To

Date: 02.03.2019

The Executive Engineer,

HSVP, Division No.- 4

Gurugram.

Subject:- Approval of the Service Plan Estimate of the Affordable Group Housing Colony on the land measuring 5.5625 Acres (License No. 109 of 2019) in Sector- 70, Gurugram Manesar Urban Complex being developed by Sh. Ram Avtar and Others.

Dear Sir,

With reference to the above mentioned subject, we hereby submitting Six sets of the service plan estimate for your consideration please.

Kindly do the needful and oblige.

Thanking you,

Yours truly,

For **Sh. Ram Avtar**

Ramavtar

Authorized Signatory

Cc:- Director, Town & Country Planning, Haryana, Chandigarh

SERVICE ESTIMATE, DESIGN REPORT AND CALCULATION OF

INTERNAL DEVELOPMENT WORKS

FOR

PROPOSED "AFFORDABLE GROUP HOUSING COLONY" AREA MEASURING 5.5625 ACRES (LICENSE NO. 109 OF 2019 DATED 11.09.2019) IN SECTOR – 70, GURUGRAM – MANESAR URBAN COMPLEX BEING DEVELOPED BY SH. RAM AVTAR AND OTHERS.

SERVICE ESTIMATE, DESIGN REPORT AND CALCULATIONS OF INTERNAL DEVELOPMENT WORKS FOR PROPOSED "AFFORDABLE GROUP HOUSING COLONY"AREA MEASURING 5.5625 ACRES (LICENSE No. 109 of 2019 Dated 11.09.2019) IN SECTOR – 70, GURUGRAM – MANESAR URBAN COMPLEX BEING DEVELOPED BY SH. RAM AVTAR AND OTHERS.

Gurugram town of Haryana State situated on N.H. -48 road at a distance of 35 Km from Delhi. Being in the national capital region, the town has fast developing tendency and potential. Further, it has also started sharing the growing residential, commercial and Industrial load of Delhi. In order to review the growing pressure of population in National Capital of Delhi, It has been decided by the Haryana Government to develop various infrastructure facilities in Gurugram Manesar Urban Complex. This report is for a part of service estimate for proposed "Affordable Group Housing Colony" measuring 5.5625 acres (License No. 109 of 2019 dated 11.09.2019) in Sector – 70, Gurugram – Manesar urban complex being developed by Sh. Ram Avtar and others. has been prepared with the following provisions which are as under :-

1. **WATER SUPPLY**

The source of water supply in this area is by HSVP Mains. It has been proposed to construct underground tanks of capacity as per attached details and to location for domestic purpose and for fire protection. The underground tanks will be fed from the HSVP based supply, which will feed O.H. tanks on the roof of the Building and has been designed as per the Hazen Williams formula. Presently there is proposed / under execution HSVP W/S in this area. However the provision of tube well have been taken due to non availability of water but after getting the approval from the competent authority through tube wells / tankers / any other approved source till HSVP W/Swill made available. The proposed tube wells shall be 510mm bore drilled with reverse rotary rig and installed with 80mm i/d housing pipe and 50mm i/d slotted tube as strainer, hence the provision of One No. Tube Wells have been taken in this estimate.

DESIGN

The scheme has been designed for population of 4090 persons considering @ 5 persons / units for Affordable Group Housing and other provision etc. The combined quantum of water supply (domestic + flushing) per head / day has been taken as 172.50 Liters per head per day as per design calculation.

PUMPING 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 time electricity failure. Generator will be provided separately or added to the capacity of main generator.

2. **SEWERAGE**

The scheme is designed for sewer connecting to the STP and bypass connection to HSVP sewer scheme. The sewer lines have designed for three times average D.W.F in relation to water supply demand. It has assumed that about 80% of the domestic and flushing water supply shall find its way into the proposed sewer. Sewer lines shall be running by gravity and discharge to STP proposed. Treated water will be used for Irrigation & Flushing purpose (through recycling) under the pipe line system.

3. **STORM WATER DRAINAGE**

It has been proposed to lay R.C.C pipes with required number of manholes for disposal of storm water, which will be connected to the HSVP drain. The intensity of rain fall has been taken as 6.00mm per hour. A minimum size of 400mm i/d R.C.C pipe for storm water drain will be provided and designed as per manning's formula. Necessary provision of rainwater harvesting arrangement has also been taken in this estimate.

4. **ROADS**

Road, Parking and Pavement have been provided to above areas and estimate is prepared as revised specifications adopted by HSVP.

5. **STREET LIGHTING AND ELECTRIFICATION :-**

Provision for external lighting and electrification of proposed area has been made.

6. **HORTICULTURE :-**

Estimate and details of plantation, landscaping, signage etc. have been included.

7. **FIRE FIGHING :-**

Provision of Fir Fighting system has been made.

8. Provision of construction of ESS Shed has been taken in this estimate.

9. **SPECIFICATIONS**

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

10. **RATES**

The estimate has been based on the present market rates.

11. **COST**

The total cost of the scheme including cost of all services works out to Rs. 453.99 Lacs (Rupees Four Crore Fifty Three Lacs Ninety Nine Thousand only) including 3% contingencies and 49% departmental charges + Price escalation and cost per acre comes out to Rs. 81.62 Lacs.

(Authorized Signatory)

1. DESIGN CALCULATION :-

Total Area of plot (commercial)	= 5.5625Acres or 22510.603 Sqm
Permissible Ground Coverage 50%	= 11255.302 Sqm
Proposed Ground Floor	= 11255.302 Sqm
Permissible F.A.R. @ 2.25% (Resi.)	= 48622.903 Sqm
Proposed F.A.R Achieved (Resi.)	= 48470.063 Sqm
Proposed area of commercial	= 1547.595 Sqm
Community Building	= 198.60 Sqm
Anganwari	= 198.60 Sqm

2. Detail of Units

No. of Units	No. of Floors	No. of Block	Unit / Block	Total Unit	Density
Tower -1	G + 14	1	118	118	590
Tower -2	G + 14	1	118	118	590
Tower -3	G + 14	1	118	118	590
Tower – 4	G + 14	1	118	118	590
Tower – 5	G + 14	1	118	118	590
Tower -6	G + 14	1	118	118	590
Tower – 7	G + 13	1	110	110	550
Total Density				**818**	**4090**

3. Water Requirement :-

Total Population = 4090 Persons
@ 172.50 LPCD = 705525.00 LPD
Commercial & Community Buildings :-

- Commercial = 1547.595 Sqm
  @ 3 Sqm / person = 516 Persons @ 45 LPCD = 23220.00 LPD
- Community Building (Area 198.60 Sqm) L.S = 10000.00 LPD
- Anganwari (Area 198.60 Sqm) L.s = 10000.00 LPD
- Other staff i.e. mtc staff & Guard's etc. (L.S.) = 5,000.00 LPD

Total = 753745.00 LPD Or 754 KLD
Say 760 KLD

II. FIRE DEMAND

(i) Population = 4090 Persons
(p) ½ x 100/1000 = (4.09) ½ x 100 = 202.23 KLD Say 210 KLD

III. Garden Irrigation Requirement (For Total Area) = 50.00 KLD

IV. Total Water Requirement for UGT
(Excluding Fire Demand)
Hence Domestic Water Requirement (67%) = 760 x 67% = 509.00 KLD
Hence Flushing Water Requirement (33%) = 760 x 33% = 251.00 KLD
Half Day Requirement = 260 K.L. for Domestic
= 130 K.L. for Flushing

But it is proposed to construct an underground tank i.e. 260 K.L. in two compartment for domestic use and 130 K.L. for non potable water in two compartment (at STP) and 210 K.L. for fire fighting purposes for UGT in two compartment in UGT as shown location in the plan.

Total Capacity of UGT = 260 + 210 = 470.00 KLD
Total Requirement for Flushing and Irrigation at STP = 251+50 = 301.00 KLD

VI. Tube Well **For UGT**

a) Yield = 15 K.L. / Hr.
b) Working Hour per day = 16 Hr. / Per Day
c) Total water demand (Domestic) = 509 M3/Day
d) Number of tube well required (Water Demand / Discharge / Hr. working Per day) = 2.12 Nos
e) Add 5% extra = 0.10

Total = 2.22 Nos
Say = 2 Nos

(Water to the proposed development is to be supplied by HSVP. However consider 50% T.W.'s it is proposed to install only one no. tube wells for augmentation / standby purposes and provision has also been taken in the estimates due to non availability of water but after getting the approval from the competent authority.

I) Pumping Machinery for Tube wells

a) Gross Working Head = 80 Mtr
b) Average fall in S.L = 2 Mtr
c) Depression Head = 6 Mtr
d) Friction loss in main = 10 Mtr
Total = 98 Mtr
e) Discharge = 15000 LPH (Or 4.17 LPS Say 4.50 LPS)
f) Horse Power = 9.80 H.P.
HP = (4.50 x 98) / (75 x 0.60)

Say = 10.00 H.P.

It is proposed to provide 1 No. pumping set of 4.50 LPS discharge at 98 Mtr head (1W)

II) Boosting Machinery for domestic water For UGT

Total Water Requirement = 509.00 KLD
Pumping per hour @ 8 hr. pumping / day = 509 /8 KL / hr.
= 63.625 KL / hr.
= 1060.41 lpm = 17.67 lps
Say 2 No. 9.00 lps each

Gross working head For UGT
- Suction lift = 5.00 mts.
- Frictional loss in mains & specials = 5.00 mts.
- Clear Head required = 65.00 mts.

Total = 75.00 mts.
Say = 75.00 mts.
Pump HP = (9.00x75)/(75x0.60) = 15.00 H.P.
Say = 15.00 HP

It is proposed to provide 3 Nos of pumping set of 9.00 lps discharge at 75mts Head each (2W + 1S) for UGT

III) Boosting Machinery for flushing water at STP

Total Water Requirement	**= 251 K.L.D**
Pumping per hour @ 8 hr. pumping / day	= 251 /8 KL / hr.
	= 31.375 KL / hr.
	= 522.92 lpm = 8.72 lps,
	Say 2 No.5.00 lps each
Gross working head	
- Suction lift	= 5.00 mts.
- Frictional loss in mains & specials	= 5.00 mts.
- Clear Head required	= 65.00 mts.
Total	= 75.00 mts.
Say	= 75.00 mts.
Pump HP	= (5.00 x 75) / (75 x 0.60)
	= 8.33 HP
Say	= 10.00 HP

It is proposed to provide 3 Nos of pumping set of 5.00 lps discharge at 75 mts Head each (2W + 1S)

IV) Boosting Machinery for Irrigation water

Total Water Requirement	**= 50 KLD**
Pumping per hour @ 5 hr. pumping / day	= 50 /5 KL / hr.
	= 10.00 KL / hr.
	= 166.66 lpm = 2.77 lps
Say	= 5.00 LPS
Gross working head	
- Suction lift	= 3.00 mts.
- Frictional loss in mains & specials	= 3.00 mts.
- Clear Head required	= 20.00 mts.
Total	= 26.00 mts.
Say	= 26.00 mts.
Pump HP	= (5.00 x 26) / (75 x 0.60)
	= 2.88 HP
Say	= 3.00 HP

It is proposed to provide 2 No. of pumping set of 5.00 lps discharge at 26 mts Head each (1W + 1S)

V) Boosting Machinery for Fire water

Total Water Requirement

Hydrant pump as per CFO Directive	= 2280 LPM, 95M Head and 80 H.P = 1 Nos
Jockey pump (Hydrant) as per NBC table No. 23	= 180 LPM, 95M Head and 7.50 H.P = 1 Nos
Diesel pump as per CFO Directive	= 2280 LPM, 95 M Head and 80 H.P = 1 Nos
Gross working head	
- Suction lift	= 5.00 mts.
- Frictional loss in mains & specials	= 5.00 mts.
- Clear Head required	= 85.00 mts.
Total	= 95.00 mts.
Jockey Pump HP (Fire)	= (3 x 95) / (75 x 0.60)
	= 6.33HP
Say	= 7.50 HP (1W)

VI) DG Set for plumbing

DG Set Requirement

Submersible Pump	(1 x 10)	= 10 HP
Domestic Pump	(2 x 15)	= 30 HP
Flushing Pump	(2 x10)	= 20 HP
Street Light and other etc.		= 5 HP
Fire Jockey pump		= 7.5 HP
Total pump load		**= 72.50 HP**
		= 72.50 x 0.746 x 1.50
		= 81.12 K.W
Total DG capacity		**= 1 No. 100 KVA**

Hence it is proposed to provide 1 No. D.G. Set of 100 KVA capacity

FLOW TO SEWAGE TREATMENT PLANT

Total Water Requirement = 509 KLD for domestic & 251 KLD for flushing

i)	80% of total Domestic Water Demand = 80% of 509 KLD	= 407.20 KLD
ii)	80% of total Flushing Water Demand =80% of 251 KLD	= 200.80 KLD
	Total	**=608.00 KLD**
Considering 5% marginal factor		= 30.40 KLD
	G. Total	**=638.40 KLD**

Say 640 KLD

Proposed STP Capacity = 640KLD Or 0.64 MLD

(Authorized Signatory)

FINAL ABSTRACT OF COST

SR. NO.	SUB WORK	DESCRIPTION	AMOUNT (Rs. In Lacs)
1	SUB WORK NO.I	WATER SUPPLY SCHEME	141.22
2	SUB WORK NO. II	SEWERAGE SCHEME	127.42
3	SUB WORK NO. III	STORM WATER DRAINAGE	51.03
4	SUB WORK NO. IV	ROAD AND FOOTPATH	66.83
5	SUB WORK NO. V	STREET LIGHTING	8.11
6	SUB WORK NO. VI	HORTICULTURE (PLANTATION &ROAD SIDE TREES)	4.83
7	SUB WORK NO. VII	MTC. OF SERVICES & RESURFACING OF ROADS (After 1st 5 years of 1st Phase & Next 5 years in 2nd Phase)	54.55
		TOTAL	453.99
TOTAL : (Rupees Four Crore Fifty Lacs Seventy Three Thousand only)			

Cost Per Acre = Rs.453.99 Lacs / 5.5625 = 81.62 Lacs Per Acre

AUTHORISED SIGNATORY

SUB WORK NO. 1 (Abstract of cost) **WATER SUPPLY SCHEME**

SR. NO.	SUB WORK	DESCRIPTION	AMOUNT (Rs. In Lacs)
1	Sub Head No. 01	Head Works	24.90
2	Sub Head No. 02	Pumping Machinery	29.90
3	Sub Head No. 03	Water Supply Distribution & Rising main pipe	22.22
4	Sub Head No. 04	External Fire Hydrants	12.57
6	Sub Head No. 05	Irrigation	2.43
		TOTAL	92.02
		Add 3% contingency & P.H. Services	2.76
		Total	94.78
		Add 49% Department charges + Price Escalation	46.44
		G. Total	141.22
		Say in Lacs	141.22

(C.O. to Final Abstract Of Cost)

SUB WORK NO. I **WATER SUPPLY**
Sub Head No. 01 **Head Works**

Sr. NO.	Description	Amount in Rs.
1	Construction of U.G. tanks and Fire TanK Including pipes, valve & Specials. 470 KLD @ Rs. 3000/- per K.L.D	1410000
2	Provision for construction of Boosting Station 1 Nos @ Rs. 250000/- each	250000.00
3	Boring and installing tube well reverse rotary rig complete with pipes and strainer to a depth of about 98 Mtr complete in all respect. 1 Nos @ Rs. 700000/- each	700000.00
4	Provision for construction of tube well chamber size 1.50m x 1.50m complete in all respect. 1 Nos @ Rs. 80000/- each	80000.00
5	Provision for carriage of material and unforeseen items L.S.	20000.00
6	Provision of specials for tube well & rising main to UGT L.S.	30000.00
	Total	2490000.00
	Say in Lacs	24.90

(C.O. to Abstract of cost of Sub Work No. I)

SUB WORK NO. 1 **WATER SUPPLY**
Sub Head No. 02 **Pumping Machinery**

Sr. NO.	Description	Amount in Rs.
1	Providing and installing Hydro pneumatic pumping set of following capacities for domestic water Supply with specials	
	9.00 lps at 75 mts head - 3 No. (2W+1SB) - @ Rs. 2,00,000/- each Set (15.00HP)	**600000.00**
2	Providing and installing Hydro Pneumatic pumping set of following capacities for Flushing water supply & Irrigation	
	5.00 lps at 75 mts head - 3 No. (2W+1SB) @ Rs. 1,00,000/- 1 Set (10 HP each)	**300000.00**
	5.00 lps at 26 mts head - 2 Nos (1W+1SB) @ Rs. 15,000/- 1 Set (3 HP each)	**30000.00**
3	Providing and installing Submersible pump for tube wells with specials	
	4.50 lps at 98 mts head - 1 Nos (1W) @ Rs. 80,000/- 1 Set (10HP each)	**80000.00**
4	Provision for construction of ESS Shed 1 Nos @ Rs. 60,000/- each	**60000.00**
5	Providing and installing pumping sets of following capacities for Fire Protection etc. with foundation complete	
	- 180 lpm at 95 M head 1 No. @ Rs. 80,000/- (7.50 HP each)	80000.00
	- 2280 lpm at 95 M head 1 No. @ Rs. 3,50,000/- (80 HP each) (Hydrant)	350000.00
	- 2280 lpm at 95 M head 1 No. @ Rs. 4,50,000/- (80 HP) (Diesel Engine)	450000.00
6	Provision for D.G. Set for stand by arrangement for all machinery = 1 No. 100 KVA @ Rs. 7,00,000/- each	700000.00
7	Provision for making foundations & erection of pumping machinery	40000.00
8	Provision for pipes, valve & specials inside boosting chamber	150000.00
9	Provision for electric services connection including electric fittings for boosting chambers and pump chamber etc.	100000.00
10	Provision for carriage of materials and other unforeseen items L.S.	50000.00
	Total	**2990000.00**
	Say in Lacs	**29.90**

