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Directorate of Town & Country Planning, Haryana

Plot No. 3, Nagar Yojna Bhawan, A-wing, Madhya Marg, Sector-18 Chandigarh,
Website: tpharyana.gov.in; Phone: 0172-2548475, 2707175; email: tpharyana7@gmail.com

Regd.
To

SMN Realty LLP,
House No. 37, 1st Floor, Block-C,
Pocket-II, Sector-11, Rohini, Delhi-110085.

Memo No. LC-4332/JE(MK)/2023/ 18307 Dated: 09/06/23

Subject: Approval of Service Plan/Estimates for affordable residential plotted colony under DDJAY-2016 over an area measuring 5.76875 acres situated in the revenue estate of village Rathdhana, Sector-26, Sonipat.

Please refer to your application on the matter as subject cited above.

The service plan/ estimates of Affordable Plotted Colony (under DDJAY Policy-2016) being developed over an area measuring 5.76875 acres falling under Licence No. 33 of 2022 dated 30.03.2022 in the revenue estate of village Rathdhana, Sector-26, Sonipat has been checked and corrected wherever necessary and are hereby approved subject to the following terms and conditions:-

1. That you will have to pay External Development Charges as a full and no deduction on account of any services proposed from other Department/from own sources by the colonizer for the time being, as EDC works for a town as a whole will have to be got executed in view of overall planning, proposed area also covered/to be covered in EDC, Sonipat Town.
2. The category wise area shown on the plans and proposed density of population thereof has been treated to be correct for the purpose of services only.
3. That you are liable to maintain the licensed area for ten years or as per FHSVP norms till such time, the colony is taken over by the local authority/State Govt.
4. The wiring system of street lighting will be under ground and the specifications of the street lighting fixture etc. will be as per relevant standard of HVPNL. LED lamps shall be provided to meet the requirement of HVPNL and as well environment.
5. It is made clear that appropriate provision for fire-fighting arrangement as required in the NBC/ISI should also be provided by you and fire safety certificate should also be obtained from the competent authority before undertaking any construction. You shall be sole responsible for fire safety arrangement.
6. All technical notes and comments incorporated in the estimates in two sheets will also apply. A copy of these is also appended as Annexure-A.
7. The correctness of the levels of the colony will be sole responsibility of the owner for integrating the internal sewer/ storm water drainage of the colony by providing the master services.

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with IDC deposited. The colonizer will be fully responsible to meet the demand, to dispose of effluent and rain water till these services are provided by HSVP.

9. You shall be solely responsible for disposal of sewage of your colony as per requirement of HSPCB/Environment Deptt. till such time the external services are made available as per the proposal of the town. All the link connections with the external services shall be made by you at your own cost after seeking approval from competent authority. There should be no pollution due to disposal of sewerage of the colony. The disposal of the effluent should be accordance to the standard norms fixed by Haryana State Pollution Board/Environment Department.
10. The estimate does not include the provision of electrification of the colony. However, it is clear that the supervision charges and O&M charges shall be paid by you directly to the HVPNI.
11. That you shall be solely responsible to lay the services upto the external services laid/to be laid by HSVP or any developing agency on Sector dividing road at respective locations/points.
12. You have proposed to utilize recycled water for flushing purposes and provision of separate flushing line, storage tank, metering system, pumping system and plumbing has been made. Therefore, it is clarified that no tap or outlet of any kind will be provided from the flushing lines/plumbing lines for recycled water except for connection to the cistern of flushing tanks and any scouring arrangement. Even ablation taps should be avoided.
 - (i) Two separate distribution systems, independent to each other, will be adopted, one for potable water supply and second for recycled water. Every Home/Office/business establishment will have access to two water pipe lines.
 - (ii) Potable water and recycled water supply lines will be laid on opposite berms of road. Recycled water lines will be above sewer lines. Wherever unavoidable and if all pipes are required to be laid on same side of road, these will be located from the ground surface in order of descending quality. Potable water shall be above recycled water which should be above sewer. Minimum clear vertical separation between a potable water line and a recycled water line shall be one ft, if it not possible then readily identifiable sleeve should be used.

To avoid any accidental use of recycled water for potable purposes all:-

 - (a) Recycle water pipes, fitting, appurtenances, valves, taps, meters, hydrants will be of Red Colour or painted red.
 - (b) Sign and symbols signifying and clearly indicating "Recycle Water" "Not fit for Drinking" must invariably be stamped/fixed on outlets, Hydrants Valves both surface and subsurface. Covers and at all conspicuous places of recycle distribution system.

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- (c) Detectable marker tapes of red colour bearing words "Recycle Water" should be fixed at suitable interval on pipes.
- (d) Octagonal covers, red in colour or painted red and words "Recycle Water-Not fit for Drinking" embossed on them should be used for recycled water.
- 13. That it shall be mandatory to provide dual/two button or lever flushing system in toilets.
- 14. You shall be solely responsible for the construction of various structures such as RCC underground tank etc. according to the standard specification good quality and its workmanship. The structural stability responsibility will entirely rest upon you.
- 15. In case some additional structures are required to be constructed and decided by HSVP/development agency at a later stage, the same will be binding upon you. Flow of control valves will be installed preferably of automatic type on water supply connection with main water supply line, laid by developing agency or HSVP.
- 16. The formation level of internal road should match with sector roads. Similar other services like water supply, sewerage and SWD level etc. should be fixed in integration of levels of EDC services of water supply, sewerage and SWD etc, which shall be ensured by you.
- 17. In case it is decided by Govt. that HSVP/Govt. will construct 24 m wide road and will extend master services on 24 m wide internal circulation road, then additional amounts at rates as decided by the authority/Govt. will be recoverable over and above EDC.
- 18. Since, the construction of master plan road is yet to take place, you will get the road level/formation level of your service fixed from the concerned Superintending Engineer, before execution.
- 19. This estimate does not include the common services like water supply, storage tank on the top of the building block, the plumbing works etc. will part of the building works.
- 20. You will have to ensure that the sewer/storm water drainage to be laid by you will be connected with the proposed existing master services by gravity. If it is not possible to connect the services by gravity, it will be your sole responsibility to make the pumping arrangement and maintenance thereof for all the time to come.
- 21. That you shall not make any connection with the master services i.e. water supply, sewerage, storm water drainage, without prior approval of the competent authority in writing.
- 22. That the detailed technical proposal/scheme shall be got approved from this office before execution of work at site.

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The firm will provide solar water heating system as per the guidelines issued by Haryana Govt./Ministry of Environment/Govt. of India.

It is made clear that roof top rain harvesting system shall be provided by you as per Central Ground Water Authority norms/Haryana Govt. Notification and the same

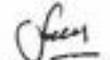
- of first rain water not to be entered into the system shall also be made by you.
25. That you shall transfer the land under master plan road as well as service road to Govt./HSVP for construction of road/service road free of cost and proportionate cost for construction of service road shall also be paid by you.
26. That you shall ensure the compliance of all conditions of Chief Engineer-I, Haryana Shehri Vikas Pradhikaran, Panchkula imposed in his office letter memo no. CE-1/SE:(HQ)/SDE(W)/HDM(R/F)/2022/188589 dated 10.11.2022 (enclosed as Annexure-A).

