1.00
9	Provision for cutting the roads and making to its original condition			LS	1.00
10	Providing and fixing fire hydrants complete with masonary chambers.near by Community & Commercial	Nos.	6	15000.00	0.90
11	Making water supply connection with HSVP/GMDA Master Line			LS	2.00
12	Provision for rising main from HSVP/GMDA water supply line to UG Tank				
i)	100 mm dia	M	100	1460.00	1.46
	(C.O. to abstract of cost of Sub-work No.I)			TOTAL	16.28
				SAY	16.28

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	Sub Work I				Water Supply
	Sub Head No. IV				Flushing & Irrigation
S. No.	Description	Unit	Qty	Rate	IN LACS
1	Providing, laying, jointing & testing UPVC Agricultural pipes(6 kg/sq.cm) including cost of excavation complete as per ISI marked. (For Flushing water supply & irrigation supply line)				
i)	100 mm dia	M	415	1460.00	6.06
ii)	25 mm dia for Garden hydrent	M	75	300.00	0.23
iii)	32 mm dia for Garden hydrent	M	70	400.00	0.28
iv)	40 mm dia for Garden hydrent	M	40	600.00	0.24
v)	50 mm dia for Garden hydrent	M	0	750.00	0.00
2	Providing and fixing sluice valves including cost of brick mansonry chambers complete in all respect				
	100 mm dia	Nos.	5	12000.00	0.60
3	Providing, fixing and testing butterfly valves including cost of valve chambers complete in all respects.				
i)	100 mm i/d	Nos.	5	10000.00	0.50
4	Providing & fixing 20 mm Irrigation for hydrant valve complete in all respect.	Nos.	12	5000.00	0.60
5	Providing and fixing air valves and scour taps including cost of bricks masonry chambers.	Nos.	2	10000.00	0.20
6	Provision for carriage of material & unforseen items		LS		0.50
7	Provision for cutting of roads & make is good the same.		LS		1.00
8	Provision for indicating Plate with safety box etc. complete in all respect.	Nos.	17	2000.00	0.34
	(C.O. to abstract of cost of Sub-work No.I)			TOTAL	10.55
				SAY	10.55

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	Sub Work II				Sewerage Scheme
S. No.	Description	Unit	Qty	Rate	in Lacs
1	Providing, lowering, jointing, conforming to HDPE DWC Pipe and specials into trenches including cost of excavation, bed concrete lot of manholes complete.				
i)	200 mm i/d				
a)	Average depth upto 4 m	M	306.00	1700.00	5.20
ii)	250 mm i/d				
a)	Average depth 1.5 m to 4.5 m	M	71.00	2000.00	1.42
iii)	300 mm i/d				
	Average depth 1.5 m to 4.5 m	M	0	2400.00	0.00
2	Provision for lighting, watching and temporary diversion traffic		LS		1.00
3	Provision for cutting of roads and making good in original condition		LS		1.00
4	Provision for connection with HSVP/GMDA Master Line.		LS		2.00
5	Providing and installation of STP 75 KLD including civil tanks and all electro mechanical works.	KLD	75.00	16000.00	12.00

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6	Provision for timbering & shoring, vent pipe & fixing at suitable place			LS		2.00
7	Provision for HDPE pipe from S.T.P. to HSVP/GMDA main line (over flow)					
i)	150 mm dia pipe	M	70	2040.00		1.43
8	Provision for carriage of material & unforseen items			LS		2.00
					SUB TOTAL	28.05
					Add 3% contingencies & PE charges	0.84
						28.89
					Add 49% Deptt.,price escalation unforeseen and administrator charges.	14.16
					TOTAL	**43.05**
	(C.O. TO FINAL ABSTRACT OF COST SUB WORK - II)				**SAY**	**43.05**

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	Sub Work III				Storm water drainage
S. No.	Description	Unit	Qty	Rate	In Lacs
1	Providing, lowering, jointing, cutting RCC NP3 pipes and specials into trenches including cost of excavation cost of manholes, ventilating chambers etc. complete in all respects.				
i)	400 mm i/d				
a)	Average depth 0.2M to 4m	M	553	2500.00	13.83
	Including Over Flow Line				
ii)	500 mm i/d				
a)	Average depth 0.2M to 4m	M	50	2700.00	1.35
	Including Over Flow Line				
2	Provision for road gully and drain with connection pipe		LS		2.00
3	Provision for lighting, watching and temporary diversion of traffic.		LS		2.50
4	Provision for cutting of roads and making good in original condition.		LS		1.00
5	Construction of rain water harvesting pit of modular type as per details and specification given below, including, cost of excavation of all ind soil foundation trenches of drain including dressing of sides of ramming and getting out excavtion of soil.	Nos	2	350000.00	7.00
6	Provision for timbering & shoring		LS		1.00
7	Provision for storm water connection with HSVP/GMDA Master Line.		LS		2.00
8	Provision for carriage of material & unforseen items & Provision of temporary disposal arrangements till HSVP/GMDA services are provided.		LS		5.00
				SUB TOTAL	**35.68**
				Add 3% contingencies & PE charges	1.07
					36.75
				Add 49% Deptt.,price escalation unforeseen and administrator charges.	18.00
				TOTAL	**54.75**
	(C.O. TO FINAL ABSTRACT OF COST SUB WORK - III)			**SAY**	**54.75**