(C.O. to Abstract of cost of Sub Work No. I)

SUB WORK NO. 1 **WATER SUPPLY**
Sub Head No. 03 **Water Supply Distribution & Rising Main Pipe**

Sr. NO.	Description	Amount in Rs.
1	Providing, laying, jointing & testing pipe lines including cost of excavation etc. complete in all respects	
i)	100mm dia D.I. Pipe 655 Mtr @ Rs. 700/- Per Mtr	458500.00
ii)	150mm i/d D.I. Pipes - 1130 Mtr @ Rs. 1000/- Per Mtr	1130000.00
iii)	200mm i/d D.I. Pipes 20 Mtr @ Rs. 1200/- per mtr	24000.00
2	Providing and fixing sluice valve including cost of surface box and masonry chamber etc. complete in all respect	
	a) 100mm i/d 15 No. @ Rs. 7500/- each	112500.00
	b) 150mm i/d 25 No. @ Rs. 10000/- each	250000.00
	c) 200mm i/d 2 No. @ Rs. 15000/- each	30000.00
3	Providing and fixing indicating plates for sluice valve 42 No. @ Rs. 1000/-	42000.00
4	Provision for carriage of materials and other unforeseen items	25000.00
5	Provision for making connection with HUDA Pipe & T.W's etc.	100000.00
6	Provision for cutting the road and making good the same	50000.00
	Total	2222000.00
	Say in Lacs	22.22

(C.O. to Abstract of cost of Sub Work No. I)

SUB WORK NO. 01 **WATER SUPPLY**

SUB HEAD NO. 04 **EXTERNAL FIRE HYDRANTS**

Sr. NO.	Description	Amount in Rs.
1	Providing, Laying, jointing and testing Heavy Class M.S. Pipes for fire rising main including cost of fittings, valves, connection etc. complete in all respect	
a)	100mm dia - 168 M @ Rs. 600/- Per Mtr	100800.00
b)	150mm dia - 970 M @ Rs. 900/- Per Mtr	873000.00
2	Providing and fixing fire Hydrant with accessories 28 No. @ Rs. 7500/- each	210000
3	Provision for Security Services for Fire Arrangement L.S.	20000.00
4	Providing and fixing indicating plate -28 No. @ Rs. 1000/- each	28000.00
6	Provision for carriage of material L.S.	25000.00
	Total	**1256800.00**
	Say In Lacs	**12.57**

(C.O. to Abstract of cost of Sub Work No. I)

SUB WORK NO. 01 **WATER SUPPLY**

SUB HEAD NO. 05 **IRRIGATION**

Sr. NO.	Description	Amount in Rs.
1	Providing, Laying, jointing and testing UPVC pipe lines suitable for 6 kg pressure including cost of fittings, valves, connection etc. complete in all respect	
a)	25mm dia - 180 M @ Rs. 350/- Per Mtr	63000.00
2	Providing and fixing 25mm dia, Irrigation hydrant valve complete in all respect 30 Nos @ Rs. 3000/- each	90000.00
3	Provision for carriage of materials and other unforeseen items L.S.	25000.00
4	Provision for indicating plate with safety box etc. complet in all respect 30 Nos @ Rs. 1500/- each	45000.00
6	Provision for road cutting and making it condition as original L.S.	20000.00
	Total	**243000.00**
	Say in Lacs	**2.43**

(C.O. to Abstract of cost of Sub Work No. I)

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SUB WORK NO. II **SEWERAGE SCHEME**

Sr. NO.	Description	Amount in Rs.
1	Providing, jointing, cutting and testing stoneware pipe grade A and lowering into trenches including cost of excavation, bed concrete, cost of manholes etc. complete	
	a) SW Pipe 200mm i/d avg. depths 0 - 2.00M 120 M @ Rs. 1200/- per Mtr	144000.00
	b) SW Pipe 250mm i/d avg depth 2.00 M 514 M @ Rs. 1300/- per Mtr	668200.00
	c) SW Pipe 300mm i/d avg depth 2.75 M 20 M @ Rs. 1500/- per Mtr	30000.00
2	Providing, laying, jointing & testing pipe lines including cost of excavation etc. complete in all respect - 150mm dia Heavy Class DI pipes (overfow for STP)	
	a) 150MM i/d D.I. Pipe - 210 M @ Rs. 1000/- Per Mtr	210000.00
3	Provision of lighting and watching etc.	30000.00
4	Provision for cartage of material	20000.00
5	Provision for making connection with HUDA	200000.00
6	Provision for construction of Sewerage Treatment Plant (STP) including the cost of tertiary treatment level with recycling storage tank and machinery with all arrangement etc. complete in all respect. 640 KLD or (0.64 MLD) Capacity L.S.	7000000.00
		8302200.00
	Add 3% contingency & P.H. Services	249066
	Total	**8551266**
	Add 49% Department charges + Price Escalation	4190120
	G. Total	**12741386**
	Say in Lacs	**127.42**

(C.O. to Final Abstract of Cost)

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SUB WORK NO. III **STORM WATER DRAINAGE SCHEME**

Sr. NO.	Description	Amount in Rs.
1	Providing, lowering, laying, jointing RCC pipe class Np3 with cement joint,	
	a) RCC Np3 pipe 400mm i/d = 810 M @ Rs. 1500/- Per Mtr	1215000.00
2	Provision for Rain Water Harvesting arrangement including the cost of screening chamber and pit with all type of pipes and other material etc. complete in all respect as per standard drawing and bore upto requirement of site etc. 6 Nos RWH @ Rs. 2,50,000/- each	1500000.00
2	Provision for road gulley & pipe with connection	400000.00
3	Provision for lighting and watching	20000.00
4	Provision for timbering and shoring	20000.00
5	Provision for cartage of material	20000.00
6	Provision for making connection with HUDA storm water drain	150000.00
	Total	**3325000.00**
	Add 3% contingency & P.H. Services	99750.00
	Total	**3424750.00**
	Add 49% Department charges + Price Escalation	1678127.50
	G. Total	**5102877.50**
	Say in Lacs	**51.03**

(C.O. to Final Abstract of Cost)

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Sub Work No. IV **ROAD AND FOOTPATH**

S. No.	Description	Unit	Qty	Rate (In Rs.)	Amount (In Rs.)
1	Provision for leveling & earth filling as per site conditions	Per Acre	5.5625	80000	445000
2	i) Providing and laying 100mm thick PCC under pavement, cement concrete of specified grade 1:4:8 and 150mm thick RMC grade M-40 ii) Providing and laying Bituminous road (250mm GSB, 300mm WMM, 50mm DBM, 40mm BC).	Sqm	5440	300	1632000
3	Provision for kerbs & channels of C.C. 1.2:4	Metre	750	400	300000
4	Provision for arrangement of guide map and indicating board etc.	LS			30000
5	Provision for parking arrangement with 100mm thick PCC under pavement cement concrete of specified grade 1:4:8 and 150mm thick RMC Grade M-40 or Bituminous road with 250mm GSB, 300mm WMM, 50mm thick DBM & 40mm thick BC etc. as per requirement of site for surface car parking and approach to Tower / Blocke etc. complete in all respect	Sqm	6390	300	1917000
5	Provision for carriage of material	LS			30000
	Sub Total				**4354000**
	Add 3% contingencies & PH Services				130620
	Sub Total				**4484620**
	Add 49% Departmental Charges + Price Escalation				2197464
	Total				**6682084**
	Say Rs. In Lacs				**66.83**

(C.O. to Final Abstract of cost)

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Sub Work No. V **STREET LIGHTING**

S. No.	Description	Unit	Qty	Rate (In Rs.)	Amount (In Rs.)
1	Provision for Street Lighting at surrounding area as per standard specifications of HVPN etc. complete	Acre	5.5625	95000	528438
	Add 3% contingencies & PH Services				15853
	Total				**544291**
	Add 49% Departmental Charges + Price Escalation				266702
	Total				**810993**
	Say Rs. In Lacs				**8.11**

(C.O. to Final Abstract of cost)

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Sub Work No. VI **HORTICULTURE**

S. No.	Description	Unit	Qty	Rate (In Rs.)	Amount (In Rs.)
1	Development of Lawn Areas				
a.	Trenching of ordinary soil upto depth of 60 cm i/c removal & stacking of serviceable material & disposing by spreading and levelling within a lead of 50 M and making up the trench area for proper levels by filling with earth or earth mixed with manure before and after flooding trench with water i/c cost of imported earth and manure with all fitting and valve etc. complete				
b.	Rough dressing of turfed area				
c	Grassing with "Cynadon dactylon" i/c watering and maintenance of lawns for 30 days till the grass forms a thick lawn, free from weeds and fit for moving in row 7.5 cm part in eighter direction				
d	organized green 5757.588 Sqm Or 1.43 Acres (As per detail given in green park area calculation)	Acre	1.43	100000	143000
2	Providing and planting trees along boundary @ 6 m interval (Length appx 738M) = 738/6 = 123 Nos Say No. of trees = 130 Nos Cost details : Excavation = Rs. 120 Manure = Rs. 300 Tree Plant = Rs. 900 Total Rs. = Rs. 1320				
		Each	130	1320	171600
	Total				**314600**
	Add 3% contingencies & PH Services				9438
	Total				**324038**
	Add 49% Departmental Charges + Price Escalation				158779
	Total				**482817**
	Say Rs. In Lacs				**4.83**

(C.O. to Final abstract of cost)

Sub Work No. VII **Mtc. Of services & Resurfacing of Road**

S. No.	Description	Unit	Qty	Rate (In Rs.)	Amount (In Rs.)
1	Mtc. Of water supply, sewer, storm water drain, roads, street light, hort. Etc. for period of 10 years including operation charges full establishment etc. complete in all respects	Acre	5.5625	150000	834375
2	Provision for resurfacing of roads after 5 years of 1st phase with provision of 50mm thiCK BM including leveling coarse and 25mm BC as per crust design whichever is safer	Sqm	5440	200	1088000
3	2nd phase after next five years of 1st phase (50mm DBM & 25mm BC or as per crust design whichever is safer	Sqm	5440	300	1632000
	Sub Total				**3554375**
	Add 3% contingencies & PH Services				106631
	Sub Total				**3661006**
	Add 49% Departmental Charges				1793893
	Total				**5454899**
	Say Rs. In Lacs				**54.55**

(C.O. to Final abstract of cost)

SUMMARY OF DESIGN REQUIREMENT

S. No.	Description	Qty	Unit
1	Total Population	4090	Persons
2	Total Water Requirement (Domestic)	509	KLD
3	Total Water Requirement (Flushing)	251	KLD
4	Total Water Requirement (Horticulture)	50	KLD
5	U. G Tank (Domestic - 260 KLD)	1	No.
6	U.G.T Fire Tank 210 KLD	1	No.
7	No. of Domestic WS pumps UGT	2+1	Set
8	STP (Capacity 640 KLD)	1	No.
9	No. of Flushing pumps	2+1	No.
10	No. of submersible pumps	1	No.
11	Main Fire Hydrant electrical pumps	1	No.
12	Diesel fire pumps	1	No.
13	Jockey fir pumps	1	No.
14	Generating sets (100 KVA)	1	100 KVA

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TOTAL MATERIAL STATEMENT FOR WATER SUPPLY i.e. DOMESTIC, FLUSHING & RISING MAIN ETC.

S. No.	Description	Size of pipe upto valve in 100mm	Size of pipe upto valve in 150mm	Size of pipe upto valve in 200mm	Size of pipe upto valve in 250mm
1	Domestic	125 M	570 M	20 M	-
2	Flushing	160 M	560 M	-	-
3	Rising Main	370 M	-	-	-
	Total	**655M**	**1130 M**	**20 M**	-

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MATERIAL STATEMENT (DOMESTIC WATER SUPPLY)

S. No.	Line Designation		Size of Pipe Provided	Length of Pipe (Mtr)	Length in Mtr			
	From	To			250MM	200MM	150MM	100MM
1	UGT	A	200	20	-	20	-	-
2	A	B	150	110	-	-	110	-
3	B	C	150	105	-	-	105	-
4	C	D	150	35	-	-	35	-
5	A	E	150	35	-	-	35	-
6	E	F	150	35	-	-	35	-
7	F	D	150	250	-	-	250	-
8	B	B1	100	125	-	-	-	125
	Total			715	0	20	570	125

200mm i/d Pipe Length	20 Mtr
150mm i/d Pipe Length	570 Mtr
100mm i/d Pipe Length	125 Mtr

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MATERIAL STATEMENT (FLUSHING WATER SUPPLY)

S. No.	Line Designation		Size of Pipe Provided	Length of Pipe (Mtr)	Length in Mtr		
	From	To			200MM	150MM	100MM
1	STP	a	150	15	-	15	-
2	a	b	150	8	-	8	-
3	b	c	150	105	-	105	-
4	c	d	150	150	-	150	-
5	d	e	100	35	-	-	35
6	a	f	150	27	-	27	-
7	f	e	150	255	-	255	-
8	c	c1	100	125	-	-	125
	Total			720	0	560	160

150mm i/d Pipe Length 560 Mtr
100mm i/d Pipe Length 160 Mtr

MATERIAL STATEMENT FOR BOREWELL RISING MAINS AND HUDA MAIN

S. No.	Name of Line		Size of Pipe Provided	Length of Pipe (Mtr)	Length in Mtr	
	From	To			100mm	150mm
1	T.W.	UGT	100	60	60	-
2	Govt. Line	UGT	100	310	310	-
	Total			**370**	**370**	**0**

MATERIAL STATEMENT FOR SEWERAGE SCHEME

S. No.	Line No.		Length (In Mtr)	Pipe Dia	Av. Depth	Length in Mtr			
						200mm i/d	250mm i/d	300mm i/d	400mm i/d
	From	To				0 to 2.00 Mtr	0 to 2.00 Mtr	0 to 2.75 Mtr	0 to 3.00 Mtr
1	A	B	132	250	1.49	-	132	-	-
2	B1	B	120	200	1.32	120	-	-	-
3	B	C	122	250	2.03	-	122	-	-
4	C1	C	260	250	1.48	-	260	-	-
5	C	STP	20	300	2.36	-	-	20	-
6	STP - Govt. / Sewer By Pumping 150mm i/d D.I. Pipe = 210 Mtr								
	Total		654			120	514	20	0

200mm i/d Pipe Length 120 Mtr
250mm i/d Pipe Length 514 Mtr
300mm i/d Pipe Length 20 Mtr

150mm i/d D.I. Pipe (By Pumping) = 210 Mtr

MATERIAL STATEMENT OF STORM WATER DRAINAGE SCHEME

Sr. No.	Line Reference		400mm i/d RCC Np3 Pipe Length in Mtr
	From	To	
1	A	B	40
2	B	C	135
3	C4	C3	95
4	C3	C2	135
5	C2	C1	45
6	C1	C	110
7	C	D	75
8	D1	D1	70
9	D	Govt. SWD (HSVP)	105
	Total Length		**810**

Total Length 400mm i/d RCC Np3 pipe = 810 Mtr

Total Rain Water Harvesting (RWH) = 6 Nos

Material Statement of Road Works

Sr. No.	Road No.	Road Width	Length	Width	Area	
1	1	6.00	240.00	6.00	1440.00	Sqm
2	2	6.00	42.00	6.00	252.00	Sqm
3	3	6.00	240.00	6.00	1440.00	Sqm
4	4	6.00	42.00	6.00	252.00	Sqm
5	5	6.00	126.00	6.00	756.00	Sqm
6	6	12.00	23.00	5.50	126.50	Sqm
7	7	3.36	17.00	3.36	57.12	Sqm
	G. Total		**730.00**		**4323.62**	Sqm
Add 5% extra for curves					216	Sqm
Total					**4539.80**	**Sqm**
				Say	**5440**	**Sqm**

ii) Kerbs & Channels

6 Mtr wide Road		690 Mtr
12 Mtr wide Road		23 Mtr
	Total	**713 Mtr**
Add 5% for curves		36 Mtr
	G. Total	**749 Mtr**
	Say	**750 Mtr**

II) PARKING :-

(i) Surface Car Parking = 511 Nos

Area = 511 Nos x 2.50 Mtr x 5.00 Mtr = 6387.50 Sqm

Say 6390 Sqm

MATERIAL STATEMENT (FIRE FIGHTING)

S. No.	Line Reference		Length in Mtr	Size of M.S. Pipe 150mm i/d Fire Rising	Remarks
	From	To		150mm	
1	UGT	A	20	20	
2	A	B	75	75	
3	B	C	270	270	
4	C	D	55	55	
5	A	E	105	105	
6	E	F	130	130	
7	F	G'	23	23	
8	G	H	52	52	
9	H	D	100	100	
10	E	C	140	140	
	Total		**970**	**970**	

i) Length of 150mm i/d M.S. Pipe = 970 Mtr

ii) Length of 100mm i/d F.H. = 28 X 6 = 168 Mtr

iii) Nos of F.H. = 28 Nos

SUBHEAD : IRRIGATION WATER SUPPLY SCHEME - DESIGN CALCULATION (HORTICULTURE)

HYDRAULIC STATEMENT OF IRRIGATION WATER SUPPLY

S. No.	Line Reference	Population	Peak Flow in LPH	Velocity (m/s)	Size of the pipe required (in mm)	Size of the Pipe Recommend (mm)	Hydraulic Radius	Total Friction Loss in m/m	Length (M)	Loss of Head in Line (M)	Formation Level	Available head (M)
1	From Flushing Water Supply line	50000	-	-	25.00	25	-	-	180	-	-	-