Note:-

- a. That you shall implement the directions given by National Green Tribunal O.A. No. 21 of 2014 and no. 95 of 2014 (in the matter of Vardhman Kaushik V/s Union of India & Others) and instructions have been issued by HSVP time to time may be implementation of these instructions at site.
- b. That you shall execute the development works as per Environmental Clearance and comply with the provisions of Environment Protection Act, 1986, Air (Prevention and Control of Pollution of Act 1981) and Water (Prevention and Control of Pollution of 1974). In case of any violation of the provisions of said statutes, you shall be liable for penal action by Haryana State Pollution Controlled Board or any other Authority Administering the said Acts.

A copy of the approved service plan/estimates is enclosed herewith. You are requested to supply three additional copies of the approved service plan/ estimates to the Chief Administrator, HSVP, Panchkula under intimation to this office.

DA/As above


(Sunena)

District Town Planner (HQ)
For Director General, Town & Country Planning
Haryana, Chandigarh

Endst. No LC-4332-JE (MK)-2023/

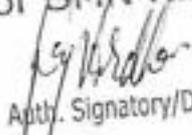
Dated :

A copy is forwarded to the Chief Engineer-II, HSVP, Panchkula with reference to his memo No. CE-1/ SE(HQ)/SDE(W)/HDM(R/F)/2022/188589 dated 10.11.2022 for information and necessary action please.

(Sunena)

District Town Planner (HQ)
For Director General, Town & Country Planning
Haryana, Chandigarh

FOR SMN REALTY LLP


Atty. Signatory/Designated Partner



PROPOSED AFFORDABLE RESIDENTIAL PLOTTED
COLONY (DDJAY) OVER AN AREA MEASURING
5.7687 ACRE AT SEC-26, RATHDHANA, SONEPAT,
HARYANA

SERVICE PLAN ESTIMATE
FOR

PROJECT REPORT/ESTIMATE FOR PROVIDING WATER SUPPLY, SEWERAGE,
STROM WATER DRAINAGE, ROADS, STREET LIGHTING AND HORTICULURE IN
RESPECT OF 5.76875 ACRES

: DEVELOPERS :
M/S. SMN REALTY LLP

: ARCHITECT :
RRITAM DESIGN
D-11, 2ND FLOOR, PRASHANT VIHAR, ROHINI, NEW DELHI-110085

: MEP CONSULTANT :
BEHERA ASSOCIATES PVT LTD
F623A, GROUND FLOOR, LADO SARAI
NEW DELHI 110030

FOR SMN REALTY LLP


Designated Partner

5.76875 ACRES AFFORDABLE RESIDENTIAL PLOTTED COLONY UNDER DDJAY IN SEC-26, RATHDHANA ,SONIPAT,

DEVELOPED BY M/S SMN REALTY LLP.

ESTIMATE FOR PROVIDING WATER SUPPLY,SEWERAGE, STORM WATER DRAINAGE, ROADS,STREET LIGHTING AND HORTICULTURE IN RESPECT OF 5.76875 ACRES AFFORDABLE RESIDENTIAL PLOTTED COLONY UNDER DDJAY IN SEC-26, RATHDHANA ,SONIPAT, HARYANA.

The district of Sonipat is bounded by 28.4815° to 29.1710° north latitude and 76.2840° to 77.1245° east longitude. It falls in the survey of India topo sheets no. 53C, 53D, 53G, 53H covering an area of 2260.53 sqkm. Sonipat is one of the smallest district in haryana state and covers 5.11% area of the state. The district is surrounded by Panipat district in the north, Jind district in the west, Rohtak district in the SW drection and Delhi in the south. The district headquarter, Sonipat is connected by metalled roads with important cities of the state and to Delhi It is also connected by board gouge railway line with delhi and Chandigarh. Gohana , Ganaur, Rai & Kundli are the other important towns in the district.

PROJECT REPORT/ESTIMATE FOR PROVIDING WATER SUPPLY, SEWERAGE, STROM WATER DRAINAGE, ROADS, STREET LIGHTING AND HORTICULTURE IN RESPECT OF 5.76875 ACRES AFFORDABLE RESIDENTIAL PLOTTED COLONY UNDER DDJAY IN SEC-26, RATHDHANA ,SONIPAT, HARYANA.

The Haryana Government has prepared a master plan for development of Residential/Industrial/ Commercial urban estate Sonipat. Project is developed by M/S SMN Realty LLP. They have decided to develop the area in this master plan as a plotted residential colony and has named this part as Proposed Affordable residential plotted Colony for an area measuring 5.76875 Acres in Sec-26, Rathdhana, Sonipat, Haryana.

Water Supply

1 Source

The source of water supply in this area is from HSVP how ever tubewells shall be proposed for Emergency if permission will get from CGWA. At present water supply is from HSVP municipal supply and tanker supply is sweet and fit for human consumption. However in borewell water is available at reasonable depth. The average yield of tubewell with 40-45 ft strainers will be about 20,000 litre per hour. The recharging of underground water table in this belt is stated to be good. However still we shall resort to rain water harvesting system to keep up the recharging system. The number of tubewells required for the above area has been worked out and the tubewells will be bored after the permission from CGWA in tune with growth of demand. The ultimate requirement of tubewells includes provisions of 10% stand by. Ultimately, water shall be supplied to the Project by HARYANA SHAHARI VIKAS PRADHIKARAN, SONIPAT, HARYANA.

2 Design

The scheme has been designed for approved population of **1391 persons in 5.76875 acres**. The rate of water supply per head per day has been taken as 155.25 litres (135+15%) as per NBC 2016 / HSVP norms. in addition to above necessary provision of water for community area, coomercial area, parks etc. have been taken into account for calculating the maximum quantity of water requirement.

3 Pumping Equipments

It has been proposed to install pumping set as described with standby of equal capacity. The provision for standby generating set has been provided in case of any electricity failure. Generator will be provided separately or added to the capacity of main generator.

4 Under Ground Storage

Underground storage tank provision has been made for **150KL** capacity. in 4 compartments, which caters for the raw, domestic as well as for firefighting requirement. The water from fire compartment shall overflow to the raw water compartment so that the water in

5 Boosting Station

A boosting station having monoblock centrifugal pump set is planned near under ground reservoir to pump water from domestic/ treated under ground water tank to over head water tank provided at individual plot terrace.

6 Distribution System

The distribution system for this development has been designed to supply @ 155 litre per head her day @ 2.5 times the average rate of flow on 'Hazen william' formula with C-140. Necessary provision for laying D.I. pipe K-7 conforming to relevent IS standards along with valves and specials has been made in the project. The minimum terminal head at any point will be more than 30.00 meters so that it can serve the stilt and four floors stories construction envisaged in the plan. Minimum pipe dia for distribution is kept as 100 mm dia for domestic water supply.

7 Rising Mains

Rising mains from HSVP water main or sector road to water works have also been designed and provision for 100 mm dia D.I. pipe line (dia as/ design) has been made in this estimate.