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	Sub Work IV				Road Work
S. No.	Description	Unit	Qty	Rate	In Lacs
1	Provision for levelling and earth filling as per site conditions.	Acre	3.15625	175000.00	5.52
2	Construction of road by- Blacktop or Bituminous road				
	i) Providing GSB by 200 mm thick.				
	ii) 250 mm thick W.M.M. stone aggregate layer				78.00
	iii) 50 mm DBM.				
	iv) 30 mm thick B.C. complete in all respect.				
	Total including 6m, 8 m ,12m	Sq. M	5200	1500.00	
3	Miscellaneous items				
(a)	Providing for Kerbs & Channels AS PER Specification.	RMT	1680	600.00	
	for 3.15625 ACRES				10.08
	6m , 8 m &12 m wide road m (840 x 2 = 1680 RM)				

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b	Construction of foothpath with paver block over 100mm thick cement and concrete 1.0m wide on one side of 6 m wide road = 1x578.24 =578.24 m. 8 m wide road = 1.0x124.22 = 124.22 m. 12 m wide road = 1.0x134 = 134 m. Total = 836.46 m.		836.46	1000.00		8.36
4	Provision for traffic control, lighting and guide map,lighting watching etc.		LS			2.00
5	Provision for carriage of material & other unforseen items.		LS			1.00
6	Provision for plot indicator, guide maps etc.		LS			1.00
7	Provision for demarcation etc.		LS			0.50
8	Provision for Parking & pavement in Open Area Cement coc. 1:4:8 + 80MM thick paver block (50% of total area)	sqm	2370	1000.00		23.70
					SUB TOTAL	130.16
					Add 3% contingencies & PE charges	3.90
						134.06
					Add 49% Deptt.,price escalation unforeseen and administrator charges.	65.69
					TOTAL	199.75
	(C.O. TO FINAL ABSTRACT OF COST SUB WORK - IV)				**SAY**	199.75

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	Sub Work V					Street Lighting
S. No.	Description	Unit	Qty	Rate		In Lacs
1	Providing street lighting on internal roads as per standerd specification of HVPNL and CFL complete in all respect AREA 3.155 ACRES					
	Provision made on L.S. cost @ Rs.2,50,000.00 per acre	Acre.	3.15625	250000.00	per acres	7.89
				SUB TOTAL		**7.89**
				Add 3% contingencies & PE charges		0.24
						8.13
				Add 49% Deptt.,price escalation unforeseen and administrator charges.		3.98
				TOTAL		**12.11**
	(C.O. TO FINAL ABSTRACT OF COST SUB WORK - V)			**SAY**		**12.11**

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S. No.	Sub Work VI Description	Unit	Qty	Rate	Horticulture Amount
1	Development of lawn area				In Lacs
a)	Trenching the ordinary soil upto depth of 60 cm. including removal and apcking of servicable material and disposing at the lead of 50m and making upto the tranched area to prope level by filling with earth mixed with manure before and after flooding trenches with water including cost of imported earth and manure.				
b)	Rough dressing of trenched area.				
c)	Grassing with including watering and maintenance of lawns free from weds and fit for moving in rows including for hedges, shrubs and green belt (as per HSVP/GMDA Norms)	Per acre	1.31	150000.00	1.97
2	Planting of trees with tree guards on roads at 6m & 6.5m intervals				
	Total length of roads = 565 mtr. No of trees @ 12m c/c = 565x2/12 = 95 nos say = 100 nos				
	Cost of the tree @ 2310/- each **Cost Analysis of Planting Trees** Excavation = 60.00 each Manure = 100.00 each Tree plants = 150.00 each Tree guards = 2000.00 each Total Cost = Rs. 2310.00 per tree	Nos.	100	2310.00	2.31
				SUB TOTAL	**4.28**
				Add 3% contingencies & PE charges	0.13 4.40
				Add 49% Deptt.,price escalation unforeseen and administrator charges.	2.16
				TOTAL	**6.56**
	(C.O. TO FINAL ABSTRACT OF COST SUB WORK - VI)			**SAY**	**6.56**