Note :- 30 Nos connections are to be done from flushing water supply line i.e. 30 Nos x 8 Mtr/each = 180 Mtr for 25mm i/d

HYDRAULIC STATEMENT OF WATER SUPPLY (DOMESTIC)

SUBHEAD : DOMESTIC WATER SUPPLY SCHEME - DESIGN CALCULATION

S. No.	Line Reference		Tower No.	Flat / Unit			Population @ 5 Person per flat	Water Requirement @ 172.50 LPCD	Other Water Requirement i.e. Commercial / Community Centre and Anganwadi	Total Water Requirement in LPD	Water Requirement @ 67% of total water requirement	Peak Flow in LPH	Velocity (m/s)	Size of the pipe in (mm)	Total Friction Loss in M/M	Length in (M)	Loss of Head in Line (M)	Formation Level at Lower End	Available Head at Lower end (M)	Terminal Head (M)	Remarks
	From	To		Self	Branch	Total			in LPD												
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
1	UGT	A	1 to7+ Comm. etc.	-	818	818	4090	705525	48220	753745	505009	189380	0.76	200	0.005	20	0.04	230.50	305.45	74.95	Formation Level at Water Works i.e. UGT = 230.55 M Boosting Head = 75.00 M Hydraulic Head = 305.55 M
2	A	B	1 to 6 comm. etc.	236	118	354	1770	305525	48220	353545	236875	88840	0.62	150	0.005	110	0.52	230.30	304.90	74.60	
3	B	C	6,7, commun.+ Ang	118	-	118	590	101775	25000	126775	84939	31853	0.28	150	0.002	105	0.55	230.40	304.69	74.29	
4	C	D	Commun.+ Ang	-	-	-	-	-	20000	20000	13400	5025	0.29	150	0.001	35	0.39	230.50	304.65	74.15	
5	A	E	1 to 7	59	409	468	2320	400200	-	400200	268134	100553	0.62	150	0.005	35	0.40	230.51	305.27	74.72	
6	E	F	1 to 7	-	409	409	2045	352762	-	352762	236351	88634	0.62	150	0.005	35	0.40	230.70	305.09	74.39	
7	F	D	1 to 7	409	-	409	2045	352762	-	352762	236351	88634	0.62	150	0.005	250	0.37	230.50	303.84	73.34	
8	B	B1	comm.	-	-	-	-	-	23220	23220	15557	5834	0.38	100	0.005	125	0.22	230.28	304.52	74.32	

HYDRAULIC STATEMENT OF WATER SUPPLY (FLUSHING) RECYCLING OF TREATED SEWAGE WATER

SUBHEAD : FLUSHING WATER SUPPLY SCHEME - DESIGN CALCULATION

S. No.	Line Reference		Tower No.	Unit / Flat			Population @ 5 Person per flat.	Water Requirement @ 172.50 LPCD	Other Water Requirement i.e. Commercial, Community Centre / Anganwadi in LPD	Total Water Requirement in LPD	Water Requirement @ 33% of total water requirement	Peak Flow in LPH	Velocity (m/s)	Size of the pipe in (mm)	Total Friction Loss in M/M	Length in (M)	Loss of Head in Line (M)	Formation Level at Lower End	Available Head at Lower end (M)	Terminal Head (M)	Remarks
	From	To		Self	Branch	Total															
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
1	STP	a	1 to 7+ comm. Etc.	0	818	818	4090	705525	48220	753745	248736	93225	0.62	150	0.005	15	0.01	230.40	305.37	74.97	Formation Level at STP = 230.45 M Roosting Head = 75.00 M Flushing Hydraulic Head at STP = 305.45 M
2	a	b	1 to 7 comm. + other	0	409	409	2045	352763	28220	380983	125724	47146	0.43	150	0.003	3	0.02	230.40	305.35	74.95	
3	b	c	1 to 7 comm + other	118	291	409	2045	352763	28220	380983	125724	47146	0.43	150	0.003	105	0.32	230.30	305.03	74.73	
4	c	d	3 to 7	291	0	291	1455	250988	0	250988	82826	31059	0.34	150	0.002	150	0.30	230.55	304.73	74.18	
5	d	e	-	0	0	0	0	0	0	0	0	0	0.33	100	0.002	35	0.07	230.70	304.66	73.96	
6	a	f	1 to 7 commun. + Anj	0	409	409	2045	352763	20000	372763	123012	46129	0.43	150	0.003	27	0.08	230.50	305.29	74.79	
7	f	e	1 to 7	409	0	409	2045	352763	0	352763	116412	43654	0.43	150	0.003	255	0.76	230.70	304.33	73.63	
8	c	c1	comm.	0	0	0	0	0	23220	23220	7663	2873	0.31	100	0.002	125	0.25	230.20	304.78	74.58	

DESIGN STATEMENT OF SEWERAGE SCHEME

SUBHEAD : SEWERAGE SCHEME - DESIGN CALCULATION

S. No.	Line Reference		Tower No.	Unit / Flat			Population @ 5 Person per flat	Water Requirement @ 172.50 LPCD	Other Requirement i.e. comm. / community building / Anganwadi	Total water requirent LPD	Sew. Quantity after evaporation losses @ 20% (in LPD)	Sewerage Discharge Peak Flow (m3/sec)	Size of pipe in (mm)	Gradient in (m)	Velocity (m/sec)	Carrying capacity of pipe (m/sec)	Length in Mtr	Fall + Extra Fall in line due to slope (m)	Ground Level		Formation Level		Invert Level		Depth		
	From	To		Self	Branch	Total										m3 /sec			Start	End	Start	End	Start	End	Start	End	Average
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
1	A	A	3 to 7	291	-	291	1455	250987	0	250987	200790	0.0070	250	305	0.76	0.019	132	A3+A6+0.83	230.20	229.80	230.55	230.30	229.35	228.52	1.20	1.78	1.49
2	B1	B	comm.	-	-	-	-	0	23220	23220	18576	0.0006	200	225	0.76	0.012	120	0.53	229.85	229.80	230.20	230.30	229.20	228.67	1.00	1.63	1.32
3	B	C	1 to 7, Comm	118	291	409	2045	352762	28220	380982	304786	0.0106	250	305	0.78	0.019	122	0.40	229.80	230.10	230.80	230.60	228.52	228.12, 228.09	1.78	2.28	2.03
4	C1	C	1 to 7, Common + Ang	409	-	409	2045	352762	20000	372762	298210	0.0103	250	305	0.79	0.019	260	0.85	230.30	230.10	230.70	230.40	229.50	228.65	1.20	1.75	1.48
5	C	S.T.P.	1 to 7 + comm. Etc.	-	818	818	4090	705525	48220	753745	602996	0.0209	300	385	0.76	0.027	30	0.05	230.10	230.15	230.40	230.45	228.09	228.04	2.31	2.41	2.36
6	STP	Govt. Sewer line.		150mm (Ø D.I. Pipe (By pumping) From STP to Govt. Sewer Line										-	-	-	210	1.80	230.15	229.75	230.45	229.60	228.99	227.65	1.50	1.95	1.73

DESIGN CALCULATION OF STORM WATER DRAINAGE SCHEME

INTENCITY OF RAIN FALL = 0.006 MTR /HR

IMPERMEABILITY FACTOR = 0.6

Name of Node		Area (Self)	Area (Self)	Branch Area	Total Area	Total Area	Rain fall	Discharge @ 17.36 LPS/ Hector	Length	Pipe dia	Slope	Velocity	Cap. Of drain	Fall + Extra Fall	Ground Level		Formation Level		Invert Level		Depth of M.H's		Average Depth	Remarks
From	To	IN SQM	In Acre	In Acre	In Acre	In Hector	mm / hr.	IN LPS	In Mtr	In mm	In Mtr	IN m/sec	IN LPS	IN Mtr	Start	End	Start	End	Start	End	Start	End		
2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
A	B	810	0.20	0	0.20	0.08	6.00	1.38	40	400	570	0.76	98.57	0.07	230.30	230.20	230.70	230.55	229.20	229.13	1.50	1.42	1.46	-
B	C	5000	1.24	0.2	1.44	0.58	6.00	10.06	135	400	570	0.76	98.57	0.24	230.20	229.80	230.55	230.30	229.13	228.89 228.52	1.42	1.41	1.42	RWH-4
C4	C3	2400	0.59	0	0.59	0.24	6.00	4.17	95	400	570	0.76	98.57	0.17	230.30	230.40	230.70	230.60	229.20	229.03	1.50	1.57	1.54	RWH-1
C3	C2	4300	1.06	0.59	1.65	0.67	6.00	11.59	135	400	570	0.76	98.57	0.24	230.40	230.30	230.60	230.50	229.03	228.79	1.57	1.71	1.64	RWH-2
C2	C1	1350	0.33	1.65	1.98	0.80	6.00	13.91	45	400	570	0.76	98.57	0.08	230.30	230.05	230.50	230.40	228.79	228.71	1.71	1.69	1.70	-
C1	C	3300	0.82	1.98	2.80	1.13	6.00	19.67	110	400	570	0.76	98.57	0.19	230.05	229.80	230.40	230.30	228.71	228.52	1.69	1.78	1.74	RWH-3
C	D	1500	0.37	4.24	4.61	1.87	6.00	32.39	75	400	570	0.76	98.57	0.13+0.5=0.63	229.80	229.85	230.30	230.25	228.52	227.89	1.78	2.36	2.07	RWH-5
D1	D	2800	0.69	0	0.69	0.28	6.00	4.85	70	400	570	0.76	98.57	0.12	230.05	229.85	230.35	230.25	228.85	228.73	1.50	1.52	1.51	-
D	Govt. SWD Line	1050	0.26	5.3	5.56	2.25	6.00	39.06	105	400	570	0.76	98.57	0.18	229.85	229.75	230.25	229.60	227.89	227.71	2.36	1.89	2.13	RWH-6

WATER SUPPLY SCHEME

DETAIL OF AREA STATMENT

	Acre	Sqm in 1 Acre	AREA IN SQM.		TOTAL G.F. COVERAGE RESI +STILT, COMM. + COMMU. ELE./FIRE. GUARD. METER	TOTAL MUMTY & MACH. RM. + STAIR WELL AREA	TOTAL PROP. COVD. AREA OF F:A:R: STILT+COMM.+ ANGANWARI +COMMU.+ BASEMENT+ MUMTY/MACH. RM.+ STAIR WELL	
TOTAL PLOT AREA	5.56250	4046.850	22510.603	Sqm.				
PERM. G.F. COVERAGE @50%			11255.302	Sqm.				
PERMISSIBLE AREA / FAR :-								
1) COMMERCIAL @ 4%	0.2225		900.424	Sqm.	2811.515	400.688	48470.063	Resi. F:A:R
F.A.R = 175%			1575.742	Sqm.	730.35	30.137	730.35	Stilt
2) RESIDENTIAL@ 96%	5.340		21610.179	Sqm.	813.015	78.435	1547.595	Comm. F:A:R
F.A.R = 225%			48622.903	Sqm.	198.600		198.600	Community
3) COMMUNITY HALL			105.010	Sqm.	180.00		198.600	Anganwari
4) ANGANWARI			105.810	Sqm.		509.260	180.00	Ele. Panel,Fire,G.
PROP. FAR. / COVD. AREA :-			TOTAL IN SQM.	%AGE	4733.480	STAIR WELL	509.260	Mumtys
1) RESIDENTIAL			2811.515	13.010	21.028	2605.839	2684.274	Stair well
2) COMMERCIAL			1547.595	171.874	%.	78.435		
3) COMMUNITY HALL (NON-FAR)			198.600					
4) ANGANWARI (NON-FAR)			198.600	397.200		2684.274	54518.742	SQM
5) ELE. PANEL/FIRE CONTROL RM/GUARD. METER RM. NON-FAR			180.000					

PERMISSIBLE % OF PLOT USED :-

TOTAL COVERED AREA ON GROUND FLOOR + STILT (TOWER-1 to 7) FOR G.F COVERAGE =2811.515+730.35+813.015+198.60 + 180.0 =4733.40 SQM. =21.020 %

STILT AREA ON G.F. (TOWER-1 to 7) = 730.35 SQM

TOTAL COVD. AREA OF MUMTY & M. ROOM (TOWER 1 to 7) + COMMERCIAL & ANGANWARI/COMMU. HALL) = 400.688+30.137+78.435 = 509.26 SQM. (NON-F:A:R)

TOTAL PROP . COVD. AREA OF INCLU. TOWER (1 to 7) RESI. +STILT+COMMERCIAL+ COMMUNITY & ANGANWADI + ELE. PANAL/ FIRE/GAURD RM. + MUMTY/MACH. RM. +STAIR WELL =RESI. & COMMERCIAL = 48470.063+730.350+1547.595+198.60+198.60+180.0+509.26+ (STAIR WELL= 2684.274) = 54518.742 SQM.

PARKING DETAIL :-
TOTAL CAR PARKING REQUIRED
TOTAL NOS. OF FLATS (0.5 ECS) =818/2 =409 Nos. Cars Required
PROVIDED PARKING :-
PROPOSED SUR FACE PARKING =11747.352/23 = 510.75 Nos. Of Cars
UNDER STILT = 730.35 / 28 = 26.08 NOS CAR
TOTAL NOS CARs = 536.83
TOTAL TWO WHEELER PARKING REQUIRED
ONE TWO WHEELER FOR PER DEWELING UNTIS
TOTAL NOS. OF FLATS = 818 Required Two wheelers
PROVIDED TWO WHEELER = 830 Nos.
PERM. GREEN AREA = 15% OF PLOT AREA = 22510.603X15/100 = 3376.59 SQM.
PROP. GREEN AREA = 5757.500 SQM. = 25.57 %
TOTAL NOS. DWELLING UNITS REQUIRED = 801
TOTAL DWELLING UNITS PROVIDED = 818
TOTAL DENSITY PERMISSIBLE = 750-900 PPA
TOTAL DENSITY PROPOSED- (818 D.U. X 5 PERSON) / 5.34 ACRE = 765.92 PPA

DETAIL OF TOWER COVERED AREA FOR F.A.R.

FLOOR	TOWER-1	TOWER-2	TOWER-3	TOWER-4	TOWER-5	TOWER-6	TOWER-7	TOTAL IN SQM.
	TYPE-A	TYPE-A	TYPE-A	TYPE-A	TYPE-A	TYPE-A	TYPE-A	
	G+14 (3BHK)	G+14 (3BHK)	G+14 (3BHK)	G+14 (3BHK)	G+14 (3BHK)	G+14 (1BHK)	G+13 (1BHK)	
STILT	121.54	120.872	120.872	120.872	120.872	62.661	62.661	730.350
GROUND FLOOR	450.709	450.709	450.709	450.709	450.709	258.785	258.785	2811.515
FIRST FLOOR	542.833	542.165	542.165	542.165	542.165	285.098	285.098	3281.689
SECOND FLOOR	542.833	542.165	542.165	542.165	542.165	285.098	285.098	3281.689
THIRD FLOOR	542.833	542.165	542.165	542.165	542.165	285.098	285.098	3281.689
FOURTH FLOOR	542.833	542.165	542.165	542.165	542.165	285.098	285.098	3281.689
FIFTH FLOOR	542.833	542.165	542.165	542.165	542.165	285.098	285.098	3281.689
SIXTH FLOOR	542.833	542.165	542.165	542.165	542.165	285.098	285.098	3281.689
SEVENTH FLOOR	542.833	542.165	542.165	542.165	542.165	285.098	285.098	3281.689
EIGHTH FLOOR	542.833	542.165	542.165	542.165	542.165	285.098	285.098	3281.689
NINETH FLOOR	542.833	542.165	542.165	542.165	542.165	285.098	285.098	3281.689
TENTH FLOOR	542.833	542.165	542.165	542.165	542.165	285.098	285.098	3281.689
ELEVENTH FLOOR	542.833	542.165	542.165	542.165	542.165	285.098	285.098	3281.689
TWELVE FLOOR	542.833	542.165	542.165	542.165	542.165	285.098	285.098	3281.689
THIRTEEN FLOOR	542.833	542.165	542.165	542.165	542.165	285.098	285.098	3281.689
FOURTEEN FLOOR	542.833	542.165	542.165	542.165	542.165	285.098		2996.591
TOTAL AREA	8056.451	8049.099	8049.099	8049.099	8049.099	4250.157	3965.059	48470.063

DETAIL OF CARPET AREA FLOOR/ TOWERWISE for Tower-1 to 5 (3BHK)

SL. NO.	FLOOR	UNIT-A Nos.	UNIT-A AREA	UNIT-A TOTAL	UNIT-B Nos.	UNIT-B AREA	UNIT-B TOTAL	NET TOTAL	TOTAL NOS. OF TOWER	Total Carpet area
1	GROUND FLOOR	2	59.797	119.594	4	59.946	239.784	359.378	5	1796.890
2	FIRST FLOOR	4	59.797	239.188	4	59.946	239.784	478.972	5	2394.860
	TOTAL									11554.930

DETAIL OF CARPET AREA FLOOR/ TOWERWISE for Tower-6 (1BHK)

DETAIL OF CARPET AREA FLOOR/ TOWERWISE for Tower-7 (1BHK)