8 Sewerage

This scheme is designed for sewer connecting to the proposed sewage treatment plant. The sewage system has been marked on the The sewer lines have been designed for 3 times average DWF in relation to the water supply demand assuming that 80% of water supply shall find its way into the propoosed sewer. ~~DWC~~ HDPE SN8 pipe sewers have been proposed and designed to run half full. The sewers have been designed on 0.75 M per second minimum velocity i.e. self cleansing velocity Necessary provision for laying ~~DWC~~ HDPE SN8 pipes and manholes etc. has been made in this estimate.

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Size/ Shape of Manholes

As per IS 4111:1986 "Circular type of manholes are much stronger than rectangular and arch type manholes thus these type of manholes are preferred over rectangular as well as arch type manholes. However both rectangular and circular type of manholes are proposed to be provided. The brick masonry rectangular manhole is proposed to be provided for depth upto 0.9m.

The brick masonry/ concrete circular manholes are proposed to be provided for all depth exceeding 0.9 m upwards. Circular manholes are straight down in lower portion and slanting on top portion so as to narrow down the top opening equal to internal dia of manhole cover.

Depending on the depth of manhole, brick circular manhole of dia 910, 1220, 1520, 1820 mm dia are proposed to be provided.

9 Storm Water Drainage

The storm water is designed to carry 6.25 mm rainfall per hour or 0.123 cusecs per acre as discharge. Also suitable provisions are contemplated in our scheme to ensure better recharging of underground water table in the area. Underground R.C.C. pipe drain with minimum 400 mm dia are proposed to be provided in this area with circular manhole.

Necessary design statement for entire storm water system has been prepared and attached with estimate.

10 Rain Water Harvesting

The main emphasis on recharging the underground aquifers and safe disposal of storm water with flooding the site has been laid in designing/ planning of storm water drainage system. RCC Type Conventional type rain water harvesting are proposed to be provided.

11 Roads

The roads are proposed to be provided in the plotted development in such a way that main 9 m wide colony road connects with 24 m sector road. Internal service of the roads of the colony 9m wide provide approach for construction of roads to the plots. Detailed calculation of the various item of works have been made on the basis of the detail design of the roads as approved by Chief Engineer HSVP, Gurugram.

12 Street Lighting

Street lighting system has been designed to provide illumination of 15 to 20 lux on roads. Street lights are provided on 6 m high steel tubular poles are located on one side of 9.0 m wide road. Luminaries with 65 watts LED lights are proposed to be provided for achieving the desired illumination.

13 Horticulture

Provision of road side plantation of trees with tree guards has been made for all roads. The parks shall be developed by providing lawns & ornamental trees with tree guards.

14 Specifications :

The work will be carried out in accordance with the standard specification of P.H. Department as laid down by HSVP & Haryana Government.

15 Rates

Estimate for providing services in this pocket has been prepared on the recent HSVP rates.

16 Cost

The total cost of development in this project including various P.H. and B & R services works out to Rs. ~~543.72~~ ^{592.24} Lacs which includes 3% contingency and PE charges and 49% departmental charges also.

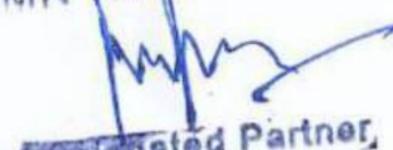
The cost per gross acre for this phase works out to App. Rs. ~~94.25~~ ^{102.663} Lacs/acre which covers the provision of services like water supply, sewerage, storm water drainage, roads, street lighting and plantations including plantations maintenance thereof as well as future expansion whatsoever indicated.

DESIGN CALCULATION

		For 5.76875 Acre:	Unit	
Daily water requirement				
Total No. of Plots (General)		103	Nos	
Total No. of Plots (EWS)		0	Nos	
Population per plot (General)		13.5	Person/Plot	
Population per plot (EWS)		9	Person/Plot	
1 Therefore population (General)		1391	Persons	
Therefore population(EWS)		0	Persons	
Total Population		1391	Persons	
	SAY	1391	Persons	
Total daily Water requirement for plots (135 LPCD + 15%)	@	155.25	LPCD	
		Domestic @ 65%	Flushing @ 35%	
		140369.29	75583.46	LPD
	Or Say	140.40	75.60	KLD (1)
2 Non Residential building water requirement				
a No. of commercial area		1	No.	
Daily water requirement	@	32000	Ltrs/Acre/day	

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		65%	35%	
Area of commercial		0.1250	Acre	
Daily water requirement	@	20800	11200	Ltrs/Acre/day
Therefore daily water requirement		2600.00	1400.00	lit/day
	Or Say	2.60	1.40	KLD
b No. of community center		1	No.	
Area of community center		0.5768	Acre	
Daily water requirement	@	25000	lit/acre/day	
Daily water requirement		9373	5047	lit/day
	Or Say	9.37	5.05	KLD
c No. of milk booth		1	No.	
Daily water requirement	@	1000	lit/acre/day	
Daily water requirement		650	350	lit/day
	Or Say	0.65	0.35	KLD
Total 2 (a+b+c)		12.62	6.80	KLD (2)
3 Area under Parks		0.460	Acre	
Daily water requirement	@	25000	lit/acre/day	
Therefore daily water requirement			11500	lit/day
			11.50	KLD
4 Area under Roads		1.44	Acre	
Daily water requirement	@	5000	lit/acre/day	
Therefore daily water requirement			7225	lit/day
			7.22	KLD
	Total		18.72	KLD
I Total daily requirement				
a) For (1+2)		153.02	82.40	KLD
b) Under Road+ Parks (3+4)		0.00	18.72	KLD
Total Daily Requirement		153.02	101.12	KLD
	Or Say	154.00	102.00	KLD
II Tubewell				
Assuming working hours of tubewells		10	hours	
Assuming discharge/hour of each tubewell		20	KL/hours	
Total domestic water requirement		154 170	KLD	= 170/20/10
No. of tubewells required		0.77 0.85	Nos.	
Add 10% standby		0.08		
	Total	0.85 0.93	Nos.	
	Proposed	1.0	Nos.	
So It is proposed 1 nos of tubewell if permission will get from from CGWA. The provision of 1 no of tubewell has been made in the estimate because the water demand for flushing, horticulture and the road washing purpose is to be met from re circulated after treatment at STP and ultimate water supply is to be provided by HSVP.				
III Pumping machinery for tubewell				
a) Gross working load	=	45.00 30.00	m	
b) Average Fall in S.L	=	3.05	m	
c) Depression head	=	6.10 5.00	m	
d) Friction loss	=	2.50 2.00	m	
	=	56.65 5.00	m	
	Say	60.00	105 mtr	
BHP = $(20 \times 1000 \times 60) / (60 \times 60 \times 75 \times 0.6)$	=	7.41 12.96	HP	
With 60% efficiency	Proposed	7.50	15.00	HP
It is proposed to install 1 no. Submersible pumping set with a discharge of 20000 ltr./hour (335 lpm) driven with 7.5 HP electric motor.				
IV Underground Tank				
Daily requirement for domestic use and other except fire fighting	=	153.02	KLD	
Capacity of under ground tank 12 hr storage except fire fighting @ 60% storage	=	91.81	KLD	
	Say	100.00	KLD	
Total Population in General plots	=	1391	Person	13.5 Person/plot
Total Population in Commercial	=	169	Person	3 sqm/person
Total Population in Community centre	=	778	Person	3 sqm/person
Total Population	=	2337	Person	

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Fire Tank Capacity as $100 \times [\text{sqrt}(2337) / 1000]$ x 1/3	=	50.96	KLD
Say	=	50.00	KLD
Total	=	150.00	KLD

It is proposed to provide 1 no. under ground tank of capacity **150 KL** which also includes **50 KL** capacity for **fire fighting**. Tank will have four compartments, Two for fire, one for raw and one for domestic use. The water first enters the fire compartment, then over flows to the domestic water use compartment so that the water in the fire compartment shall remain fresh.