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	Sub Work VII				Maintenance Charges of Road
S. No.	Description	Unit	Qty	Rate	Rs. In Lacs
1	Provision for maintenance charges for water supply, sewerage, storm water drainage, roads, street light, horticulture etc. complete including operation and establishment charges as per HSVP/GMDA norms after completion and resurfacing of roads after 10 years or 1st phase.	Acre	3.15625	800000.00	25.25
2	Provision for resurfacing and strengthening of roads after 1st five years of 1st phase with 50 mm B.M. & 30 mm B.C.	Sq. M	5200	660.00	34.32
3	Provision for resurfacing and strengthening of road after 10 years of 2nd phase with 50 mm B.M. & 30 mm B.C.	Sq. M	5200	825.00	42.90
				TOTAL	**102.47**
				Add 3% contingencies & PE charges	3.07
				Sub-Total	105.54
				Add 49% Deptt.,price escalation unforeseen and administrator charges.	51.72
				TOTAL	**157.26**
	(C.O. TO FINAL ABSTRACT OF COST SUB WORK - VII)			**SAY**	**157.26**

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PROJECT : COMMERCIAL PLOTS (SCO) OVER AN AREA MEASURING 3.15625 ACRES IN SECTOR – 73, GURUGRAM				
MATERIAL OF DOMESTIC PIPE				
SL NO	LINE NO		LENGTH OF PIPE	SIZE OF RISER PIPE IN MM Dia
1	UGT	C1	5	100
2	C1	C2	76	100
3	C2	C3	81	100
4	C3	C4	59	100
5	C4	C5	76	100
6	C4	C8	33	100
7	C5	C6	64	100
8	C6	C7	160	100
	TOTAL		554	
	SAY		560	

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PROJECT : COMMERCIAL PLOTS (SCO) OVER AN AREA MEASURING 3.15625 ACRES IN SECTOR – 73, GURUGRAM																		
DESIGN CALCULATION FOR DOMESTIC WATER SYSTEM																		
S. NO.	Reference line		NO OF UNIT			Popul. (Total No of Persons)	Total Requirement	Total Water Requirement.	DIA.	Velocity	Length of Line	(S) Slope of pipe	Head Loss for line Length	Fitting Loss @ 10% of pipe length	Total Head Loss	CUMMULATIVE	Ground Level	Air Release Valve
	FROM	TO	SELF	PREVIOUS	TOTAL		(In LPD)	(In LPM)	(In MM)	m/sec	(In Mtr)	(In m/m)	(In Mtr)	(In Mtr)	(In Mtr)		(In Mtr)	Nos.
1	UGT	C1	0	42	42	3100	40641	85	100	1.2	5.0	0.028	0.14	0.014	0.15	0.153	225.405	0
2	C1	C2	0	42	42	3100	40641	85	100	1.2	76.0	0.028	2.11	0.211	2.32	2.322	225.925	0
3	C2	C3	7	35	42	3100	40641	85	100	1.2	81.0	0.028	2.25	0.225	2.47	2.475	225.937	0
4	C3	C4	4	31	35	2583	33868	71	100	1.2	59.0	0.028	1.64	0.164	1.80	1.802	225.937	0
5	C4	C5	10	17	27	1993	26127	54	100	1.2	76.0	0.028	2.11	0.211	2.32	2.322	225.638	0
6	C4	C8	4	0	4	295	3871	8	100	1.2	33.0	0.028	0.92	0.092	1.01	1.008	225.937	1
7	C5	C6	0	17	17	1255	16450	34	100	1.2	64.0	0.028	1.78	0.178	1.96	1.955	225.638	1
8	C6	C7	17	0	17	1255	16450	34	100	1.2	160.0	0.028	4.44	0.444	4.89	4.888	225.638	0
Total length= 554.0																		

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PROJECT : COMMERCIAL PLOTS (SCO) OVER AN AREA MEASURING 3.15625 ACRES IN SECTOR – 73, GURUGRAM				
MATERIAL OF FLUSHING PIPE				
SL NO	LINE NO		LENGTH OF PIPE	SIZE OF RISER PIPE IN MM Dia
1	STP	F1	17	80
2	F1	F2	53	80
3	F1	F3	83	80
4	F3	F7	21	80
5	F3	F4	73	80
6	F4	F5	58	80
7	F5	F6	109	80
	TOTAL		**414**	
	Say		**415**	

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PROJECT : COMMERCIAL PLOTS (SCO) OVER AN AREA MEASURING 3.15625 ACRES IN SECTOR – 73, GURUGRAM						
MATERIAL OF GARDEN HYDRANT						
	FROM	TO	25 MM	32 MM	40 MM	50 MM
1	F1	F2	5.5			
2	F1	F3	5.5			
3	F4	F5	3.5			
4	F5	F6	5.5			
5	F2	GH-9	40	20		
6	F7	GH-6	10	15	40	
	GH-10	GH-12		31		
		TOTAL LENGTH	70 mtr	66 mtr	40 mtr	
		Say	75	70	40	0
TOTAL GARDEN HYDRANT = 12 Nos						

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PROJECT : COMMERCIAL PLOTS (SCO) OVER AN AREA MEASURING 3.15625 ACRES IN SECTOR – 73, GURUGRAM