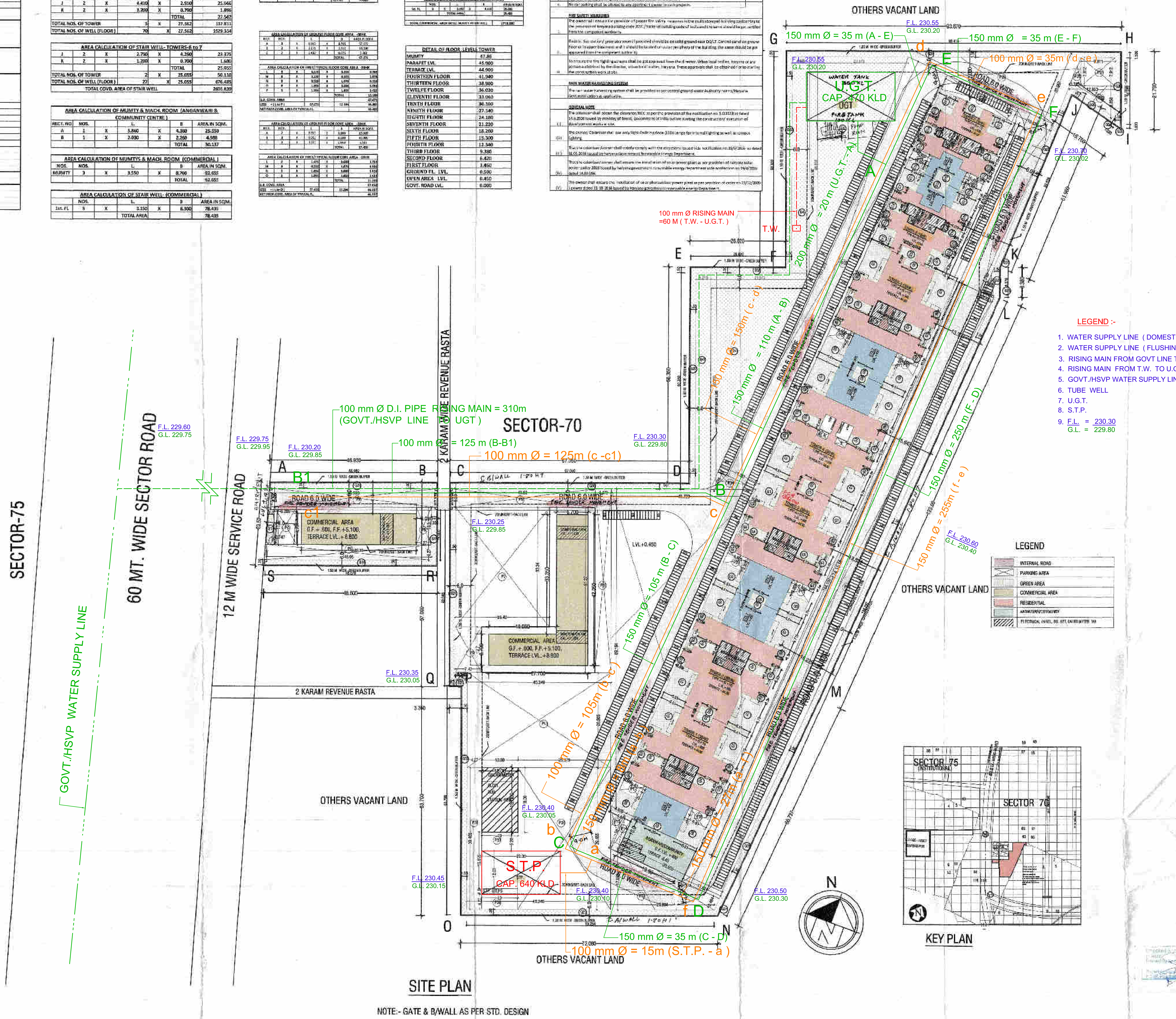
SL. NO.	FLOOR										
9	EIGHTH FLOOR	4	29.222	116.888	2	31.319	62.638	2	31.812	63.624	243.150	1	243.150
10	NINETH FLOOR	4	29.222	116.888	2	31.319	62.638	2	31.812	63.624	243.150	1	243.150
11	TENTH FLOOR	4	29.222	116.888	2	31.319	62.638	2	31.812	63.624	243.150	1	243.150
12	ELEVENTH FLOOR	4	29.222	116.888	2	31.319	62.638	2	31.812	63.624	243.150	1	243.150
13	TWELVE FLOOR	4	29.222	116.888	2	31.319	62.638	2	31.812	63.624	243.150	1	243.150
14	THIRTEEN FLOOR	4	29.222	116.888	2	31.319	62.638	2	31.812	63.624	243.150	1	243.150
	TOTAL	54	409.108	1577.088	28	438.466	876.932	28	445.368	890.736	3345.656		3345.656
	TOTAL CARPET AREA OF TOWER -1 to 7												47259.392

DETAIL OF FLATS TOWER & FLOORWISE

SL. NO.	FLOOR	TOWER-1	TOWER-2	TOWER-3	TOWER-4	TOWER-5	TOWER-6	TOWER-7	TOTAL FLATS
		3BHK	3BHK	3BHK	3BHK	3BHK	1BHK	1BHK	
		G+14	G+14	G+14	G+14	G+14	G+14	G+13	
1	GROUND FLOOR	6	6	6	6	6	6	6	42
2	FIRST FLOOR	8	8	8	8	8	8	8	56
3	SECOND FLOOR	8	8	8	8	8	8	8	56
4	THIRD FLOOR	8	8	8	8	8	8	8	56
5	FOURTH FLOOR	8	8	8	8	8	8	8	56
6	FIFTH FLOOR	8	8	8	8	8	8	8	56
7	SIXTH FLOOR	8	8	8	8	8	8	8	56
8	SEVENTH FLOOR	8	8	8	8	8	8	8	56
9	EIGHTH FLOOR	8	8	8	8	8	8	8	56
10	NINETH FLOOR	8	8	8	8	8	8	8	56
11	TENTH FLOOR	8	8	8	8	8	8	8	56
12	ELEVENTH FLOOR	8	8	8	8	8	8	8	56
13	TWELVE FLOOR	8	8	8	8	8	8	8	56
14	THIRTEEN FLOOR	8	8	8	8	8	8	8	56
15	FOURTEEN FLOOR	8	8	8	8	8	8		48
	TOTAL FLAT (3&1BHK)	118	118	118	118	118	118	110	818
						590		228	818

NOTE:-
THE RESPONSIBILITY TO THE STRUCTURAL DESIGN AND STRUCTURAL STABILITY OF THE BUILDING BLOCK SHALL BE SOLELY OF THE ARCHITECT/STRUCTURE ENGINEERS/OWNER.

NOTE :- THE BUILDING ABOVE 30.0 METRES HEIGHT, MACHANICAL VENTILATION SYSTEM SHALL BE INSTALLED ON VENTILATION SHAFT WITH 100 % POWER BACK UP.



LEGEND :-

1. WATER SUPPLY LINE (DOMESTIC) — S.V.
2. WATER SUPPLY LINE (FLUSHING)
3. RISING MAIN FROM GOVT LINE TO U.G.T.
4. RISING MAIN FROM T.W. TO U.G.T.
5. GOVT./HSVP WATER SUPPLY LINE
6. TUBE WELL — T.W.
7. U.G.T. — U.G.T.
8. S.T.P. — S.T.P.
9. F.L. = 230.30 / G.L. = 229.80

Rajesh Dutt JD(HQ)

PROPOSED BUILDING PLAN OF AFFORDABLE GROUP HOUSING COLONY OVER AN AREA MEASURING -5.5625 ACRES (LIC. No.109 OF 2019, Dated. 11.09.2019) IN THE REVENUE ESTATE OF VILLAGE BADSHAH PUR,SECTOR-70, GURUGRAM BEING DEVELOPED BY RAM AVTAR & OTHERS

DRG. TITLE SITE PLAN

DETAIL OF AREA

ENGINEER SIGNATURE

OWNER'S SIGNATURE

ARCHITECT'S SIGNATURE

VIVEK SINGH RAO
B.Arch, M.C.A, F.I.I.A.
C.O.A. Reg. No CA/95/25040
RAO AND ASSOCIATE
374, U.V., Ph-IV, Gurgaon-15
Ph:- 2347706-07, 9811130867

PROJECT NO. RA-5023	DRG. NO. A-1/12	NORTH
SCALE- 1:400	DATE SEPT- 2019	
DRAWN BY- RAMBABU	CKD. BY - V.S. RAO	

ARCHITECTS
RAO AND ASSOCIATE
ARCHITECTS PLANNERS ENGINEERS INTERIORS VALUERS
374,UDYOG VIHAR,PHASE-4,SEC-18 GURGAON,HARYANA(INDIA)
PH. (0124) - 2347706, 2347707 FAX 0124 - 2347707

WATER SUPPLY SCHEME

SEWERAGE SCHEME

DETAIL OF AREA STATMENT

	Acre	Sqm in 1 Acre	AREA IN SQM.		TOTAL G.F. COVERAGE RESI. +STILT, COMM. + COMMU. ELE./FIRE GUARD, METER	TOTAL MUMTY & MACH. RM. + STAIR WELL AREA	TOTAL PROP. COVD. AREA OF F.A.R+ STILT+COMM.+ ANGANWARI +COMMU.+ BASEMENT+ MUMTY/MACH. RM.+ STAIR WELL	
TOTAL PLOT AREA	5.56250	4046.850	22510.603	Sqm.				
PERM. G. F. COVERAGE @50%			11255.302	Sqm.				
PERMISSIBLE AREA / FAR :-								
1) COMMERCIAL @ 4%	0.2225		900.424	Sqm.	2811.515	400.688	48470.063	Resi. F.A.R
F.A.R =175%			1575.742	Sqm.	730.35	30.137	730.35	Stilt
2) RESIDENTIAL@ 96%	5.340		21610.179	Sqm.	813.015	78.435	1547.595	Comm. F.A.R
F.A.R =225%			48622.903	Sqm.	198.600		198.600	Community
3) COMMUNITY HALL			185.810	Sqm.	180.00		198.600	Anganwari
4) ANGANWARI			185.810	Sqm.		509.260	180.00	Ele. Panel,Fire,G.
PROP. FAR. / COVD. AREA :-			TOTAL IN SQM.	%AGE	4733.480	STAIR WELL	509.260	Mumtys
1) RESIDENTIAL			2811.515	13.010	21.028	2605.839	2604.274	Stair well
2) COMMERCIAL			1547.595	171.874	%	78.435		
3) COMMUNITY HALL (NON-FAR)			198.600					
4) ANGANWARI (NON-FAR)			198.600	397.200		2604.274	54518.742	SQM
5) E.L.E. PANEL/FIRE CONTROL RM/GUARD, METER RM. NON-FAR			180.000					

PERMISSIBLE % OF PLOT USED =
TOTAL COVERED AREA ON GROUND FLOOR + STILT (TOWER-1 to 7) FOR G.F COVERAGE =2811.515+730.35+813.015+198.60 + 180.0 =4733.48 SQM. =21.028 %

STILT AREA ON G.F. (TOWER-1 to 7) = 730.35 SQM

TOTAL COVD. AREA OF MUMTY & M. ROOM (TOWER 1 to 7) + COMMERCIAL & ANGANWARI/COMMU. HALL) = 400.688+30.137+78.435 = 509.26 SQM. (NON-F.A.R)

TOTAL PROP. COVD. AREA OF INCLU. TOWER (1 to 7) RESI. +STILT+COMMERCIAL+ COMMUNITY & ANGANWADI + ELE. PANAL/ FIRE/GAURD RM. + MUMTY/MACH. RM. +STAIR WELL +RESI. & COMMERCIAL + 48470.063+730.350+1547.595+198.60+198.60+180.0+509.26+ (STAIR WELL= 2604.274) = 54518.742 SQM.

PARKING DETAIL :-
TOTAL CAR PARKING REQUIRED
TOTAL NOS. OF FLATS (0.5 ECS) =818/2 = 409 Nos. Cars Required
PROVIDED PARKING:-
PROPOSED SUR FACE PARKING =11747.352/23 = 510.75 Nos Of Cars
UNDER STILT = 730.35 / 28 = 26.08 NOS CAR
TOTAL NOS CARs = 536.83

TOTAL TWO WHEELER PARKING REQUIRED
ONE TWO WHEELER FOR PER DEWELLING UNITS
TOTAL NOS. OF FLATS = 818 Required Two wheelers
PROVIDED TWO WHEELER = 830 Nos.

PERM. GREEN AREA = 15% OF PLOT AREA = 22510.603X15/100 = 3376.59 SQM.
PROP. GREEN AREA = 5757.588 SQM. = 25.57 %

TOTAL NOS. DWELLING UNITS REQUIRED = 801
TOTAL DWELLING UNITS PROVIDED = 818
TOTAL DENSITY PERMISSIBLE = 750.900 PPA
TOTAL DENSITY PROPOSED- (818 D.U. X 5 PERSON) / 5.34 ACRE = 765.92 PPA

DETAIL OF TOWER COVERED AREA FOR F.A.R.

FLOOR	TOWER-1	TOWER-2	TOWER-3	TOWER-4	TOWER-5	TOWER-6	TOWER-7	TOTAL IN SQM.
	TYPE-A	TYPE-A	TYPE-A	TYPE-A	TYPE-A	TYPE-A	TYPE-A	
	G+14 (3BHK)	G+14 (3BHK)	G+14 (3BHK)	G+14 (3BHK)	G+14 (3BHK)	G+14 (1BHK)	G+13 (1BHK)	
STILT	121.54	120.872	120.872	120.872	120.872	62.661	62.661	730.350
GROUND FLOOR	450.709	450.709	450.709	450.709	450.709	258.785	258.785	2811.515
FIRST FLOOR	542.803	542.165	542.165	542.165	542.165	285.098	285.098	3281.659
SECOND FLOOR	542.803	542.165	542.165	542.165	542.165	285.098	285.098	3281.659
THIRD FLOOR	542.803	542.165	542.165	542.165	542.165	285.098	285.098	3281.659
FOURTH FLOOR	542.803	542.165	542.165	542.165	542.165	285.098	285.098	3281.659
FIFTH FLOOR	542.803	542.165	542.165	542.165	542.165	285.098	285.098	3281.659
SIXTH FLOOR	542.803	542.165	542.165	542.165	542.165	285.098	285.098	3281.659
SEVENTH FLOOR	542.803	542.165	542.165	542.165	542.165	285.098	285.098	3281.659
EIGHTH FLOOR	542.803	542.165	542.165	542.165	542.165	285.098	285.098	3281.659
NINETH FLOOR	542.803	542.165	542.165	542.165	542.165	285.098	285.098	3281.659
TENTH FLOOR	542.803	542.165	542.165	542.165	542.165	285.098	285.098	3281.659
ELEVENTH FLOOR	542.803	542.165	542.165	542.165	542.165	285.098	285.098	3281.659
TWELVE FLOOR	542.803	542.165	542.165	542.165	542.165	285.098	285.098	3281.659
THIRTEEN FLOOR	542.803	542.165	542.165	542.165	542.165	285.098	285.098	3281.659
FOURTEEN FLOOR	542.803	542.165	542.165	542.165	542.165	285.098		2996.571
TOTAL AREA	8050.451	[illegible]	[illegible]	[illegible]	[illegible]	4250.157	3965.059	48470.063

DETAIL OF CARPET AREA FLOOR/ TOWERWISE for Tower 1 to 5 (3BHK)

[illegible]

DETAIL OF CARPET AREA FLOOR/ TOWERWISE for Tower 6 (1BHK)

[illegible]

DETAIL OF CARPET AREA FLOOR/ TOWERWISE for Tower 7 (1BHK)

[illegible]

TOTAL CORPET AREA OF TOWER -1 to 7: 42239.392

DETAIL OF FLATS TOWER & FLOORWISE

SL. NO.	FLOOR	TOWER-1	TOWER-2	TOWER-3	TOWER-4	TOWER-5	TOWER-6	TOWER-7	TOTAL FLATS
		3BHK	3BHK	3BHK	3BHK	3BHK	1BHK	1BHK	
		G+14	G+14	G+14	G+14	G+14	G+14	G+13	
1	GROUND FLOOR	6	6	6	6	6	6	6	42
2	FIRST FLOOR	8	8	8	8	8	8	8	56
3	SECOND FLOOR	8	8	8	8	8	8	8	56
4	THIRD FLOOR	8	8	8	8	8	8	8	56
5	FOURTH FLOOR	8	8	8	8	8	8	8	56
6	FIFTH FLOOR	8	8	8	8	8	8	8	56
7	SIXTH FLOOR	8	8	8	8	8	8	8	56
8	SEVENTH FLOOR	8	8	8	8	8	8	8	56
9	EIGHTH FLOOR	8	8	8	8	8	8	8	56
10	NINETH FLOOR	8	8	8	8	8	8	8	56
11	TENTH FLOOR	8	8	8	8	8	8	8	56
12	ELEVENTH FLOOR	8	8	8	8	8	8	8	56
13	TWELVE FLOOR	8	8	8	8	8	8	8	56
14	THIRTEEN FLOOR	8	8	8	8	8	8	8	56
15	FOURTEEN FLOOR	8	8	8	8	8	8		48
	TOTAL FLAT (3&1BHK)	118	118	118	118	118	118	110	818
						590		228	818

NOTE:-
THE RESPONSIBILITY TO THE STRUCTURAL DESIGN AND STRUCTURAL STABILITY OF THE BUILDING BLOCK SHALL BE SOLELY OF THE ARCHITECT/STRUCTURE ENGINEERS/OWNER.

NOTE :- THE BUILDING ABOVE 30.0 METRES HEIGHT, MACHANICAL VENTILATION SYSTEM SHALL BE INSTALLED IN VENTILATION SHAFT WITH 100 % POWER BACK UP.