It is proposed to provide under ground tank of following capacity

a) Capacity of Fire tank-1		25.00	KLD
b) Capacity of Fire tank-2		25.00	KLD
c) Capacity of Raw tank		50.00	KLD
d) Capacity of Domestic tank		50.00	KLD

V BOOSTING MACHINERY (Drinking water)

UG. Tank

a) Filter Feed Pump

Daily requirement for domestic use	=	153.02	KLD
Assuming 10 ⁸ hours running 1 pumps (with one standby)			
Discharge/hour	=	15.80 ^{19.13}	KL/HR
		255.04 ^{318.93}	LPM
	Or Say	280.00 ³⁵⁰	LPM
Head of pump			
i) Suction lifts	=	0.0	m
ii) Friction loss in M<main & specials	=	0.0	m
iii) Clear head	=	35.0	m
	=	35.0 ⁴⁰	m
Say	=	35.0 ⁴⁰	m
BHP of motor (280 ³⁵⁰ x 40) / (60 * 75 * 0.6)	=	3.37 ^{5.19}	HP
	Or Say	5.0 ^{7.50}	HP

b) ~~Domestic~~ ^{Flushing} Water Transfer Pump

Daily requirement for domestic use ^{Flushing Use}	=	153.02 ⁷⁰	KLD
Assuming 6 hours running 1 pumps (with one standby)			
Discharge/hour	=	25.50 ^{8.25}	KL/HR
		425.06 ^{145.83}	LPM
	Or Say	430.00 ²⁰⁰	LPM
Head of pump			
i) Suction lifts	=	5.0	m
ii) Friction loss in M<main & specials	=	10.0	m
iii) Clear head	=	15.0	m
iv) Residual head	=	15.0	m
	=	45.0 ⁴⁰	m
Say	=	45.0 ⁴⁰	m
BHP of motor (470 ²⁰⁰ x 40) / (60 * 75 * 0.6)	=	7.17 ^{2.96}	HP
	Or Say	10.0 ^{5.00}	HP

VI Gen Set

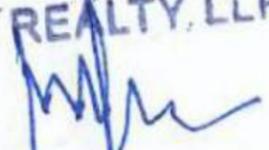
	Nos.	HP			
a) Raw Water Transfer Pump	1	5.0	=	5.0	HP
b) Domestic Water Transfer Pump	1	10.0	=	10	HP
c) Flushing Water Transfer Pump	1	7.5	=	7.5	HP
d) Tubewell	1	7.5 ¹⁵	=	7.5 ¹⁵	HP
e) Lighting	2	20.0	=	40	HP
				70.0 ^{77.50}	HP
				78.3 ⁸⁷	KVA
				80 ¹⁰⁰	KVA

5 Sewage Treatment Plant capacity

Gross domestic + Flushing water requirement/day	235.4	KLD
Sewage flow will be 80% of total load	188.3	KLD
STP Capacity required at 5% extra margin	197.75	KLD
STP Capacity (Or Say)	200.00	KLD

VII STP Treated Tank

Daily requirement for flushing, horticulture, road washing	=	101.12	KLD
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Capacity of under ground tank 12 hr storage @60% storage = 60.67 KLD

Say = 65.00 KLD

VIII BOOSTING MACHINERY (Flushing water)

STP

Daily requirement for Flushing & Horticulture use = 101.12 KLD

Assuming 6 hours running 1 pumps (with one standby)

Discharge/hour = 16.85 KL/HR

280.89 LPM

Or Say 310.00 LPM

Head of pump

i) Suction lifts = 5.0 m

ii) Friction loss in M<main & specials = 10.0 m

iii) Clear head = 15.0 m

iv) Residual head = 15.0 m

= 45.0 m

Say = 45.0 m

BHP of motor $(310 \times 45) / (60 \times 75 \times 0.6)$ = 5.17 HP

Or Say 7.5 HP

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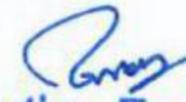

Designated Partner

FINAL ABSTRACT OF COST

	Amount (Lacs.) For 5.76875 Ac
Sub Work 1- Water Supply	106.00 119.84
Sub Work 2- Sewerage	67.63 71.77
Sub Work 3- S.W. Drainage	50.44 54.65
Sub Work 4- Roads	132.49 152.26
Sub Work 5- Street Lighting	22.13 22.13
Sub Work 6- Horticulture	15.45 19.10
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	144.65 $\frac{152.49}{592.24}$
TOTAL COST / ACRE	538.80 $\frac{592.24}{5.76875}$ 93.40 A. = 102.663 Lacs

FOR SMN REALTY LLP


Designated Partner


Executive Engineer
HSVP Division
Sonipat


Superintending Engineer
HSVP Circle, Rohtak


Director General
Town & Country Planning
Haryana, Chandigarh

Checked subject to comments
in forwarding letter No. 18858P
Dt. 10/11/2022 and notes
attached with the estimate


Additional Chief Engineer (HQ)
for Chief Engineer-I, HSVP
Panchkula

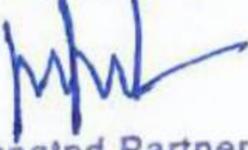

SDE(W)

WATER SUPPLY HEAD

Amount (Lacs.)
For 5.76875 Ac

Sub Head 1- Head Works	26.75	28.00
Sub Head 2- Pumping Machinery	23.80	24.00
Sub Head 3- Distribution System	18.25	20.54
Sub Head 4- Irrigation scheme	0.45	5.55
Total	69.25	78.09
Add 3% Contingencies & PE Charge	2.08	
	71.33	2.34
Add 49% Departmental Charges	34.95	80.43
TOTAL	106.28	39.41
(CO to final abstract of cost)	SAY	106.00
		119.84

FOR SMN REALTY LLP

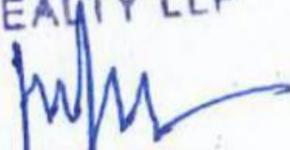

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Sub Head I

Water Supply
Head Works
Rs.(lakhs)