TITLE :- FLUSHING WATER SUPPLY HYDRAULIC CHART

S.N0	Line No		NO OF UNIT			Popul. (Total No of Persons)	Total Water Requirement in LPD	Average Demand	Peak Demand @ 2.5 Times	Flow Rate	Length of Pipe	Head Loss Mtr/ Mtr	Total Head Loss	Velocity	Dia of Pipe Required	Dia of Pipe	Ground LVL at start	Hydraulic LVL at start	Head at start	Ground LVL at End	Hydraulic LVL at End	Head at End
	From	To	SELF	PREVIOUS	TOTAL		LPD	KLD	KLD	LPM	MTR.	MTR.	MTR.	M/SEC	MM	MM	MTR.	MTR.	MTR.	MTR.	MTR.	MTR.
1	STP	F1	0	42	42	3100	43568	44	109	76	17	0.0011	0.02	0.251	35.84	80	225.937	270.937	45.00	225.937	270.919	44.98
2	F1	F2	7	0	7	517	7261	7	18	13	53	0.0000	0.00	0.042	14.63	80	225.937	270.92	44.98	225.937	270.92	44.98
3	F1	F3	6	29	35	2583	36307	36	91	63	81	0.0008	0.06	0.209	32.72	80	225.937	270.92	44.98	225.937	270.86	44.92
4	F3	F7	2	0	2	148	2075	2	5	4	21	0.0000	0.00	0.012	7.82	80	225.937	270.86	44.92	225.937	270.86	44.92
5	F3	F4	10	17	27	1993	28008	28	70	49	73	0.0005	0.03	0.161	28.74	80	225.937	270.86	44.92	225.638	270.82	45.18
6	F4	F5	0	17	17	1255	17635	18	44	31	58	0.0002	0.01	0.101	22.80	80	225.638	270.86	45.22	225.638	270.84	45.21
7	F5	F6	17	0	17	1255	17635	18	44	31	109	0.0002	0.02	0.101	22.80	80	225.638	270.92	44.98	225.638	270.84	45.21
										Total Length=	412										

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PROJECT : COMMERCIAL PLOTS (SCO) OVER AN AREA MEASURING 3.15625 ACRES IN SECTOR – 73, GURUGRAM					
MATERIAL STATEMENT FOR SEWER WATER LINE					
SL	LINE		200 MM DIA LENGTH	250 MM DIA LENGTH	TOTAL 200,250,300 MM LENGTH OF LINE
NO.	From	To	METER	METER	METER
1	SE-1	SE-2	111		111.0
2	SE-2	SE-3	57		57.0
3	SE-3	SE-5	70		70.0
4	SE-4	SE-5	13		13.0
5	SE-5	SE-6		71	71.0
6	SE-7	SE-6	55		55.0
	TOTAL		306.00	71.00	377.00
	SAY		306.00	71.00	377.00
STP BYPASS LINE 70 METER @ 100 MM DIA					

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PROJECT : COMMERCIAL PLOTS (SCO) OVER AN AREA MEASURING 3.15625 ACRES IN SECTOR – 73, GURUGRAM