AREA CALCULATION OF MUMTYS, MACH. ROOM, STAIR WELL AND BALCONY

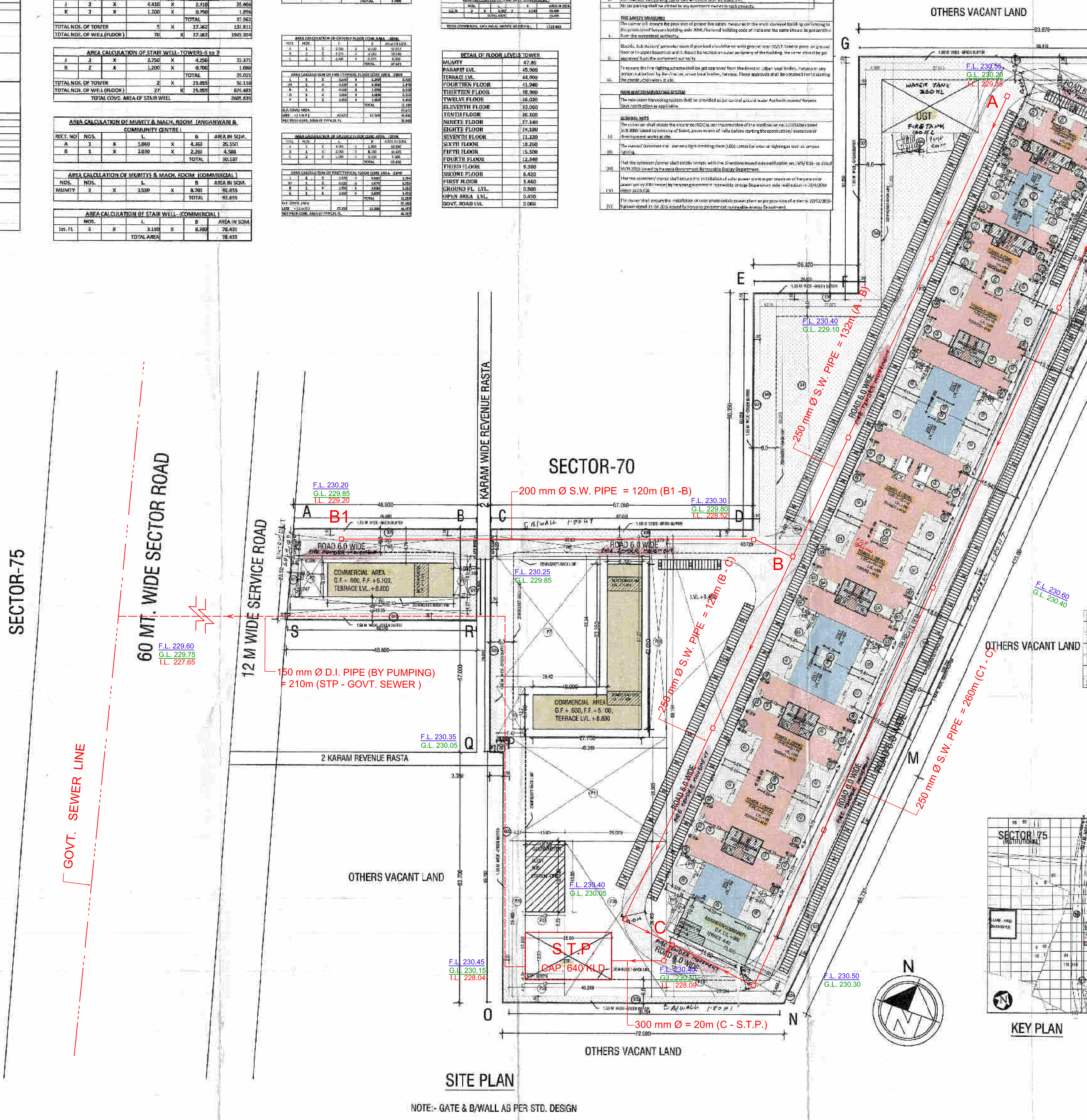
[illegible]

TOTAL COMMERCIAL AREA INCLU. MUMTY +STAIR WELL: 1725.885

DETAIL OF FLOOR LEVELS TOWER

MUMTY	47.86
PARAPET LVL.	45.900
TERRACE LVL.	44.900
FOURTEEN FLOOR	41.940
THIRTEEN FLOOR	38.980
TWELVE FLOOR	36.020
ELEVENTH FLOOR	33.060
TENTH FLOOR	30.100
NINETH FLOOR	27.140
EIGHTH FLOOR	24.180
SEVENTH FLOOR	21.220
SIXTH FLOOR	18.260
FIFTH FLOOR	15.300
FOURTH FLOOR	12.340
THIRD FLOOR	9.380
SECOND FLOOR	6.420
FIRST FLOOR	3.460
GROUND FL. LVL.	0.500
OPEN AREA LVL.	0.450
GOVT. ROAD LVL.	0.000

[illegible]



NOTE:- GATE & B/WALL AS PER STD. DESIGN

LEGEND
1. SEWER LINE — M.H.
2. D.I. PIPE LINE (BY PUMPING)
3. GOVT. SEWER LINE
4. S.T.P.
5. F.L. = 230.30
G.L. = 229.80
I.L. = 228.52

LEGEND
INTERNAL ROAD
PARKING AREA
GREEN AREA
COMMERCIAL AREA
RESIDENTIAL
ANGANWARI/COMMUNITY
ELECTRICAL PANEL, DG. SET, GAURD METER RM.

Rajesh Dutt
JD(HQ)

PROPOSED BUILDING PLAN OF AFFORDABLE GROUP HOUSING COLONY OVER AN AREA MEASURING -5.5625 ACRES (LIC. No.109 OF 2019, Dated. 11.09.2019) IN THE REVENUE ESTATE OF VILLAGE BADSHAH PUR,SECTOR-70, GURUGRAM BEING DEVELOPED BY RAM AVTAR & OTHERS

DRG. TITLE: SITE PLAN

DETAIL OF AREA

ENGINEER SIGNATURE

OWNER'S SIGNATURE

ARCHITECT'S SIGNATURE

VIVEK SINGH RAO
C.O.A. Reg. No. CA/93/25040
RAO AND ASSOCIATE
374, U.V., Ph-IV, Gurgaon-15
Ph:- 2347706-07, 9811130887

PROJECT NO. RA-5023	DRG. NO. A-1/12	NORTH
SCALE- 1:400	DATE SEPT- 2019	
DRAWN BY- RAMBABU	CKD. BY - V.S. RAO	

ARCHITECTS
RAO AND ASSOCIATE
ARCHITECTS PLANNERS ENGINEERS INTERIORS VALUERS
374,UDYOG VIHAR,PHASE-4,SEC-18 GURGAON,HARYANA(INDIA)
PH. (0124) - 2347706, 2347707 FAX 0124 - 2347707

SEWERAGE SCHEME

STORM WATER DRAINAGE SCHEME

DETAIL OF AREA STATMENT

	Acre	Sqm in 1 Acre	AREA IN SQM.		TOTAL G.F. COVERAGE RESI. +STILT, COMM. + COMMU. ELE./FIRE GUARD. METER	TOTAL MUMTY & MACH. RM. + STAIR WELL AREA	TOTAL PROP. COVD. AREA OF F.A.R+ STILT+COMM.+ ANGANWARI +COMMU.+ BASEMENT+ MUMTY/MACH. RM.+ STAIR WELL
TOTAL PLOT AREA	5.56250	4046.850	22510.603	Sqm.			
PERM. G. F. COVERAGE @ 50%			11255.302	Sqm.			
PERMISSIBLE AREA / FAR :-							
1) COMMERCIAL @ 4%	0.2225		900.424	Sqm.	2811.515	400.688	48470.063 Resi. F.A.R
F.A.R = 175%			1575.742	Sqm.	730.35	30.137	730.35 Stilt
2) RESIDENTIAL @ 96%	5.340		21610.179	Sqm.	813.015	78.436	1547.595 Comm. F.A.R
F.A.R = 225%			48622.903	Sqm.	198.600		198.600 Community
3) COMMUNITY HALL			185.810	Sqm.	180.00		198.600 Anganwari
4) ANGANWARI			185.810	Sqm.		509.260	180.00 Ele. Panel,Fire,G.
PROP. FAR. / COVD. AREA :-			TOTAL IN SQM.	%AGE	4733.480	STAIR WELL	509.260 Mumtys
1) RESIDENTIAL			2811.515	13.010	21.028	2405.839	2684.274 Stair well
2) COMMERCIAL			1547.595	171.874	%	78.436	
3) COMMUNITY HALL (NON-FAR)			198.600				
4) ANGANWARI (NON-FAR)			198.600	397.200		2684.274	54518.742 SQM
5) ELE. PANEL/FIRE CONTROL RM/GUARD. METER RM. NON-FAR			180.000				

PERMISSIBLE % OF PLOT USED =
TOTAL COVERED AREA ON GROUND FLOOR + STILT (TOWER-1 to 7) FOR G.F COVERAGE =2811.515+730.35+813.015+198.60 + 180.0 =4733.48 SQM. =21.028 %

STILT AREA ON G.F. (TOWER-1 to 7) = 730.35 SQM

TOTAL COVD. AREA OF MUMTY & M.ROOM (TOWER 1 to 7) + COMMERCIAL & ANGANWARI/COMMU. HALL) = 400.688+30.137+78.435 = 509.26 SQM. (NON-F.A.R)

TOTAL PROP. COVD. AREA OF INCLU. TOWER (1 to 7) RESI. +STILT+COMMERCIAL+ COMMUNITY & ANGANWADI + ELE. PANAL/ FIRE/GAURD RM. + MUMTY/MACH. RM. +STAIR WELL=RESI. & COMMERCIAL = 48470.063+730.350+1547.595+198.60+198.60+180.0+509.26+ (STAIR WELL= 2684.274) = 54518.742 SQM.

PARKING DETAIL :-
TOTAL CAR PARKING REQUIRED
TOTAL NOS. OF FLATS (0.5 ECS) =818/2 = 409 Nos. Cars Required
PROVIDED PARKING:-
PROPOSED SUR FACEPARKING =11717.352/23 = 516.75 Nos. Of Cars
UNDER STILT = 730.35 / 28 = 26.08 NOS CAR
TOTAL NOS CARs = 516.83
TOTAL TWO WHEELER PARKING REQUIRED
ONE TWO WHEELER FOR PER DEWELING UNITS
TOTAL NOS. OF FLATS = 818 Required Two wheelers
PROVIDED TWO WHEELER = 830 Nos.
PERM. GREEN AREA = 15% OF PLOT AREA = 22510.603X15/100 = 3376.59 SQM.
PROP. GREEN AREA = 5757.580 SQM. = 25.57 %
TOTAL NOS. DWELLING UNITS REQUIRED = 801
TOTAL DWELLING UNITS PROVIDED = 818
TOTAL DENSITY PERMISSIBLE = 750-900 PPA
TOTAL DENSITY PROPOSED- (818 D.U. X 5 PERSON) / 5.34 ACRE = 765.92 PPA

AREA CALCULATION OF MUMTYS & MACH. ROOM-3BHK TOWER-1 to 5

NOS.	NOS.		L		B	AREA IN SQM.
A	1	X	6.710	X	8.850	59.384
					TOTAL	59.384
TOTAL NOS OF MUMTYS/MACH. RM.				5	59.384	296.918

AREA CALCULATION OF MUMTYS & MACH. ROOM- 1 BHK TOWER- 6 & 7

NOS.	NOS.		L		B	AREA IN SQM.
A	1	X	3.050	X	11.700	35.685
B	1	X	2.000	X	8.100	16.200
					TOTAL	51.885
TOTAL NOS OF MUMTYS/MACH. RM.				2	51.885	103.770
TOTAL COVD. AREA OF MUMTY & MACH. RM.						400.688

AREA CALCULATION OF STAIR WELL- TOWERS-1 to 5

			L		B	
J	2	X	4.410	X	2.910	25.666
K	2	X	1.200	X	0.790	1.896
					TOTAL	27.562
TOTAL NOS. OF TOWER			5	X	27.562	137.811
TOTAL NOS. OF WELL (FLOOR)			70	X	27.562	1929.354

AREA CALCULATION OF STAIR WELL- TOWERS-6 to 7

			L		B	
J	2	X	2.750	X	4.250	23.375
K	2	X	1.200	X	0.700	1.680
					TOTAL	25.055
TOTAL NOS. OF TOWER			2	X	25.055	50.110
TOTAL NOS. OF WELL (FLOOR)			27	X	25.055	676.485
TOTAL COVD. AREA OF STAIR WELL						2605.839

AREA CALCULATION OF MUMTY & MACH. ROOM (ANGANWARI & COMMUNITY CENTRE)

RECT. NO	NOS.		L		B	AREA IN SQM.
A	1	X	5.860	X	4.360	25.550
B	1	X	2.030	X	2.260	4.588
					TOTAL	30.137

AREA CALCULATION OF MUMTYS & MACH. ROOM (COMMERCIAL)

NOS.	NOS.		L		B	AREA IN SQM.
MUMTY	3	X	3.550	X	8.700	92.655
					TOTAL	92.655

AREA CALCULATION OF STAIR WELL- (COMMERCIAL)

	NOS.		L		B	AREA IN SQM.
1st. FL	3	X	3.150	X	8.300	78.435
			TOTAL AREA			78.435

AREA CALCULATION OF BALCONY UNIT-A, B & C (3BHK)

UNITS		L		B	AREA IN SQM.
A	1	3.300	X	1.500	4.950
B	1	3.500	X	1.500	5.250
C	1	3.300	X	1.500	4.950
				TOTAL	15.150

AREA CALCULATION OF BALCONY UNIT-A -(1BHK)

NOS.		L		B	AREA IN SQM.
A	1	6.070	X	1.500	9.105
				TOTAL	9.105

AREA CALCULATION OF BALCONY UNIT: B -(1BHK)

NOS.		L		B	AREA IN SQM.
A	1	2.300	X	1.500	3.450
B	1	1.000	X	1.500	1.500
C	1	1.370	X	1.500	2.055
				TOTAL	7.005

AREA CALCULATION OF GROUND FLOOR CORE AREA -3BHK [illegible]

AREA CALCULATION OF FIRST/TYPICAL FLOOR CORE AREA -3BHK [illegible]

AREA CALCULATION OF GROUND FLOOR CORE AREA -1BHK [illegible]

AREA CALCULATION OF FIRST/TYPICAL FLOOR CORE AREA -1BHK [illegible]

AREA CALCULATION OF GROUND FLOOR - COMMERCIAL [illegible]

AREA CALCULATION OF FIRST FLOOR - COMMERCIAL [illegible]

AREA CALCULATION OF MUMTYS & MACH. ROOM (COMMERCIAL) [illegible]

AREA CALCULATION OF STAIR WELL (COMMERCIAL) [illegible]

TOTAL COMMERCIAL AREA INCLU. MUMTY -STAIR WELL 1718.885

DETAIL OF FLOOR LEVELS TOWER

MUMTY	47.86
PARAPET LVL.	45.900
TERRACE LVL.	44.900
FOURTEEN FLOOR	41.940
THIRTEEN FLOOR	38.980
TWELVE FLOOR	36.020
ELEVENTH FLOOR	33.060
TENTH FLOOR	30.100
NINETH FLOOR	27.140
EIGHTH FLOOR	24.180
SEVENTH FLOOR	21.220
SIXTH FLOOR	18.260
FIFTH FLOOR	15.300
FOURTH FLOOR	12.340
THIRD FLOOR	9.380
SECOND FLOOR	6.420
FIRST FLOOR	3.460
GROUND FL. LVL.	0.500
OPEN AREA LVL.	0.450
GOVT. ROAD LVL.	0.000

PARKING

a. The parking space shall be provided at the rate of half equivalent car space (ECS) for each dwelling unit.
b. Only one two-wheeler parking site shall be earmarked for each flat which shall be allotted only to the flat owners. The parking bay of two-wheelers shall be 0.8X2.5 m.
c. No car parking shall be allowed to any apartment owner in such projects.

FIRE SAFETY MEASURES

i. The owner will ensure the provision of proper fire safety measures in the multi storeyed building conforming to the provision of Haryana building code 2016 / National building code of India and the same should be got certified from the competent authority.
ii. Electric Sub station/ generator room if provided should be on solid ground near DG/LT. Control panel on ground floor or in upper basement and it should be located on outer periphery of the building, the same should be got approved from the competent authority.
iii. To ensure the Fire fighting scheme shall be got approved from the director, urban local bodies, haryana or any person authorized by the director, urban local bodies, haryana. These approvals shall be obtained prior to starting the construction work at site.

RAIN WATER HARVESTING SYSTEM

The rain water harvesting system shall be provided as per central ground water Authority norms/Haryana Govt.notification as applicable.

GENERAL NOTE

(i) The coloniser shall obtain the clearance/NOC as per the provision of the notification no. S.O.1533(e) dated 14.9.2006 issued by ministry of forest, government of india before starting the construction/ execution of development works at site.
(ii) The owner/ Colonisers shall use only light-Emitting diode (LED) lamps for internal lighting as well as campus Lighting.
(iii) That the coloniser/owner shall strictly comply with the directions issued vide notification no 19/6/2016-5p dated 31.03.2016 issued by haryana Government Renewable Energy Department.
(iv) That the coloniser/owner shall ensure the installation of solar power plant as per provision of haryana solar power policy 2016 issued by haryana government renewable energy Department vide notification 19/4/2016 dated 14.03.2016.
(v) The owner shall ensure the installation of solar photovoltaic power plant as per provision of order no 22/12/2005-5 power dated 21.03.2016 issued by Haryana government renewable energy Department.