S. No.	Description	Unit	Qty	Rate	Amount
1	Boring and installing 510 mm i/d tubewells with reverse/direct rotary rig complete with pipe strainer to a depth of about 80m ¹⁰⁵ complete.	Nos.	1	1000000.00	10.00
2	Constructing pump chambers as per standard design of PWD PH/HSVP of size 1.50x1.50 m. ^{3.0x3.0}	Nos.	1	100000.00	1.00 ^{2.50}
3	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	5.00 ^{4.00}
ii)	construction of UG Tank	KL.	150	4500.00 ^{5000/-}	6.75 ^{7.50}
4	Provision for carriage of material and other	LS		LS	1.00
5	Provision for facilities staff for Maintenance.	LS		LS	3.00
	(C.O. to abstract of cost of Sub-work No.I)			TOTAL	26.75 ^{28.00}
				SAY	26.75 ^{28.00}

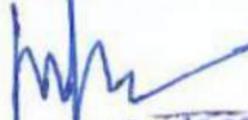
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Sub Work I
Sub Head No. II

Water Supply
Pumping Machinery
Amount (Rs.)
(in Lakhs)

S. No.	Description	Unit	Qty	Rate	Water Supply Pumping Machinery Amount (Rs.) (in Lakhs)
1	Providing and installing electricity driven electro or submersible pumping set capable of delivering about 20 KL water per hour against a total head of 80 ¹⁰⁵ M complete with motor and other accessories.	Nos.	1	200000.00	2.00
2	Provision for cheap pressure type chlorination plant complete.			LS	1.00
3	Provision for making foundations & erection of pumping machinery.			LS	1.00
4	Provision for pipes, valves & specials inside the pump chamber.			LS	1.00
5	Provision for electric services connection including electric fittings for tubewells chambers complete. Including cost of trasfermer.			LS	2.00
6	Providing and installing electricity driven pumping set, capable of delivering 280 LPM of water at 35M head complete in all respects. (For Filter Feed Pump) (7.5 HP) (1 working + 1 standby)	Nos.	2	120000.00 75000	2.40 1.50
7	Providing and installing electricity driven pumping set, capable of delivering 470 LPM of water at 45M head complete in all respects. (10 HP) (Domestic Water Transfer Pump) (1 working + 1 standby)	Nos.	2	150000.00 100000	3.00 2.00
8	Providing and installing electricity driven pumping set, capable of delivering 310 LPM of water at 45M head complete in all respects. (7.5 HP) (Flushing Water Transfer Pump) (1 working + 1 standby)	Nos.	2	120000.00 75000	2.40 1.50
9	Provision of diesel generator set of each for standby arrangements for booster pump complete with gear head arrangements of following capacities 80 ¹⁰⁰ KVA.			LS	8.00 9.00
10	Provision for carriage of materials and other unforeseen items. / Mix.			LS	1.00 2.00
(C.O. to abstract of cost of Sub-work No.I)				TOTAL SAY	23.80 24.50 23.80 24.50

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Sub Work I
Sub Head No. III

Water Supply
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	576	1250.00 1320	7.20 7.60
2	Providing, laying, jointing & testing D.I. K-7 pipes including cost of excavation complete as per ISI marked. (For borewell line)				
i)	100 mm dia	M	10	1250.00 1320	0.13
3	Providing, laying, jointing & testing HDPE PE-80 pipes including cost of excavation complete as per ISI marked. (For Flushing water supply line)				
i)	80 mm dia	M	576	800.00	4.61
4	Providing and fixing sluice valves including cost brick masonry chambers complete in all respects.				
i)	100 mm i/d	Nos.	6	12000.00	0.72
5	Providing, fixing and testing butterfly valves including cost of valve chambers complete in all respects.				
i)	80 mm i/d	Nos.	6	10000.00	0.60
6	Providing and fixing 100 mm dia NRV including cost of valve chambers complete in all respects.				
i)	100 mmm dia	Nos.	1	14000.00	0.14
ii)	80 mmm dia	Nos.	1	10000.00	0.10
7	Providing and fixing air valves and scour valves including cost of valve chambers complete in all respects.	Nos.	4	10000.00	0.40
8	Providing and fixing indicating plates for sluice valve, air valve etc.	Nos.	18	1000.00 2000	0.18 0.36
9	Provision for carriage of material <i>Mix</i>			LS	1.00 3.00
10	Provision for cutting the roads and making to its original condition			LS	1.00
11	Providing and fixing fire hydrants complete with masonry chambers.	Nos.	5 7	15000.00	1.05 0.75
12	Making water supply connection			LS	1.00
13	Provision for rising main from HSVP water supply line to UG Tank				
i)	100 mm dia (DI Pipe K-7)	M	10	1250.00	0.13
(C.O. to abstract of cost of Sub-work No.I)				TOTAL	18.25 20.54
				SAY	18.25 20.54 Lacs

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Sub Work I
Sub Head No. IV

Water Supply
Irrigation

S. No.	Description	Unit	Qty	Rate	IN LACS
1	Providing, laying, jointing & testing HDPE PE-80 pipes including cost of excavation complete as per ISI marked.				
i)	25 49 mm dia	M	125	300.00 400	0.075 5.00
ii)	32 mm dia	M	75	450.00 320	0.068 0.24
2	Providing & fixing 20 mm PVC Irrigation hydrant valve with PVC lid complete in all respect including cost of PVC keys	Nos.	6	3500.00	0.21
3	Provision for carriage of material	LS		10000.00	0.10
(C.O. to abstract of cost of Sub-work No.I)				TOTAL SAY	0.45 5.55 Lacs 0.45

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Sub Work II

Sewerage Scheme

S. No.	Description	Unit	Qty	Rate	in Lacs
1	Providing, lowering, jointing, cutting DWC HDPE SN8 pipes ^{SWP} and specials into trenches including cost of excavation, bed concrete lot				
i)	200 mm I/d				
a)	Average depth upto 1.5 m ^{1.80}	M	444	4250.00 ¹⁷⁰⁰	7.55
b)	Average depth 1.5 m to 4.5 m ^{2.50}	M	147	1500.00 ¹⁹⁰⁰	5.55
2	Provision for lighting, watching and temporary diversion traffic			LS	2.21 ^{2.79}
3	Provision for timbering & shoring			LS	1.00
4	Provision for cutting of roads and carriage of materials etc. and other unforeseen charges			LS	1.00
5	Provision for connection with HSVP			LS	1.00
6	Providing and installation of STP 200 KL including civil tanks and all electro mechanical works. It also includes flushing tank.	KL	200	16000.00	32.0
7	Provision for DI K-7 ^{SWP} pipe from S.T.P. to HSVP main line (Over flow line)				
i)	100 mm dia pipe ^{203 mm} SWP	M	25	1250.00 ¹⁷⁰⁰	0.31 ^{0.43}
Add 3% contingencies & PE charges					44.07 ^{46.77}
Add 49% Deptt. Charges					1.32 ^{1.40}
(C.O. TO FINAL ABSTRACT OF COST SUB WORK - II)					45.39 ^{48.17}
				TOTAL SAY	22.24 ^{23.60}
					67.63 ^{71.77}
					67.63 ^{71.77}