DESIGN OF SEWERAGE SYSTEM

S.No	sewerage Line No		Length (m)	Design of Sewerage System				Population	Sewage flow @ 80% of PC D	Peak Flow (lpd)	Peak Flow (lps)	Infilteration @ 25% Av. Discharge	Total discharge (lps)	Pipe Size (mm)	Slope (mm)	"C" Value	Velocity (m/s)	Capacity of pipe(lps)	Check	Fall (m)	Ground Level(m)		Invert Level(m)		q/Q	va/v	Actual velocity (va)	d/D	Depth(m)		Avg Depth of Manhole
	From	To		Self	Prev. plots	Total	Other														Start	End	Start	End					Start	End	
1	S-1	S-2	11.760	2	0	2		148	3208	8020	0.093	0.023	0.116	200	300	0.011	0.71	11.194	OK	0.039	225.638	225.638	224.238	224.199	0.000	0.280	0.199	0.050	1.400	1.439	1.420
2	S-2	S-3	11.785	2	2	4		295	6416	16040	0.186	0.046	0.232	200	300	0.011	0.71	11.194	OK	0.039	225.638	225.638	224.199	224.160	0.010	0.300	0.214	0.070	1.439	1.478	1.459
3	S-3	S-4	11.785	2	4	6		443	9624	24060	0.278	0.070	0.348	200	300	0.011	0.71	11.194	OK	0.039	225.638	225.638	224.160	224.120	0.010	0.300	0.214	0.070	1.478	1.518	1.498
4	S-4	S-5	11.760	2	6	8		590	12832	32080	0.371	0.093	0.464	200	300	0.011	0.71	11.194	OK	0.039	225.638	225.638	224.120	224.081	0.020	0.400	0.285	0.100	1.518	1.557	1.537
5	S-5	S-6	11.795	2	8	10		738	16040	40100	0.464	0.116	0.580	200	300	0.011	0.71	11.194	OK	0.039	225.638	225.638	224.081	224.042	0.020	0.400	0.285	0.100	1.557	1.596	1.577
6	S-6	S-7	11.760	2	10	12		886	19248	48120	0.557	0.139	0.696	200	300	0.011	0.71	11.194	OK	0.039	225.638	225.638	224.042	224.003	0.020	0.400	0.285	0.100	1.596	1.635	1.616
7	S-7	S-8	11.745	2	12	14		1033	22456	56140	0.650	0.162	0.812	200	300	0.011	0.71	11.194	OK	0.039	225.638	225.638	224.003	223.963	0.030	0.460	0.328	0.130	1.635	1.675	1.655
8	S-8	S-9	11.760	2	14	16		1181	25664	64160	0.743	0.186	0.928	200	300	0.011	0.71	11.194	OK	0.039	225.638	225.638	223.963	223.924	0.030	0.460	0.328	0.130	1.675	1.714	1.694
9	S-9	S-10	6.830	1	16	17		1255	27268	68170	0.789	0.197	0.986	200	300	0.011	0.71	11.194	OK	0.023	225.638	225.638	223.924	223.901	0.040	0.510	0.363	0.150	1.714	1.737	1.725
10	S-10	S-11	30.200	0	17	17		1255	27268	68170	0.789	0.197	0.986	200	300	0.011	0.71	11.194	OK	0.101	225.638	225.638	223.901	223.801	0.040	0.510	0.363	0.150	1.737	1.837	1.787
11	S-11	S-12	25.800	0	17	17		1255	27268	68170	0.789	0.197	0.986	200	300	0.011	0.71	11.194	OK	0.086	225.638	225.638	223.801	223.715	0.040	0.510	0.363	0.150	1.837	1.923	1.880
12	S-12	S-13	12.830	0	17	17		1255	27268	68170	0.789	0.197	0.986	200	300	0.011	0.71	11.194	OK	0.043	225.638	225.638	223.715	223.672	0.040	0.510	0.363	0.150	1.923	1.966	1.945
13	S-13	S-14	12.000	2	17	19		1402	30476	76190	0.882	0.220	1.102	200	300	0.011	0.71	11.194	OK	0.040	225.638	225.638	223.672	223.632	0.040	0.510	0.363	0.150	1.966	2.006	1.986
14	S-14	S-15	12.030	2	19	21		1550	33684	84210	0.975	0.244	1.218	200	300	0.011	0.71	11.194	OK	0.040	225.638	225.638	223.632	223.592	0.040	0.510	0.363	0.150	2.006	2.046	2.026
15	S-15	S-16	12.030	2	21	23		1697	36892	92230	1.067	0.267	1.334	200	300	0.011	0.71	11.194	OK	0.040	225.638	225.638	223.592	223.552	0.050	0.530	0.378	0.160	2.046	2.086	2.066
16	S-16	S-17	12.025	2	23	25		1845	40100	100250	1.160	0.290	1.450	200	300	0.011	0.71	11.194	OK	0.040	225.638	225.638	223.552	223.512	0.050	0.530	0.378	0.160	2.086	2.126	2.106
17	S-17	S-18	8.777	2	25	27		1993	43308	108270	1.253	0.313	1.566	200	300	0.011	0.71	11.194	OK	0.029	225.638	225.937	223.512	223.482	0.060	0.550	0.392	0.170	2.126	2.455	2.290
18	S-30	S-18	13.879	2	0	2		148	3208	8020	0.093	0.023	0.116	200	300	0.011	0.71	11.194	OK	0.046	225.937	225.937	224.537	224.491	0.000	0.280	0.199	0.050	1.400	1.446	1.423
19	S-18	S-19	15.200	2	29	31		2288	49724	124310	1.439	0.360	1.798	250	375	0.011	0.74	18.153	OK	0.041	225.937	225.937	223.482	223.442	0.040	0.510	0.377	0.150	2.455	2.495	2.475
20	S-19	S-20	14.000	2	31	33		2435	52932	132330	1.532	0.383	1.914	250	375	0.011	0.74	18.153	OK	0.037	225.937	225.937	223.442	223.405	0.040	0.510	0.377	0.150	2.495	2.532	2.514
21	S-20	S-21	16.145	2	33	35		2583	56140	140350	1.624	0.406	2.031	250	375	0.011	0.74	18.153	OK	0.043	225.937	225.937	223.405	223.362	0.040	0.510	0.377	0.150	2.532	2.575	2.554
22	S-21	S-22	7.384	0	35	35		2583	56140	140350	1.624	0.406	2.031	250	375	0.011	0.74	18.153	OK	0.020	225.937	225.937	223.362	223.342	0.040	0.510	0.377	0.150	2.575	2.595	2.585
23	S-22	S-23	12.850	0	35	35		2583	56140	140350	1.624	0.406	2.031	250	375	0.011	0.74	18.153	OK	0.034	225.937	225.937	223.342	223.308	0.040	0.510	0.377	0.150	2.595	2.629	2.612
24	S-23	S-24	3.265	0	35	35		2583	56140	140350	1.624	0.406	2.031	250	375	0.011	0.74	18.153	OK	0.009	225.937	225.937	223.308	223.299	0.040	0.510	0.377	0.150	2.629	2.638	2.634
25	S-25	S-26	13.775	1	0	1		74	1604	4010	0.046	0.012	0.058	200	300	0.011	0.71	11.194	OK	0.046	225.937	225.937	224.537	224.491	0.000	0.280	0.199	0.050	1.400	1.446	1.423
26	S-26	S-27	14.025	2	1	3		221	4812	12030	0.139	0.035	0.174	200	300	0.011	0.71	11.194	OK	0.047	225.937	225.937	224.491	224.444	0.010	0.300	0.214	0.070	1.446	1.493	1.469
27	S-27	S-28	14.025	2	3	5		369	8020	20050	0.232	0.058	0.290	200	300	0.011	0.71	11.194	OK	0.047	225.937	225.937	224.444	224.398	0.010	0.300	0.214	0.070	1.493	1.539	1.516
28	S-28	S-29	9.821	2	5	7		517	11228	28070	0.325	0.081	0.406	200	300	0.011	0.71	11.194	OK	0.033	225.937	225.937	224.398	224.365	0.010	0.300	0.214	0.070	1.539	1.572	1.556
29	S-29	S-24	6.491	0	7	7		517	11228	28070	0.325	0.081	0.406	200	300	0.011	0.71	11.194	OK	0.022	225.937	225.937	224.365	224.343	0.010	0.300	0.214	0.070	1.572	1.594	1.583
30	S-24	STP	5.577	0	42	42		3100	67368	168420	1.949	0.487	2.437	250	375	0.011	0.74	18.153	OK	0.015	225.937	225.937	223.299	223.284	0.050	0.530	0.392	0.160	2.638	2.653	2.646