DETAIL OF TOWER COVERED AREA FOR F.A.R

FLOOR	TOWER-1	TOWER-2	TOWER-3	TOWER-4	TOWER-5	TOWER-6	TOWER-7	TOTAL IN SQM.
	TYPE-A	TYPE-A	TYPE-A	TYPE-A	TYPE-A	TYPE-A	TYPE-A	
	G+14 (3BHK)	G+14 (3BHK)	G+14 (3BHK)	G+14 (3BHK)	G+14 (3BHK)	G+14 (1BHK)	G+13 (1BHK)	
STILT	121.34	120.072	120.072	120.072	120.072	62.661	62.661	730.350
GROUND FLOOR	458.789	458.789	458.789	458.789	458.789	258.785	258.785	2811.515
FIRST FLOOR	542.833	542.165	542.165	542.165	542.165	285.098	285.098	3281.689
SECOND FLOOR	542.833	542.165	542.165	542.165	542.165	285.098	285.098	3281.689
THIRD FLOOR	542.833	542.165	542.165	542.165	542.165	285.098	285.098	3281.689
FOURTH FLOOR	542.833	542.165	542.165	542.165	542.165	285.098	285.098	3281.689
FIFTH FLOOR	542.833	542.165	542.165	542.165	542.165	285.098	285.098	3281.689
SIXTH FLOOR	542.833	542.165	542.165	542.165	542.165	285.098	285.098	3281.689
SEVENTH FLOOR	542.833	542.165	542.165	542.165	542.165	285.098	285.098	3281.689
EIGHTH FLOOR	542.833	542.165	542.165	542.165	542.165	285.098	285.098	3281.689
NINETH FLOOR	542.833	542.165	542.165	542.165	542.165	285.098	285.098	3281.689
TENTH FLOOR	542.833	542.165	542.165	542.165	542.165	285.098	285.098	3281.689
ELEVENTH FLOOR	542.833	542.165	542.165	542.165	542.165	285.098	285.098	3281.689
TWELVE FLOOR	542.833	542.165	542.165	542.165	542.165	285.098	285.098	3281.689
THIRTEEN FLOOR	542.833	542.165	542.165	542.165	542.165	285.098	285.098	3281.689
FOURTEEN FLOOR	542.833	542.165	542.165	542.165	542.165	285.098		2996.591
TOTAL AREA	8058.451	8049.099	8049.099	8049.099	8049.099	4250.157	3965.059	48470.063

DETAIL OF CARPET AREA FLOOR/ TOWERWISE for Tower 1 to 5 (3BHK)

SL. NO.	FLOORS	UNIT-A Nos.	UNIT-A AREA	UNIT-A TOTAL	UNIT-B Nos.	UNIT-B AREA	UNIT-B TOTAL	NET TOTAL	TOTAL NOS. OF TOWER	Total Carpet area
1	GROUND FLOOR	2	59.797	119.594	4	59.946	239.784	359.378	5	1796.890
2	FIRST FLOOR	4	59.797	239.188	4	59.946	239.784	478.972	5	2394.860
3	SECOND FLOOR	4	59.797	239.188	4	59.946	239.784	478.972	5	2394.860
4	THIRD FLOOR	4	59.797	239.188	4	59.946	239.784	478.972	5	2394.860
5	FOUTH FLOOR	4	59.797	239.188	4	59.946	239.784	478.972	5	2394.860
6	FIFTH FLOOR	4	59.797	239.188	4	59.946	239.784	478.972	5	2394.860
7	SIXTH FLOOR	4	59.797	239.188	4	59.946	239.784	478.972	5	2394.860
8	SEVENTH FLOOR	4	59.797	239.188	4	59.946	239.784	478.972	5	2394.860
9	EIGHTH FLOOR	4	59.797	239.188	4	59.946	239.784	478.972	5	2394.860
10	NINETH FLOOR	4	59.797	239.188	4	59.946	239.784	478.972	5	2394.860
11	TENTH FLOOR	4	59.797	239.188	4	59.946	239.784	478.972	5	2394.860
12	ELEVENTH FLOOR	4	59.797	239.188	4	59.946	239.784	478.972	5	2394.860
13	TWELVE FLOOR	4	59.797	239.188	4	59.946	239.784	478.972	5	2394.860
14	THIRTEEN FLOOR	4	59.797	239.188	4	59.946	239.784	478.972	5	2394.860
15	FOURTEEN FLOOR	4	59.797	239.188	4	59.946	239.784	478.972	5	2394.860
	TOTAL	58	896.955	3468.226	60	899.19	3596.76	7064.986		35324.930

DETAIL OF CARPET AREA FLOOR/ TOWERWISE for Tower- 6 (1BHK)

SL. NO.	FLOORS	UNIT-A Nos.	UNIT-A AREA	UNIT-A TOTAL	UNIT-B Nos.	UNIT-B AREA	UNIT-B TOTAL	UNIT-C Nos.	UNIT-C AREA	UNIT-C TOTAL	NET TOTAL	TOTAL NOS. OF	Total Carpet area
1	GROUND FLOOR	2	29.222	58.444	2	31.319	62.638	2	31.812	63.624	184.706	1	184.706
2	FIRST FLOOR	4	29.222	116.888	2	31.319	62.638	2	31.812	63.624	243.150	1	243.150
3	SECOND FLOOR	4	29.222	116.888	2	31.319	62.638	2	31.812	63.624	243.150	1	243.150
4	THIRD FLOOR	4	29.222	116.888	2	31.319	62.638	2	31.812	63.624	243.150	1	243.150
5	FOUTH FLOOR	4	29.222	116.888	2	31.319	62.638	2	31.812	63.624	243.150	1	243.150
6	FIFTH FLOOR	4	29.222	116.888	2	31.319	62.638	2	31.812	63.624	243.150	1	243.150
7	SIXTH FLOOR	4	29.222	116.888	2	31.319	62.638	2	31.812	63.624	243.150	1	243.150
8	SEVENTH FLOOR	4	29.222	116.888	2	31.319	62.638	2	31.812	63.624	243.150	1	243.150
9	EIGHTH FLOOR	4	29.222	116.888	2	31.319	62.638	2	31.812	63.624	243.150	1	243.150
10	NINETH FLOOR	4	29.222	116.888	2	31.319	62.638	2	31.812	63.624	243.150	1	243.150
11	TENTH FLOOR	4	29.222	116.888	2	31.319	62.638	2	31.812	63.624	243.150	1	243.150
12	ELEVENTH FLOOR	4	29.222	116.888	2	31.319	62.638	2	31.812	63.624	243.150	1	243.150
13	TWELVE FLOOR	4	29.222	116.888	2	31.319	62.638	2	31.812	63.624	243.150	1	243.150
14	THIRTEEN FLOOR	4	29.222	116.888	2	31.319	62.638	2	31.812	63.624	243.150	1	243.150
15	FOURTEEN FLOOR	4	29.222	116.888	2	31.319	62.638	2	31.812	63.624	243.150	1	243.150
	TOTAL	58	438.330	1694.876	30	469.785	939.57	30	477.18	954.36	3588.806		3588.806

DETAIL OF CARPET AREA FLOOR/ TOWERWISE for Tower- 7 (1BHK)

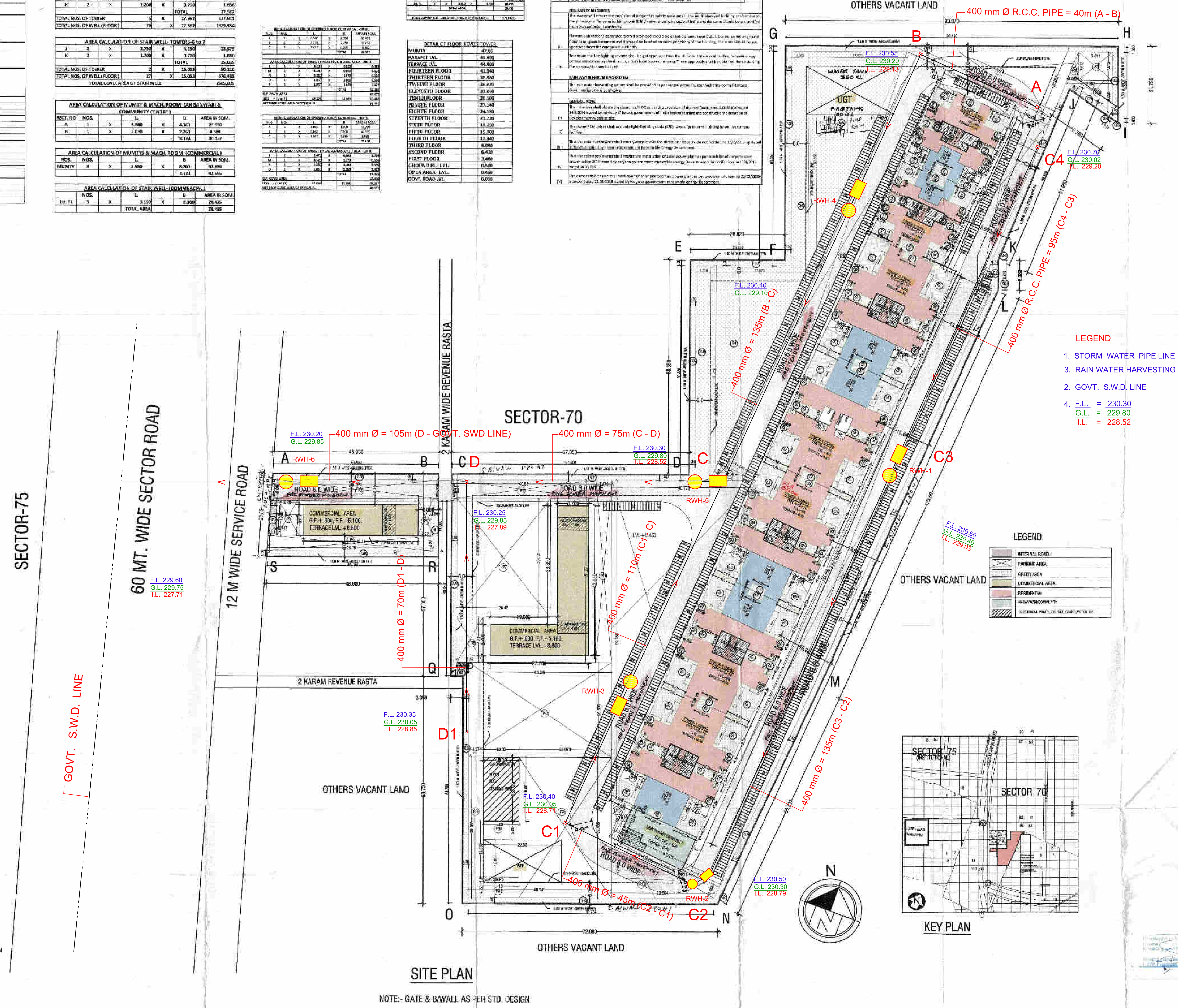
SL. NO.	FLOORS	UNIT-A Nos.	UNIT-A AREA	UNIT-A TOTAL	UNIT-B Nos.	UNIT-B AREA	UNIT-B TOTAL	UNIT-C Nos.	UNIT-C AREA	UNIT-C TOTAL	NET TOTAL	TOTAL NOS. OF	Total Carpet area
1	GROUND FLOOR	2	29.222	58.444	2	31.319	62.638	2	31.812	63.624	184.706	1	184.706
2	FIRST FLOOR	4	29.222	116.888	2	31.319	62.638	2	31.812	63.624	243.150	1	243.150
3	SECOND FLOOR	4	29.222	116.888	2	31.319	62.638	2	31.812	63.624	243.150	1	243.150
4	THIRD FLOOR	4	29.222	116.888	2	31.319	62.638	2	31.812	63.624	243.150	1	243.150
5	FOUTH FLOOR	4	29.222	116.888	2	31.319	62.638	2	31.812	63.624	243.150	1	243.150
6	FIFTH FLOOR	4	29.222	116.888	2	31.319	62.638	2	31.812	63.624	243.150	1	243.150
7	SIXTH FLOOR	4	29.222	116.888	2	31.319	62.638	2	31.812	63.624	243.150	1	243.150
8	SEVENTH FLOOR	4	29.222	116.888	2	31.319	62.638	2	31.812	63.624	243.150	1	243.150
9	EIGHTH FLOOR	4	29.222	116.888	2	31.319	62.638	2	31.812	63.624	243.150	1	243.150
10	NINETH FLOOR	4	29.222	116.888	2	31.319	62.638	2	31.812	63.624	243.150	1	243.150
11	TENTH FLOOR	4	29.222	116.888	2	31.319	62.638	2	31.812	63.624	243.150	1	243.150
12	ELEVENTH FLOOR	4	29.222	116.888	2	31.319	62.638	2	31.812	63.624	243.150	1	243.150
13	TWELVE FLOOR	4	29.222	116.888	2	31.319	62.638	2	31.812	63.624	243.150	1	243.150
14	THIRTEEN FLOOR	4	29.222	116.888	2	31.319	62.638	2	31.812	63.624	243.150	1	243.150
	TOTAL	54	409.108	1577.988	28	438.466	876.932	28	445.368	890.736	3345.656		3345.656
	TOTAL CARPET AREA OF TOWER -1 to 7												42259.392

DETAIL OF FLATS TOWER & FLOORWISE

SL. NO.	FLOOR	TOWER-1	TOWER-2	TOWER-3	TOWER-4	TOWER-5	TOWER-6	TOWER-7	TOTAL FLATS
		3BHK	3BHK	3BHK	3BHK	3BHK	1BHK	1BHK	
		G+14	G+14	G+14	G+14	G+14	G+14	G+13	
1	GROUND FLOOR	6	6	6	6	6	6	6	42
2	FIRST FLOOR	8	8	8	8	8	8	8	56
3	SECOND FLOOR	8	8	8	8	8	8	8	56
4	THIRD FLOOR	8	8	8	8	8	8	8	56
5	FOURTH FLOOR	8	8	8	8	8	8	8	56
6	FIFTH FLOOR	8	8	8	8	8	8	8	56
7	SIXTH FLOOR	8	8	8	8	8	8	8	56
8	SEVENTH FLOOR	8	8	8	8	8	8	8	56
9	EIGHTH FLOOR	8	8	8	8	8	8	8	56
10	NINETH FLOOR	8	8	8	8	8	8	8	56
11	TENTH FLOOR	8	8	8	8	8	8	8	56
12	ELEVENTH FLOOR	8	8	8	8	8	8	8	56
13	TWELVE FLOOR	8	8	8	8	8	8	8	56
14	THIRTEEN FLOOR	8	8	8	8	8	8	8	56
15	FOURTEEN FLOOR	8	8	8	8	8	8		48
	TOTAL FLAT (3&1BHK)	118	118	118	118	118	118	110	818
						590		228	818

NOTE:-
THE RESPONSIBILITY TO THE STRUCTURAL DESIGN AND STRUCTURAL STABILITY OF THE BUILDING BLOCK SHALL BE SOLELY OF THE ARCHITECT/STRUCTURE ENGINEERS/OWNER.

NOTE :- THE BUILDING ABOVE 30.0 METRES HEIGHT, MACHANICAL VENTILATION SYSTEM SHALL BE INSTALLED ON VENTILATION SHAFT WITH 100 % POWER BACK UP.