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Sub Work III

S. No.	Description	Unit	Qty	Rate	Storm water drainage In Lacs
1	Providing, lowering, jointing, cutting RCC NP ³ 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 upto 1.5 m	M	341	2500.00 2300	8.53 7.84
b)	Average depth 1.5 m to 4.5 2.00 m	M	234	2600.00 2500	6.08 5.85
2	Provision for road gully and drain.			LS	5.00 3.50
3	Provision for lighting, watching and temporary diversion of traffic.			LS	1.00
4	Provision for cutting of roads and carriage of materials etc. and other unforeseen items.			LS	1.00
5	Construction of rain water harvesting pit as per details and specification given below and as per attached drawing including, cost of excavation of all ind soil foundation trenches of drain including dressing of sides of ramming and getting out excavation of soil.	Nos	4 3	250000.00 350000	10.00 10.50
6	Temp. disposal of SMO.			LS	5.00
7	Provision for connection with HSVP. 400 mm i/d (Average depth 1.5 m to 4.5 2.00 m)	M	10	2600	0.26
8	Provision for connection with HSVP line			LS	1.00
Add 3% contingencies					32.87 35.95
Add 49% Deptt. Charges					0.99 1.08
(C.O. TO FINAL ABSTRACT OF COST SUB WORK - III)					33.86 17.62
TOTAL SAY					50.44 54.65
					50.44

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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	5.7688	175000.00	10.10
2	Construction of road by- i) Providing GSB by 200 mm thick. ii) 250 mm thick W.M.M. stone aggregate layer iii) 50 mm DBM. iv) 30 mm thick B.C. complete in all respect.	Sq. M	3777	4200.00 1500	45.3222 56.66
3	Miscellaneous items				
(a)	Providing for Kerbs & Channels <i>Comp. in respect</i> for 5.76875 ACRES 9M wide road 654 x 2 = 1308 RM	RM	1308	600.00	7.85
(b)	Provision of foot path of precast conc. <i>with interlocking tiles</i> for 5.76875 acres (9m wide road) 9 wide road 654 x 1.75 x 2 = 2289 ^{1.20} 1570 SQM	Sq. M	2289 1570	750.00 1000	17.17 15.70
4	Provision for traffic lighting and guide map	LS		100000.00	1.00
5	Provision for carriage of material	LS		100000.00	1.00
6	Provision for plot indicator	LS		100000.00	1.00
7	Provision for demarcation & unforeseen items	LS		200000.00	2.00
8	Provision for parking & pavement for commercial area @ 50% 505.85 = 253 sqm		253	750.00 1500	1.90 3.90
	Add 3% contingencies				88.33 99.21
	Add 49% Deptt. Charges				2.59 2.98
					88.92 102.19
					43.57 50.07
	(C.O. TO FINAL ABSTRACT OF COST SUB WORK - IV)			TOTAL SAY	132.49 152.26

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Sub Work V

S. No.	Description	Unit	Qty	Rate	Street Lighting In Lacs
1	Providing street lighting on internal roads as per standerd specification of HVPNL and CFL complete in all respect Provision made on L.S. cost @ Rs.2,50,000.00 per acre	L.S.	5.7688	250000.00	14.42
	Add 3% contingencies				14.42 0.43
	Add 49% Deptt. Charges				14.85 7.28
				TOTAL	22.13
	(C.O. TO FINAL ABSTRACT OF COST SUB WORK - V)			SAY	22.13

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Sub Work VI

S. No.	Description	Unit	Qty	Rate	Horticulture Amount In Lacs
1	Development of lawn area				
a)	Trenching the ordinary soil upto depth of 60 cm. including removal and packing of servicable material and disposing at the lead of 50m and making upto the tranced area to prope level by filling with earth mixed with manure before and after flooding trenches with				
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 Norms)	Per acre	5.7688	150000.00 175000	8.65 10.09
2	Planting of trees with tree guards on roads at 12 m intervals				
	Total length of roads = 654 mtr				
	No of trees @ ¹⁰ 20m c/c = ¹³¹ 654x2/12 = ¹⁰ 109 nos				
	say = ¹³¹ 109 nos				
	Cost of the tree @ ¹⁸⁰⁰ 1300 each	Nos.	¹³¹ 109	¹⁸⁰⁰ 1300.00	^{2.36} 1.42
TOTAL					
Add 3% contingencies					10.07 12.45
Add 49% Deptt. Charges					0.30 0.37
					10.37 12.82
					5.08 6.28
TOTAL					15.45 19.10
(C.O. TO FINAL ABSTRACT OF COST SUB WORK - VI)					15.45 19.10 Lacs
SAY					

FOR SAIN REALTY LLP


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Sub Work VII

S. No.	Description	Unit	Qty	Rate	Maintenance 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 norms after completion and resurfacing of roads after 10 years or 1st phase.	Acre	5.7688	750000.00	43.27
2	Provision for resurfacing and strengthening of roads after 1st five years of 1st phase with 50 mm B.M. & 25 mm P.C. @ 600/sqm <i>30mm thick BC 660/-</i>	Sq. M	3777	600 660	22.66 24.93
3	Provision for resurfacing and strengthening of road after 10 years of 2nd phase with 50 mm B.M. & 25 mm P.C. @ 750/sqm <i>30mm BC 825/-</i>	Sq. M	3777	750.00 825	28.33 31.46
Add 3% contingencies					94.25 2.83 99.36
Add 49% Deptt. Charges					97.08 2.98 47.57 102.34
TOTAL					144.65 50.15
(C.O. TO FINAL ABSTRACT OF COST SUB WORK - VII)					144.65 152.45
SAY					

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PROJECT :- AFFORDABLE RESIDENTIAL PLOTTED COLONY, SONIPAT, HARYANA (5.76875 ACRE)
 TITLE :- DOMESTIC WATER SUPPLY HYDRAULIC CHART FOR RING LINES.

S. NO	Line No		PLOTS (GENERAL)			Water Requirement for Non Residential Plots.				Gross Water Requirement (Load on Line)	Average Demand	Peak Demand @ 2.5 Times	Flow Rate	Length of Pipe	Head Loss 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	Nos.	Population @ 18 persons / Plot	Water Requirement @ 155.25 Ltr/head / day	Area in Acre	TYPE OF BUILDING	Basis of Water Requirement in LPD	OCF																	Total Water Requirement in LPD
			18	100.91																						
1	UGT	D-01	103	1854	187092	0.125	COMMERCIA L+ MILK BOOTH	3250	9373	12623	199715	200	499	347	6	0.0060	0.03	0.735	76.741	100	211.800	256.800	45.00	216.800	256.767	39.97
2	D-01	D-02	103	1854	187092	0.125	COMMERCIA L+ MILK BOOTH	3250	9373	12623	199715	200	499	347	66	0.0060	0.40	0.735	76.741	100	216.800	256.767	39.97	216.900	256.370	39.47
3	D-02	D-03	68	1224	123517	0.125	COMMERCIA L+ MILK BOOTH	3250	0	3250	126767	127	317	220	54	0.0026	0.14	0.467	61.140	100	216.900	256.370	39.47	216.900	256.231	39.33
4	D-03	D-05	25	450	45411	0.125	COMMERCIA L+ MILK BOOTH	3250	0	3250	48661	49	122	84	150	0.0004	0.07	0.179	37.880	100	216.900	256.231	39.33	216.900	256.166	39.27
5	D-03	D-04	35	630	63575	0.000	PLOTS	0	0	0	63575	64	159	110	41	0.0007	0.03	0.234	43.298	100	216.900	256.231	39.33	216.900	256.202	39.30
6	D-04	D-05	27	486	49043	0.000	PLOTS	0	0	0	49043	49	123	85	118	0.0004	0.05	0.181	38.029	100	216.900	256.202	39.30	216.900	256.149	39.25
7	D-02	D-06	19	342	34512	0.000	PLOTS	0	9373	9373	43885	44	110	76	19	0.0004	0.01	0.162	35.973	100	216.900	256.370	39.47	216.850	256.363	39.51
8	D-06	D-07	14	252	25430	0.000	PLOTS	0	0	0	25430	25	64	44	59	0.0001	0.01	0.094	27.384	100	216.850	256.363	39.51	216.850	256.355	39.51
9	D-06	D-08	5	90	9082	0.000	PLOTS	0	9373	9373	18455	18	46	32	65	0.0001	0.00	0.068	23.328	100	216.850	256.363	39.51	216.750	256.359	39.61