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PROJECT : COMMERCIAL PLOTS (SCO) OVER AN AREA MEASURING 3.15625 ACRES IN SECTOR – 73, GURUGRAM

MATERIAL STATEMENT OF STORM

SL NO.	SW LINE From	SW LINE To	DIA OF PIPE IN MM	LENGTH OF LINE 400 MM DIA METER	LENGTH OF LINE 500 MM DIA
1	S-1	RWH-1	400	78.0	
2	RWH-1	RWH-2	400	69.0	
3	S-2	S-3	400	86.0	
4	S-4	S-3	400	55.0	
5	S-3	S-6	400	34.0	
6	S-5	S-6	400	65.0	
7	S-6	S-8	400	29.0	
8	S-7	S-8	400	137.0	
9	RWH2	OUT	500		50.0
TOTAL				**553.0**	**50.0**

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PROJECT : COMMERCIAL PLOTS (SCO) OVER AN AREA MEASURING 3.15625 ACRES IN SECTOR – 73, GURUGRAM

DESIGN CALCULATION FOR STORM WATER

S. NO.	NAME OF THE LINE		AREA TO BE SERVED IN ACRES			DISCHARGE @1/4" RAIN FALL	FINAL DISCHARGE	SIZE OF PIPE DRAIN (IN MM)	"C" VALUE	VELOCITY	DISCHARGE CAPACITY OF PIPE	LENGTH OF PIPE	SLOPE	FALL IN MET-ERS	GROUND LEVEL		INVERT LEVEL		DEPTH OF PIPE AT		AVERAGE DEPTH OF PIPE
			SELF	PREVIOUS	TOTAL	6.25MM/HR								As per pipe slope	U/End	L/End	U/End	L/End	U/End	L/End	
						(InM3/sec)	(In LPS)	In mm		(In m/sec)	(In LPS)	(In mtrs.)	(In mtrs.)	(In mtrs.)	(In mtrs.)	(In mtrs.)	(In mtrs.)	(In mtrs.)	(In mtrs.)	(In mtrs.)	(in mts)
1	D-1	D-2	0.10	0.00	0.10	0.0007	0.69	400	0.013	0.78	98.21	14.025	450	0.031	225.937	225.937	224.687	224.656	1.25	1.28	1.27
2	D-2	D-3	0.11	0.10	0.21	0.0015	1.49	400	0.013	0.78	98.21	13.805	450	0.03	225.937	225.937	224.656	224.625	1.28	1.31	1.30
3	D-3	D-4	0.05	0.21	0.27	0.0019	1.87	400	0.013	0.78	98.21	7.980	450	0.02	225.937	225.937	224.625	224.607	1.31	1.33	1.32
4	D-4	D-5	0.01	0.27	0.28	0.0019	1.95	400	0.013	0.78	98.21	27.385	450	0.06	225.937	225.925	224.607	224.547	1.33	1.38	1.35
5	D-5	D-6	0.03	0.28	0.31	0.0022	2.15	400	0.013	0.78	98.21	9.475	450	0.02	225.925	225.925	224.547	224.526	1.38	1.40	1.39
6	D-6	RWH-1	0.05	0.31	0.36	0.0025	2.52	400	0.013	0.78	98.21	2.885	450	0.01	225.925	225.925	224.526	224.519	1.40	1.41	1.40
7	RWH-1	D-7	0.10	0.36	0.46	0.0032	3.22	400	0.013	0.78	98.21	14.977	450	0.03	225.925	225.925	224.675	224.642	1.25	1.28	1.27
8	D-7	D-8	0.08	0.46	0.54	0.0038	3.79	400	0.013	0.78	98.21	12.460	450	0.03	225.925	225.925	224.642	224.614	1.28	1.31	1.30
9	D-8	D-9	0.12	0.54	0.66	0.0047	4.66	400	0.013	0.78	98.21	29.561	450	0.07	225.925	225.625	224.614	224.548	1.31	1.08	1.19
10	D-9	D-10	0.08	0.66	0.75	0.0053	5.25	400	0.013	0.78	98.21	11.831	450	0.03	225.625	225.625	224.548	224.522	1.08	1.10	1.09
11	D-11	D-12	0.05	0.00	0.05	0.0004	0.38	400	0.013	0.78	98.21	11.704	450	0.03	225.638	225.638	224.388	224.362	1.25	1.28	1.26
12	D-12	D-13	0.06	0.05	0.11	0.0008	0.77	400	0.013	0.78	98.21	11.760	450	0.03	225.638	225.638	224.362	224.336	1.28	1.30	1.29
13	D-13	D-14	0.06	0.11	0.16	0.0012	1.16	400	0.013	0.78	98.21	11.760	450	0.03	225.638	225.638	224.336	224.310	1.30	1.33	1.32
14	D-14	D-15	0.05	0.16	0.22	0.0015	1.54	400	0.013	0.78	98.21	11.810	450	0.03	225.638	225.638	224.310	224.283	1.33	1.35	1.34
15	D-15	D-16	0.05	0.22	0.27	0.0019	1.92	400	0.013	0.78	98.21	11.760	450	0.03	225.638	225.638	224.283	224.257	1.35	1.38	1.37
16	D-16	D-17	0.05	0.27	0.33	0.0023	2.31	400	0.013	0.78	98.21	11.785	450	0.03	225.638	225.638	224.257	224.231	1.38	1.41	1.39