SITE PLAN

NOTE:- GATE & B/WALL AS PER STD. DESIGN

PROPOSED BUILDING PLAN OF AFFORDABLE GROUP HOUSING COLONY OVER AN AREA MEASURING -5.5625 ACRES (LIC. No.109 OF 2019, Dated. 11.09.2019) IN THE REVENUE ESTATE OF VILLAGE BADSHAH PUR,SECTOR-70, GURUGRAM BEING DEVELOPED BY RAM AVTAR & OTHERS

Rajesh Dutt JD(HQ)

DRG. TITLE SITE PLAN

DETAIL OF AREA

ENGINEER SIGNATURE

OWNER'S SIGNATURE

Ram Avtar

ARCHITECT'S SIGNATURE

VIVEK SINGH RAO
B. Arch, M.C.A, F.I.I.A.
C.O.A. Reg. No. CA/99/25040
RAO AND ASSOCIATE
374, U.V., Ph-IV, Gurgaon-15
Ph:- 2347706-07, 9811139867

PROJECT NO. RA-5023	DRG. NO. A-1/12	NORTH
SCALE- 1:400	DATE SEPT- 2019	
DRAWN BY- RAMBABU	CKD. BY - V.S. RAO	

ARCHITECTS
RAO AND ASSOCIATE
ARCHITECTS PLANNERS ENGINEERS INTERIORS VALUERS
374,UDYOG VIHAR,PHASE-4,SEC-18 GURGAON,HARYANA(INDIA)
PH. (0124) - 2347706, 2347707 FAX 0124 - 2347707

ROADS

DETAIL OF AREA STATMENT

	Acre	Sqm In 1 Acre	AREA IN SQM.		TOTAL G.F. COVERAGE RESI. +STILT, COMMR. + COMMU. ELE./FIRE GUARD. METER	TOTAL MUMTY & MACH. RM. + STAIR WELL AREA	TOTAL PROP. COVD. AREA OF F:A:R+ STILT+COMM + ANGANWARI +COMMU. + BASEMENT+ MUMTY/MACH. RM.+ STAIR WELL	
TOTAL PLOT AREA	5.56250	4046.850	22510.603	Sqm.				
PERM. G.F. COVERAGE @50%			11255.302	Sqm.				
PERMISSIBLE AREA / FAR :-								
1) COMMERCIAL @ 4%	0.2225		900.424	Sqm.	2811.515	400.688	48470.063	Resi. F:A:R
F:A:R = 175%			1575.742	Sqm.	730.35	30.137	730.35	Stilt
2) RESIDENTIAL@ 96%	5.340		21610.179	Sqm.	813.015	78.435	1547.595	Comm. F:A:R
F:A:R = 225%			48622.903	Sqm.	198.600		198.600	Community
3) COMMUNITY HALL			185.810	Sqm.	180.00		198.600	Anganwari
4) ANGANWARI			185.810	Sqm.		509.260	180.00	Ele. Panel,Fire,G.
PROP. FAR. / COVD. AREA :-			TOTAL IN SQM.	%AGE	4733.480	STAIR WELL	509.260	Mumtys
1) RESIDENTIAL			2811.515	13.010	21.028	2605.839	2684.274	Stair well
2) COMMERCIAL			1547.595	171.874	.%.	78.435		
3) COMMUNITY HALL (NON-FAR)			198.600					
4) ANGANWARI (NON-FAR)			198.600	397.200		2684.274	54618.742	SQM
5) ELE. PANEL/FIRE CONTROL RM/GUARD. METER RM. NON-FAR			180.000					

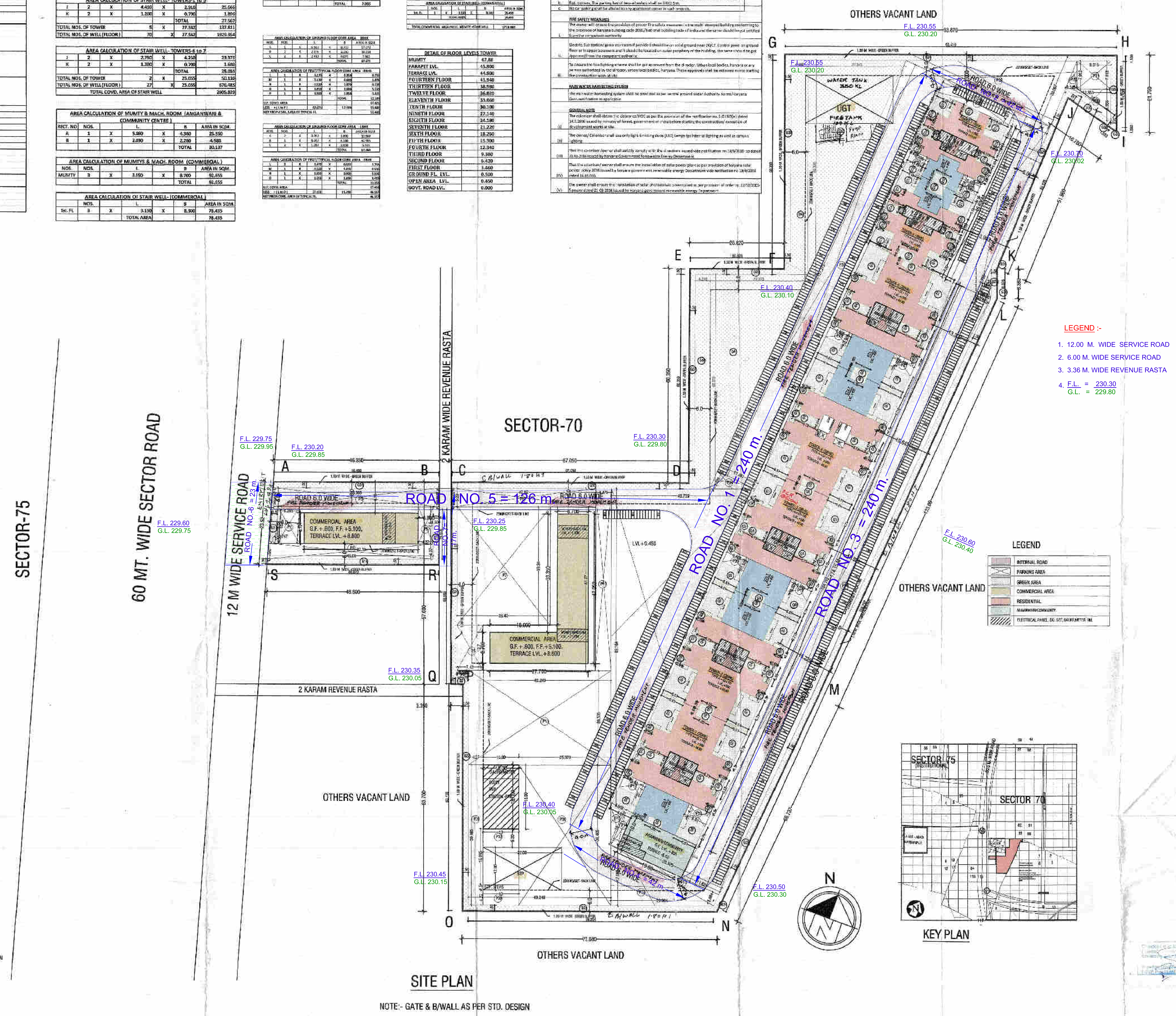
PERMISSIBLE % OF PLOT USED =
TOTAL COVERED AREA ON GROUND FLOOR + STILT (TOWER-1 to 7) FOR G.F COVERAGE =2811.515+730.35+813.015+198.60+180.0 =4733.48 SQM. =21.028 %

STILT AREA ON G.F. (TOWER-1 to 7) = 730.35 SQM

TOTAL COVD. AREA OF MUMTY & M. ROOM (TOWER 1 to 7) + COMMERCIAL & ANGANWARI/COMMU. HALL) = 400.688+30.137+78.435 = 509.26 SQM. (NON-F.A.R)

TOTAL PROP . COVD. AREA OF INCLU. TOWER (1 to 7) RESI. +STILT+COMMERCIAL+ COMMUNITY & ANGANWADI + ELE. PANAL/ FIRE/GAURD RM. + MUMTY/MACH. RM. +STAIR WELL =RESI. & COMMERCIAL = 48470.063+730.350+1547.595+198.60+198.60+180.0+509.26+ (STAIR WELL= 2684.274) = 54518.742 SQM.

PARKING DETAIL :-
TOTAL CAR PARKING REQUIRED
TOTAL NOS. OF FLATS (0.5 ECS) =818/2 = 409 Nos. Cars Required
PROVIDED PARKING :-
PROPOSED SURFACEPARKING =11747.352/23 = 510.75 Nos. Of Cars
UNDER STILT = 730.35 / 28 = 26.08 NOS CAR
TOTAL NOS CARs = 536.83
TOTAL TWO WHEELER PARKING REQUIRED
ONE TWO WHEELER FOR PER DEWELING UNTIS
TOTAL NOS. OF FLATS = 818 Required Two wheelers
PROVIDED TWO WHEELER = 830 Nos.
PERM. GREEN AREA = 15% OF PLOT AREA = 22510.603X15/100 = 3376.59 SQM.
PROP. GREEN AREA = 5757.588 SQM. = 25.57 %
TOTAL NOS. DWELLING UNITS REQUIRED = 901
TOTAL DWELLING UNITS PROVIDED = 818
TOTAL DENSITY PERMISSIBLE = 750-900 PPA
TOTAL DENSITY PROPOSED- (818 D.U. X 5 PERSON) / 5.34 ACRE = 765.92 PPA



NOTE:-
THE RESPONSIBILITY TO THE STRUCTURAL DESIGN AND STRUCTURAL STABILITY OF THE BUILDING BLOCK SHALL BE SOLELY OF THE ARCHITECT/STRUCTURE ENGINEERS/OWNER.

NOTE :- THE BUILDING ABOVE 30.0 METRES HEIGHT, MACHANICAL VENTILATION SYSTEM SHALL BE INSTALLED ON VENTILATION SHAFT WITH 100 % POWER BACK UP.

Rajesh Dutt
JD(HQ)

PROPOSED BUILDING PLAN OF AFFORDABLE GROUP HOUSING COLONY OVER AN AREA MEASURING -5.5625 ACRES (LIC. No.109 OF 2019, Dated. 11.09.2019) IN THE REVENUE ESTATE OF VILLAGE BADSHAH PUR,SECTOR-70, GURUGRAM BEING DEVELOPED BY RAM AVTAR & OTHERS

DRG. TITLE SITE PLAN

DETAIL OF AREA

ENGINEER SIGNATURE

OWNER'S SIGNATURE

ARCHITECT'S SIGNATURE

VIVEK SINGH RAO
B.Arch, M.C.A., F.I.I.A.
C.O.A. Reg. No. CA/99/25040
RAO AND ASSOCIATE
374, U.V., Ph-IV, Gurgaon-16
Ph:- 2347706-07, 9811130867

PROJECT NO. RA-5023	DRG. NO. A-1/12	NORTH
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ARCHITECTS
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ARCHITECTS PLANNERS ENGINEERS INTERIORS VALUERS
374,UDYOG VIHAR,PHASE-4,SEC-18 GURGAON.HARYANA(INDIA)
PH. (0124) - 2347706, 2347707 FAX 0124 - 2347707

FIRE FIGHTING SCHEME

DETAIL OF AREA STATMENT

	Acre	Sqm in 1 Acre	AREA IN SQM.		TOTAL G.F. COVERAGE RESI. +STILT, COMM. + COMM./, ELE./FIRE, GUARD, METER	TOTAL MUMTY & MACH. RM. + STAIR WELL AREA	TOTAL PROP. COVD. AREA OF F.A.R+ STILT+COMM.+ ANGANWARI +COMM./+ BASEMENT+ MUMTY/MACH. RM.+ STAIR WELL	
TOTAL PLOT AREA	5.56250	4046.860	22510.603	Sqm.				
PERM. G. F. COVERAGE @50%			11255.302	Sqm.				
PERMISSIBLE AREA / FAR :-								
1) COMMERCIAL @ 4%	0.2225		900.424	Sqm.	2811.515	400.688	48470.063	Resi. F:A:R
F.A.R = 175%			1575.742	Sqm.	730.35	30.137	730.35	Stilt
2) RESIDENTIAL@ 96%	5.340		21610.179	Sqm.	813.015	78.435	1547.595	Comm. F:A:R
F.A.R = 225%			48622.903	Sqm.	198.600		198.600	Community
3) COMMUNITY HALL			185.810	Sqm.	180.00		198.600	Anganwari
4) ANGANWARI			185.810	Sqm.		509.260	180.00	Ele. Panel,Fire,G.
PROP. FAR. / COVD. AREA :-			TOTAL IN SQM.	%AGE	4733.480	STAIR WELL	509.260	Mumtys
1) RESIDENTIAL			2811.515	13.010	21.028	2606.839	2684.274	Stair well
2) COMMERCIAL			1547.595	171.874	%.	78.435		
3) COMMUNITY HALL (NON-FAR)			198.600					
4) ANGANWARI (NON-FAR)			198.600	397.200		2684.274	54518.742	SQM
5) ELE. PANEL/FIRE CONTROL RM /GUARD, METER RM. NON-FAR			180.000					

PERMISSIBLE % OF PLOT USED =
TOTAL COVERED AREA ON GROUND FLOOR + STILT (TOWER-1 to 7) FOR G.F COVERAGE =2811.515+730.35+813.015+198.60+180.0 =4733.48 SQM. =21.028 %

STILT AREA ON G.F. (TOWER-1 to 7) = 730.35 SQM

TOTAL COVD. AREA OF MUMTY & M. ROOM (TOWER 1 to 7) + COMMERCIAL & ANGANWARI/COMMU. HALL) = 400.688+30.137+78.435 = 509.26 SQM. (NON-F.A.R)

TOTAL PROP. COVD. AREA OF INCLU. TOWER (1 to 7) RESI. +STILT+COMMERCIAL+ COMMUNITY & ANGANWADI + ELE. PANAL/ FIRE/GAURD RM. + MUMTY/MACH. RM. +STAIR WELL +RESI. & COMMERCIAL = 48470.063+730.350+1547.595+198.60+198.60+180.0+509.26+ (STAIR WELL= 2684.274) = 54518.742 SQM.

PARKING DETAIL :-
TOTAL CAR PARKING REQUIRED
TOTAL NOS. OF FLATS (0.5 ECS) =818/2 = 409 Nos. Cars Required
PROVIDED PARKING :-
PROPOSED SURFACE PARKING =11747.352/23 = 510.75 Nos. Of Cars
UNDER STILT = 730.35 / 29 = 26.08 NOS CAR
TOTAL NOS CARs = 536.83
TOTAL TWO WHEELER PARKING REQUIRED
ONE TWO WHEELER FOR PER DEWELING UNTIS
TOTAL NOS. OF FLATS = 818 Required Two wheelers
PROVIDED TWO WHEELER = 830 Nos.
PERM. GREEN AREA = 15% OF PLOT AREA = 22510.603X15/100 = 3376.59 SQM.
PROP. GREEN AREA = 5757.500 SQM. = 25.57 %
TOTAL NOS. DWELLING UNITS REQUIRED = 801
TOTAL DWELLING UNITS PROVIDED = 818
TOTAL DENSITY PERMISSIBLE = 750-900 PPA
TOTAL DENSITY PROPOSED- (818 D.U. X 5 PERSON) / 5.34 ACRE = 765.92 PPA

DETAIL OF TOWER COVERED AREA FOR F.A.R.

FLOOR	TOWER-1	TOWER-2	TOWER-3	TOWER-4	TOWER-5	TOWER-6	TOWER-7	TOTAL IN SQM.
	TYPE-A	TYPE-A	TYPE-A	TYPE-A	TYPE-A	TYPE-A	TYPE-A	
	G+14 (3BHK)	G+14 (3BHK)	G+14 (3BHK)	G+14 (3BHK)	G+14 (3BHK)	G+14 (1BHK)	G+13 (1BHK)	
STILT	121.54	120.872	120.872	120.872	120.872	62.661	62.661	730.350
GROUND FLOOR	450.799	450.799	450.799	450.799	450.799	258.795	258.795	2811.515
FIRST FLOOR	542.833	542.165	542.165	542.165	542.165	285.098	285.090	3281.689
SECOND FLOOR	542.833	542.165	542.165	542.165	542.165	285.098	285.090	3281.689
THIRD FLOOR	542.833	542.165	542.165	542.165	542.165	285.098	285.090	3281.689
FOURTH FLOOR	542.833	542.165	542.165	542.165	542.165	285.098	285.090	3281.689
FIFTH FLOOR	542.833	542.165	542.165	542.165	542.165	285.098	285.090	3281.689
SIXTH FLOOR	542.833	542.165	542.165	542.165	542.165	285.098	285.090	3281.689
SEVENTH FLOOR	542.833	542.165	542.165	542.165	542.165	285.098	285.090	3281.689
EIGHTH FLOOR	542.833	542.165	542.165	542.165	542.165	285.098	285.090	3281.689
NINETH FLOOR	542.833	542.165	542.165	542.165	542.165	285.098	285.090	3281.689
TENTH FLOOR	542.833	542.165	542.165	542.165	542.165	285.098	285.090	3281.689
ELEVENTH FLOOR	542.833	542.165	542.165	542.165	542.165	285.098	285.090	3281.689
TWELVE FLOOR	542.833	542.165	542.165	542.165	542.165	285.098	285.090	3281.689
THIRTEEN FLOOR	542.833	542.165	542.165	542.165	542.165	285.098	285.090	3281.689
FOURTEEN FLOOR	542.833	542.165	542.165	542.165	542.165	285.098		2996.591
TOTAL AREA	8058.451	8049.099	8049.099	8049.099	8049.099	4209.157	3965.059	48470.063

DETAIL OF CARPET AREA FLOOR/ TOWERWISE for Tower- 1 to 5 (3BHK)

SL. NO.	FLOORS	UNIT-A Nos.	UNIT-A AREA	UNIT-A TOTAL	UNIT-B Nos.	UNIT-B AREA	UNIT-B TOTAL	NET TOTAL	TOTAL NOS. OF TOWER	Total Carpet area
1	GROUND FLOOR	2	59.797	119.594	4	59.946	239.784	359.378	5	1796.890
2	FIRST FLOOR	4	59.797	239.188	4	59.946	239.784	478.972	5	2394.860
3	SECOND FLOOR	4	59.797	239.188	4	59.946	239.784	478.972	5	2394.860
4	THIRD FLOOR	4	59.797	239.188	4	59.946	239.784	478.972	5	2394.860
5	FOUTH FLOOR	4	59.797	239.188	4	59.946	239.784	478.972	5	2394.860
6	FIFTH FLOOR	4	59.797	239.188	4	59.946	239.784	478.972	5	2394.860
7	SIXTH FLOOR	4	59.797	239.188	4	59.946	239.784	478.972	5	2394.860
8	SEVENTH FLOOR	4	59.797	239.188	4	59.946	239.784	478.972	5	2394.860
9	EIGHTH FLOOR	4	59.797	239.188	4	59.946	239.784	478.972	5	2394.860
10	NINETH FLOOR	4	59.797	239.188	4	59.946	239.784	478.972	5	2394.860
11	TENTH FLOOR	4	59.797	239.188	4	59.946	239.784	478.972	5	2394.860
12	ELEVENTH FLOOR	4	59.797	239.188	4	59.946	239.784	478.972	5	2394.860
13	TWELVE FLOOR	4	59.797	239.188	4	59.946	239.784	478.972	5	2394.860
14	THIRTEEN FLOOR	4	59.797	239.188	4	59.946	239.784	478.972	5	2394.860
15	FOURTEEN FLOOR	4	59.797	239.188	4	59.946	239.784	478.972	5	2394.860
	TOTAL	58	896.955	3468.226	60	899.19	3596.76	7064.986		35324.980