AMN REALTY LLP
 Partner

PROJECT :-AFFORDABLE RESIDENTIAL PLOTTED COLONY,SONIPAT, HARYANA (5.76875 ACRE)
 TITLE :- FLUSHING WATER SUPPLY HYDRAULIC CHART FOR RING LINES.

S. NO	Line No		PLOTS (GENERAL)			Water Requirement for Non Residential Plots.					Gross Water Requirement (Load on Line)	Average Demand	Peak Demand @ 2.5 Times	Flow Rate	Length of Pipe	Head Loss Mtr/ Mtr	Total Head Loss	Velocity	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	Nos.	Population @ 18 persons / Plot.	Water Requirement @ 135 Ltr/ head / day	Area in Acre	TYPE OF BUILDING	Basis of Water Requirement in LPD	OCF	Total Water Requirement in LPD																
			18	54.34																						
1	STP	F-01	103	1854	100742	0.125	COMMERCIAL+ MILK BOOTH	1750	5047	6797	119039	119	298	207	10	0.0060	0.06	0.685	80	211.900	256.900	45.00	216.900	256.843	39.94	
2	F-01	F-02	2	36	1956	0.000	PLOTS	0	5047	5047	7003	7	18	12	42	0.0000	0.00	0.040	80	216.900	256.843	39.94	216.900	256.842	39.94	
3	F-01	F-03	101	1818	98786	0.125	COMMERCIAL+ MILK BOOTH	1750	0	1750	106286	106	266	185	25	0.0049	0.12	0.611	80	216.900	256.843	39.94	216.900	256.721	39.82	
4	F-03	F-04	14	252	13693	0.000	PLOTS	0	0	0	13693	14	34	24	58	0.0001	0.01	0.079	80	216.900	256.721	39.82	216.900	256.714	39.81	
5	F-03	F-05	84	1512	82158	0.125	COMMERCIAL+ MILK BOOTH	1750	0	1750	89658	90	224	156	19	0.0036	0.07	0.516	80	216.900	256.721	39.82	216.900	256.655	39.75	
6	F-05	F-06	16	288	15649	0.000	PLOTS	0	0	0	18524	19	46	32	60	0.0002	0.01	0.107	80	216.900	256.655	39.75	216.800	256.643	39.84	
7	F-05	F-07	68	1224	66509	0.125	COMMERCIAL+ MILK BOOTH	1750	0	1750	71134	71	178	123	52	0.0023	0.12	0.409	80	216.900	256.655	39.75	216.850	256.534	39.68	
8	F-07	F-09	25	450	24452	0.125	COMMERCIAL+ MILK BOOTH	1750	0	1750	29077	29	73	50	151	0.0004	0.07	0.167	80	216.850	256.534	39.68	216.750	256.468	39.72	
9	F-07	F-08	8	144	7825	0.000	PLOTS	0	0	0	7825	8	20	14	41	0.0000	0.00	0.045	80	216.850	256.534	39.68	216.850	256.533	39.68	
10	F-08	F-09	27	486	26408	0.000	PLOTS	0	0	0	26408	26	66	46	119	0.0004	0.04	0.152	80	216.850	256.533	39.68	216.750	256.489	39.74	

FOR SMN REALTY LLP

[Signature]
 Designated Partner

PROJECT : AFFORDABLE RESIDENTIAL PLOTTED COLONY, SMN DDJAY, SONIPAT, HARYANA (5.76875 ACRE)												
S. No.	Name of Sewer Line	Plots (Denn Dayal Awas)			Water Requirement for Non Residential Plots				Gross Water Requirement (Load on Line)	Sewage Flow (Self Load on Line)	Sewage Flow (Self Load on Line)	
		Number of Plots	Population @ 18 persons / Plot.	Water Requirement @ 135 Ltr/head / day	Type of Building	Basis of Water Requirement	Total Water Requirement.					
	From	To	Nos.	Nos.	lpd.	lpd.	lpd.	lpd.	lpd.	lpd.	kld.	
			18	155.25							1000	
1	S-01	S-03	27	486	75452	COMMERCIAL	4026	4026	79477	63582	63.6	
2	S-02	S-03	4	72	11178	PLOTS	0	0	11178	8942	8.9	
3	S-03	S-05	7	126	19562	PLOTS	0	0	19562	15649	15.6	
4	S-04	S-05	25	450	69863	MILK BOOTH	1000	1000	70863	56690	56.7	
5	S-05	S-09	5	90	13973	PLOTS	0	0	13973	11178	11.2	
6	S-06	S-08	11	198	30740	PLOTS	0	0	30740	24592	24.6	
7	S-07	S-08	3	54	8384	PLOTS	0	0	8384	6707	6.7	
8	S-08	S-09	2	36	5589	PLOTS	0	0	5589	4471	4.5	
9	S-09	S-11	0	0	0	PLOTS	0	0	0	0	0.0	
10	S-10	S-11	14	252	39123	PLOTS	0	0	39123	31298	31.3	
11	S-11	S-13	5	90	13973	PLOTS	0	0	13973	11178	11.2	
12	S-12	S-13	0	0	0	COMMUNITY CENTRE	14420	14420	14420	11536	11.5	
13	S-13	STP	0	0	0	PLOTS	0	0	0	0	0.0	

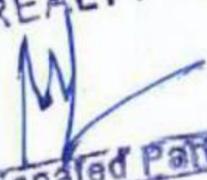
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PROJECT :- AFFORDABLE RESIDENTIAL PLOTTED COLONY, SONIPAT, HARYANA (5.76875 ACRE)

TITLE :- WATER SUPPLY QTY DOMESTIC WATER LINE

S.NO	Line No		Length of Pipe MTR.	Dia of Pipe MM	Sluice valve Each	PIPE MATERIAL
	From	To				
1	UGT	D-01	6	100	1	DI K-7
2	D-01	D-02	66	100	1	DI K-7
3	D-02	D-03	54	100	1	DI K-7
4	D-03	D-05	150	100	1	DI K-7
5	D-03	D-04	41	100	0	DI K-7
6	D-04	D-05	118	100	1	DI K-7
7	D-02	D-06	19	100	1	DI K-7
8	D-06	D-07	59	100	0	DI K-7
9	D-06	D-08	65	100	0	DI K-7
	TOTAL	100 MM	576		6	