17	D-17	D-18	0.05	0.33	0.38	0.0027	2.69	400	0.013	0.78	98.21	11.785	450	0.03	225.638	225.638	224.231	224.205	1.41	1.43	1.42
18	D-18	D-19	0.05	0.38	0.44	0.0031	3.08	400	0.013	0.78	98.21	11.760	450	0.03	225.638	225.638	224.205	224.179	1.43	1.46	1.45
19	D-19	D-20	0.06	0.44	0.50	0.0035	3.50	400	0.013	0.78	98.21	7.923	450	0.02	225.638	225.638	224.179	224.161	1.46	1.48	1.47
20	D-20	D-21	0.10	0.50	0.60	0.0042	4.20	400	0.013	0.78	98.21	25.004	450	0.06	225.638	225.625	224.161	224.106	1.48	1.52	1.50
21	D-21	D-10	0.03	0.60	0.63	0.0044	4.41	400	0.013	0.78	98.21	9.671	450	0.02	225.625	225.625	224.106	224.084	1.52	1.54	1.53
22	D-22	D-23	0.18	0.00	0.18	0.0013	1.26	400	0.013	0.78	98.21	12.941	450	0.03	225.937	225.937	224.687	224.658	1.25	1.28	1.26
23	D-23	D-24	0.07	0.18	0.25	0.0018	1.77	400	0.013	0.78	98.21	9.835	450	0.02	225.937	225.937	224.658	224.636	1.28	1.30	1.29
24	D-24	D-25	0.07	0.25	0.32	0.0022	2.24	400	0.013	0.78	98.21	15.360	450	0.03	225.937	225.937	224.636	224.602	1.30	1.33	1.32
25	D-25	D-26	0.08	0.32	0.40	0.0028	2.79	400	0.013	0.78	98.21	19.200	450	0.04	225.937	225.937	224.602	224.560	1.33	1.38	1.36
26	D-26	D-27	0.08	0.40	0.48	0.0033	3.34	400	0.013	0.78	98.21	14.025	450	0.03	225.937	225.937	224.560	224.528	1.38	1.41	1.39
27	D-27	D-28	0.08	0.48	0.55	0.0039	3.90	400	0.013	0.78	98.21	14.050	450	0.03	225.937	225.937	224.528	224.497	1.41	1.44	1.42
28	D-31	D-32	0.15	0.00	0.15	0.0010	1.04	400	0.013	0.78	98.21	12.000	450	0.03	225.638	225.638	224.388	224.361	1.25	1.28	1.26
29	D-32	D-33	0.05	0.15	0.20	0.0014	1.42	400	0.013	0.78	98.21	12.030	450	0.03	225.638	225.638	224.361	224.335	1.28	1.30	1.29
30	D-33	D-34	0.05	0.20	0.26	0.0018	1.81	400	0.013	0.78	98.21	12.030	450	0.03	225.638	225.638	224.335	224.308	1.30	1.33	1.32
31	D-34	D-35	0.05	0.26	0.31	0.0022	2.19	400	0.013	0.78	98.21	12.005	450	0.03	225.638	225.638	224.308	224.281	1.33	1.36	1.34
32	D-35	D-28	0.05	0.31	0.37	0.0026	2.57	400	0.013	0.78	98.21	6.470	450	0.01	225.638	225.937	224.281	224.267	1.36	1.67	1.51
33	D-28	D-29	0.04	0.92	0.96	0.0067	6.74	400	0.013	0.78	98.21	14.005	450	0.03	225.937	225.937	224.267	224.236	1.67	1.70	1.69
34	D-29	D-30	0.04	0.96	1.00	0.0070	7.02	400	0.013	0.78	98.21	8.834	450	0.02	225.937	225.937	224.236	224.216	1.70	1.72	1.71
35	D-30	D-39	0.04	1.00	1.04	0.0073	7.30	400	0.013	0.78	98.21	10.884	450	0.02	225.937	225.625	224.216	224.192	1.72	1.43	1.58
36	D-36	D-37	0.14	0.00	0.14	0.0010	0.95	400	0.013	0.78	98.21	29.805	450	0.07	225.625	225.625	224.375	224.309	1.25	1.32	1.28
37	D-37	D-38	0.10	0.14	0.23	0.0016	1.65	400	0.013	0.78	98.21	19.765	450	0.04	225.625	225.625	224.309	224.265	1.32	1.36	1.34
38	D-38	D-39	0.10	0.23	0.33	0.0023	2.34	400	0.013	0.78	98.21	15.120	450	0.03	225.625	225.625	224.265	224.231	1.36	1.39	1.38
39	D-39	D-40	0.08	1.37	1.45	0.0102	10.19	400	0.013	0.78	98.21	15.020	450	0.03	225.625	225.625	224.192	224.158	1.43	1.47	1.45
40	D-40	D-10	0.09	1.45	1.54	0.0108	10.81	400	0.013	0.78	98.21	13.596	450	0.03	225.625	225.625	224.158	224.128	1.47	1.50	1.48
41	D-10	RWH-2	0.25	2.92	3.16	0.0222	22.22	400	0.013	0.78	98.21	2.210	450	0.00	225.625	225.625	224.084	224.079	1.54	1.55	1.54