DETAIL OF CARPET AREA FLOOR/ TOWERWISE for Tower- 6 (1BHK)

SL. NO.	FLOORS	UNIT-A Nos.	UNIT-A AREA	UNIT-A TOTAL	UNIT-B Nos.	UNIT-B AREA	UNIT-B TOTAL	UNIT-C Nos.	UNIT-C AREA	UNIT-C TOTAL	NET TOTAL	TOTAL NOS. OF	Total Carpet area
1	GROUND FLOOR	2	29.222	58.444	2	31.319	62.638	2	31.812	63.624	184.706	1	184.706
2	FIRST FLOOR	4	29.222	116.888	2	31.319	62.638	2	31.812	63.624	243.150	1	243.150
3	SECOND FLOOR	4	29.222	116.888	2	31.319	62.638	2	31.812	63.624	243.150	1	243.150
4	THIRD FLOOR	4	29.222	116.888	2	31.319	62.638	2	31.812	63.624	243.150	1	243.150
5	FOUTH FLOOR	4	29.222	116.888	2	31.319	62.638	2	31.812	63.624	243.150	1	243.150
6	FIFTH FLOOR	4	29.222	116.888	2	31.319	62.638	2	31.812	63.624	243.150	1	243.150
7	SIXTH FLOOR	4	29.222	116.888	2	31.319	62.638	2	31.812	63.624	243.150	1	243.150
8	SEVENTH FLOOR	4	29.222	116.888	2	31.319	62.638	2	31.812	63.624	243.150	1	243.150
9	EIGHTH FLOOR	4	29.222	116.888	2	31.319	62.638	2	31.812	63.624	243.150	1	243.150
10	NINETH FLOOR	4	29.222	116.888	2	31.319	62.638	2	31.812	63.624	243.150	1	243.150
11	TENTH FLOOR	4	29.222	116.888	2	31.319	62.638	2	31.812	63.624	243.150	1	243.150
12	ELEVENTH FLOOR	4	29.222	116.888	2	31.319	62.638	2	31.812	63.624	243.150	1	243.150
13	TWELVE FLOOR	4	29.222	116.888	2	31.319	62.638	2	31.812	63.624	243.150	1	243.150
14	THIRTEEN FLOOR	4	29.222	116.888	2	31.319	62.638	2	31.812	63.624	243.150	1	243.150
15	FOURTEEN FLOOR	4	29.222	116.888	2	31.319	62.638	2	31.812	63.624	243.150	1	243.150
	TOTAL	58	438.330	1694.676	30	469.785	939.57	30	477.18	954.36	3588.606		3588.606

DETAIL OF CARPET AREA FLOOR/ TOWERWISE for Tower- 7 (1BHK)

SL. NO.	FLOORS	UNIT-A Nos.	UNIT-A AREA	UNIT-A TOTAL	UNIT-B Nos.	UNIT-B AREA	UNIT-B TOTAL	UNIT-C Nos.	UNIT-C AREA	UNIT-C TOTAL	NET TOTAL	TOTAL NOS. OF	Total Carpet area
1	GROUND FLOOR	2	29.222	58.444	2	31.319	62.638	2	31.812	63.624	184.706	1	184.706
2	FIRST FLOOR	4	29.222	116.888	2	31.319	62.638	2	31.812	63.624	243.150	1	243.150
3	SECOND FLOOR	4	29.222	116.888	2	31.319	62.638	2	31.812	63.624	243.150	1	243.150
4	THIRD FLOOR	4	29.222	116.888	2	31.319	62.638	2	31.812	63.624	243.150	1	243.150
5	FOUTH FLOOR	4	29.222	116.888	2	31.319	62.638	2	31.812	63.624	243.150	1	243.150
6	FIFTH FLOOR	4	29.222	116.888	2	31.319	62.638	2	31.812	63.624	243.150	1	243.150
7	SIXTH FLOOR	4	29.222	116.888	2	31.319	62.638	2	31.812	63.624	243.150	1	243.150
8	SEVENTH FLOOR	4	29.222	116.888	2	31.319	62.638	2	31.812	63.624	243.150	1	243.150
9	EIGHTH FLOOR	4	29.222	116.888	2	31.319	62.638	2	31.812	63.624	243.150	1	243.150
10	NINETH FLOOR	4	29.222	116.888	2	31.319	62.638	2	31.812	63.624	243.150	1	243.150
11	TENTH FLOOR	4	29.222	116.888	2	31.319	62.638	2	31.812	63.624	243.150	1	243.150
12	ELEVENTH FLOOR	4	29.222	116.888	2	31.319	62.638	2	31.812	63.624	243.150	1	243.150
13	TWELVE FLOOR	4	29.222	116.888	2	31.319	62.638	2	31.812	63.624	243.150	1	243.150
14	THIRTEEN FLOOR	4	29.222	116.888	2	31.319	62.638	2	31.812	63.624	243.150	1	243.150
	TOTAL	54	409.108	1577.988	28	438.466	876.932	28	445.368	890.736	3345.656		3345.656
	TOTAL CARPET AREA OF TOWER-1 to 7												42259.392

DETAIL OF FLATS TOWER & FLOORWISE

SL. NO.	FLOOR	TOWER-1	TOWER-2	TOWER-3	TOWER-4	TOWER-5	TOWER-6	TOWER-7	TOTAL FLATS
		3BHK	3BHK	3BHK	3BHK	3BHK	1BHK	1BHK	
		G+14	G+14	G+14	G+14	G+14	G+14	G+13	
1	GROUND FLOOR	6	6	6	6	6	6	6	42
2	FIRST FLOOR	8	8	8	8	8	8	8	56
3	SECOND FLOOR	8	8	8	8	8	8	8	56
4	THIRD FLOOR	8	8	8	8	8	8	8	56
5	FOURTH FLOOR	8	8	8	8	8	8	8	56
6	FIFTH FLOOR	8	8	8	8	8	8	8	56
7	SIXTH FLOOR	8	8	8	8	8	8	8	56
8	SEVENTH FLOOR	8	8	8	8	8	8	8	56
9	EIGHTH FLOOR	8	8	8	8	8	8	8	56
10	NINETH FLOOR	8	8	8	8	8	8	8	56
11	TENTH FLOOR	8	8	8	8	8	8	8	56
12	ELEVENTH FLOOR	8	8	8	8	8	8	8	56
13	TWELVE FLOOR	8	8	8	8	8	8	8	56
14	THIRTEEN FLOOR	8	8	8	8	8	8	8	56
15	FOURTEEN FLOOR	8	8	8	8	8	8		48
	TOTAL FLAT (3&1BHK)	118	118	118	118	118	118	110	818
						590		228	818

NOTE:-
THE RESPONSIBILITY TO THE STRUCTURAL DESIGN AND STRUCTURAL STABILITY OF THE BUILDING BLOCK SHALL BE SOLELY OF THE ARCHITECT/STRUCTURE ENGINEERS/OWNER.

NOTE :- THE BUILDING ABOVE 30.0 METRES HEIGHT, MACHANICAL VENTILATION SYSTEM SHALL BE INSTALLED ON VENTILATION SHAFT WITH 100 % POWER BACK UP.

AREA CALCULATION OF MUMTYS & MACH. ROOM-3BHK TOWER-1 to 5

[illegible]

AREA CALCULATION OF MUMTYS & MACH. ROOM- 1 BHK TOWER- 6 & 7

[illegible]

AREA CALCULATION OF STAIR WELL- TOWERS-1 to 5

[illegible]

AREA CALCULATION OF STAIR WELL- TOWERS-6 to 7

[illegible]

AREA CALCULATION OF MUMTY & MACH. ROOM (ANGANWARI & COMMUNITY CENTRE)

[illegible]

AREA CALCULATION OF MUMTYS & MACH. ROOM (COMMERCIAL)

[illegible]

AREA CALCULATION OF STAIR WELL- (COMMERCIAL)

[illegible]

AREA CALCULATION OF BALCONY

[illegible]

AREA CALCULATION OF STAIR WELL- (COMMERCIAL)

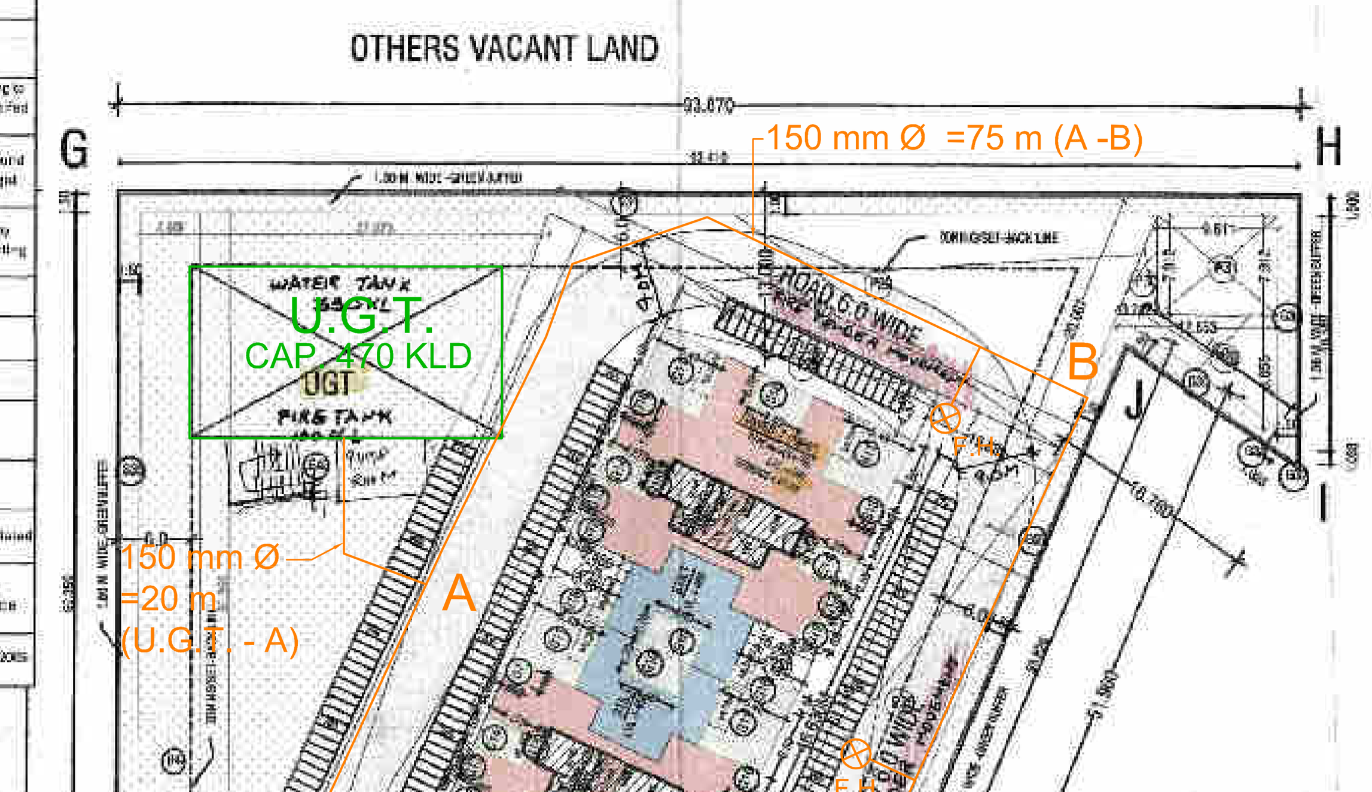
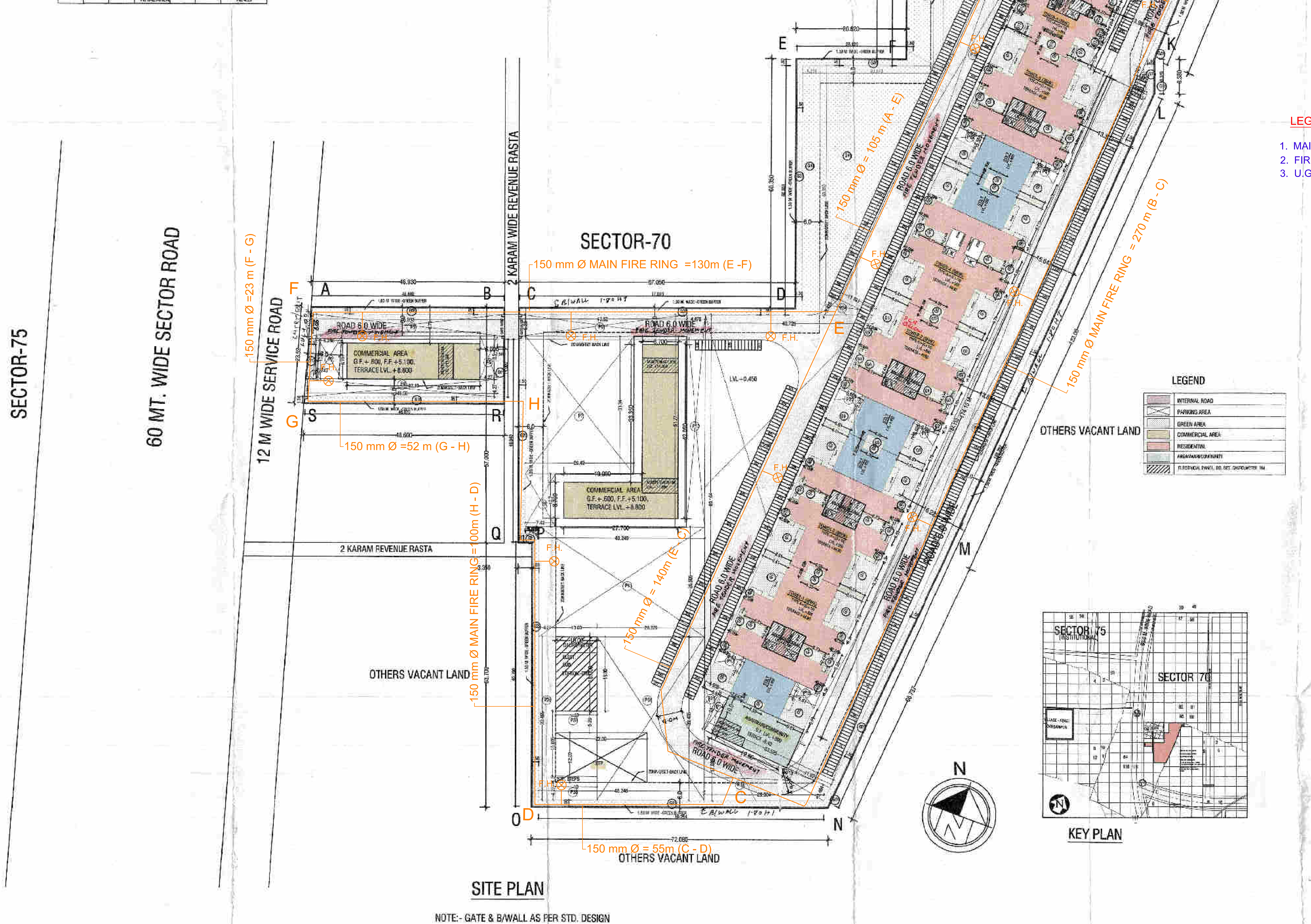
[illegible]

DETAIL OF FLOOR LEVELS TOWER

MUMTY	47.86
PARAPET LVL.	45.900
TERRACE LVL.	44.900
FOURTEEN FLOOR	41.940
THIRTEEN FLOOR	38.980
TWELVE FLOOR	36.020
ELEVENTH FLOOR	33.060
TENTH FLOOR	30.100
NINETH FLOOR	27.140
EIGHTH FLOOR	24.180
SEVENTH FLOOR	21.220
SIXTH FLOOR	18.260
FIFTH FLOOR	15.300
FOURTH FLOOR	12.340
THIRD FLOOR	9.380
SECOND FLOOR	6.420
FIRST FLOOR	3.460
GROUND FL. LVL.	0.500
OPEN AREA LVL.	0.450
GOVT. ROAD LVL.	0.000

REMARKS

[illegible]

SITE PLAN

NOTE:- GATE & B/WALL AS PER STD. DESIGN

LEGEND :-
1. MAIN HYDRANT LINE
2. FIRE HYDRANT
3. U.G.T.

KEY PLAN

Rajesh Dutt
JD(HQ)

PROPOSED BUILDING PLAN OF AFFORDABLE GROUP HOUSING COLONY OVER AN AREA MEASURING -5.5525 ACRES (LIC. No.109 OF 2019, Dated. 11.09.2019) IN THE REVENUE ESTATE OF VILLAGE BADSHAH PUR,SECTOR-70, GURUGRAM BEING DEVELOPED BY RAM AVTAR & OTHERS

DWG. TITLE SITE PLAN

DETAIL OF AREA

ENGINEER SIGNATURE

OWNER'S SIGNATURE

ARCHITECT'S SIGNATURE

VIVEK SINGH RAO
B.Arch, M.C.A., F.I.I.A
C.O.A. Reg. No. CA/99/25040
RAO AND ASSOCIATE
374, U.V., Ph-IV, Gurgaon-15
Ph:- 2347706-07, 9811130867

PROJECT NO. RA-5023	DRG. NO. A-1/12	NORTH
SCALE- 1:400	DATE SEPT- 2019	
DRAWN BY- RAMBABU	CKD. BY - V.S. RAO	

ARCHITECTS
RAO AND ASSOCIATE
ARCHITECTS PLANNERS ENGINEERS INTERIORS VALUERS
374,UDYOG VIHAR,PHASE-4,SEC-18 GURGAON,HARYANA(INDIA)
PH. (0124) - 2347706, 2347707 FAX 0124 - 2347707