PROJECT : COMMERCIAL PLOTS (SCO) OVER AN AREA MEASURING 3.15625 ACRES IN SECTOR – 73, GURUGRAM

MATERIAL STATEMENT OF ROAD

6 METER WIDE ROAD

S.NO	NODE	WIDE(m)	LENGTH(m)	6 M	WIDTH Metalled	AREA in SQM
1	1-2	6	87.2	87.2	6	523.20
2	2-3	6	84.51	84.5	6	507.06
3	4-5	6	70.74	70.7	6	424.44
4	5-6	6	55.59	55.6	6	333.54
5	5-6	6	39.01	39.0	6	234.00
6	6-7	6	117.858	117.9	6	707.148
7	8-9	6	38.711	38.7	6	232.266
8	9-10	6	57.09	57.1	6	342.54
	Total 6 M Wide Road Length =		550.71	Total 6 M Wide Road Area =		3304.20
Add 5% for Curve			27.54			165.21
TOTAL			578.24			3469.41

8 METER WIDE ROAD

S.NO	NODE	WIDE(m)	LENGTH(m)	8 M	WIDTH Metalled	AREA in SQM
1	11-12	8	118.301	118.3	8	946.408
	Total 8 M Wide Road Length =		118.30	Total 8 M Wide Road Area =		946.408
Add 5% for Curve			5.92			47.3204
TOTAL			124.22			993.728

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12 METER WIDE ROAD						
S.NO	NODE	WIDE(m)	LENGTH(m)	8 M	WIDTH Metalled	AREA in SQM
1	13-14	12	133.706	133.7	5.50	735.383
	Total 12 M Wide Road Length =		133.71	Total 12 M Wide Road Area =		735.383
TOTAL			134.00			735.00
Total Length of 6, 8 & 12 M Wide Road			836.46	Total Area of 6, 8 & 12 M Wide Road		5198.20
Length SAY			840 Meters	Area Say		5200 Sqm.

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