FOR SMN REALTY LLP

Designated Partner

PROJECT :- AFFORDABLE RESIDENTIAL PLOTTED COLONY, SONIPAT, HARYANA (5.76875 ACRE)									
GARDEN IRRIGATION LINE			BOREWELL LINE			CITY WATER SUPPLY LINE			
SL NO.	DIA OF PIPE IN MM	LENGTH IN M	GARDEN HYDRANT	SL NO.	PIPE DIA IN MM	LENGTH IN M	SL NO.	PIPE DIA IN MM	LENGTH IN M
1	50								
2	32	15.00		1	100	10	1	100	10
3	25	25.00	6						
TOTAL			6						

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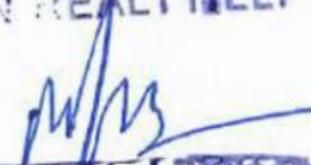
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Designated Partner

PROJECT :- AFFORDABLE RESIDENTIAL PLOTTED COLONY, SONIPAT, HARYANA (5.76875 ACRE)

TITLE :- WATER SUPPLY QTY FLUSHING WATER LINE

S.NO	Line No		Length of Pipe MTR.	Dia of Pipe MM	Butterfly valve Each	PIPE MATERIAL
	From	To				
1	STP	F-01	10	80	1	HDPE PE-80
2	F-01	F-02	42	80	1	HDPE PE-80
3	F-01	F-03	25	80	1	HDPE PE-80
4	F-03	F-04	58	80	0	HDPE PE-80
5	F-03	F-05	19	80	0	HDPE PE-80
6	F-05	F-06	60	80	1	HDPE PE-80
7	F-05	F-07	52	80	1	HDPE PE-80
8	F-07	F-09	151	80	0	HDPE PE-80
9	F-07	F-08	41	80	0	HDPE PE-80
10	F-08	F-09	119	80	1	HDPE PE-80
	TOTAL	80 MM	576		6	

FOR SMN REALTY LLP


Designated Partner

PROJECT :- AFFORDABLE RESIDENTIAL PLOTTED COLONY, SONIPAT, HARYANA (5.76875 ACRE)
 TITLE :- SEWAGE QTY. SHEET

S.No	Line No.	PIPE MATERIAL	Length (mtr.)	Pipe Size of		Start (mtr.)	End (mtr.)	Avg. (mtr.)	Excavation			Total No. of Manhole	Manhole				Extra Depth				Rectangle Manhole (900x800)		
				(mm)	(M)				0.0-1.5mtr	1.5-3.0mtr	3.0-4.5mtr		4.5-6.0mtr	Type-A	Type-B	Type-C	Type-D	Type-A	Type-B	Type-C		Type-D	
1	S-01	DWC SN-8	130	200.00	0.200	1.00	1.99	1.50	129.5	0.0	0.0	0.0	10	0	0	0	0	5.850	0.000	0.000	0.000	-	
2	S-02	DWC SN-8	28	200.00	0.200	1.00	1.19	1.10	28.0	0.0	0.0	0.0	2	0	0	0	0	0.370	0.000	0.000	0.000	-	
3	S-03	DWC SN-8	47	200.00	0.200	1.99	2.32	2.16	0.0	47.0	0.0	4	0	4	0	0	0	0.000	1.940	0.000	0.000	-	
4	S-04	DWC SN-8	112	200.00	0.200	1.00	1.87	1.44	111.5	0.0	0.0	9	0	0	0	0	0	4.725	0.000	0.000	0.000	-	
5	S-05	DWC SN-8	40	200.00	0.200	2.32	2.64	2.48	0.0	39.5	0.0	3	0	0	0	0	0	0.000	0.000	0.000	0.000	-	
6	S-06	DWC SN-8	46	200.00	0.200	1.00	1.31	1.16	45.5	0.0	0.0	4	0	0	3	0	0	0.980	0.000	0.000	0.000	-	
7	S-07	DWC SN-8	22	200.00	0.200	1.00	1.15	1.08	22.0	0.0	0.0	2	0	0	0	0	0	0.330	0.000	0.000	0.000	-	
8	S-08	DWC SN-8	22	200.00	0.200	1.31	1.56	1.44	21.5	0.0	0.0	2	0	0	0	0	0	1.050	0.000	0.000	0.000	-	
9	S-09	DWC SN-8	16	200.00	0.200	2.64	2.75	2.70	0.0	16.0	0.0	1	0	0	0	0	0	0.000	0.000	0.405	0.000	-	
10	S-10	DWC SN-8	53	200.00	0.200	1.00	1.37	1.19	53.0	0.0	0.0	5	0	0	1	0	0	1.375	0.000	0.000	0.000	-	
11	S-11	DWC SN-8	39	200.00	0.200	2.75	3.02	2.89	0.0	38.5	0.0	3	0	0	0	0	0	0.000	0.000	1.785	0.000	-	
12	S-12	DWC SN-8	33	200.00	0.200	1.00	1.22	1.11	32.5	0.0	0.0	2	0	0	0	0	0	0.400	0.000	0.000	0.000	-	
13	S-13	DWC SN-8	6	200.00	0.200	3.02	3.06	3.04	0.0	0.0	6.0	1	0	0	0	0	0	0.000	0.000	0.750	0.000	-	
Total			591						443.5	141.0	6.0	48.0	36.0	4.0	8.0	0.0	0.0	15.1	1.9	3.5	0.0	0.0	
Excavation Depth																							
	150 mm Dia pipe		(0.0 - 1.5)	(1.5 - 3.0)	(3.0 - 4.5)	(4.5 - Above)																	
	200 mm Dia pipe		0.00	0.00	0	0																	
	250 mm Dia pipe		444	141	6	0																	
	300 mm Dia pipe		0	0	0	0																	
	400 mm Dia pipe		0.00	0	0	0																	

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PROJECT :-AFFORDABLE RESIDENTIAL PLOTTED COLONY,SONIPAT, HARYANA (5.76875 ACRE)

TITLE :- STORM WATER DRAINAGE - HYDRAULIC DESIGN CHART.

S. No	Line No.	Length in mtr.	self area in sqmtr.	Self Area (Hec)	previous area in hec.	Total Area (Hec)	Rain Fall mm/hr	Discharge lps/Hec	Pipe dia require d (mm)	Pipe dia (mm)	Slope (mm) 1 in	Velocity m/sec.	Cap of pipe in lps.	Check	Fall in line mtr.	Ground level at Start	Invert Level at Start	Ground level at End	Invert Level at End	Manhole Depth			Manhole Type			
																				Depth at Start	Depth at End	Average Depth	No. of MH	910 Dia upto 1.67m Type-A	1220 Dia upto 2.29m Type-B	1520 Dia From 2.29 to 4.18m
1	R-01	50.5	2258	0.226	0.00	0.226	6.25	2.74	70.66	400	450	0.923	116.07	OK	0.11	216.900	215.700	216.900	215.588	1.20	1.31	1.26	4	4	0	0
2	R-02	62.0	3816	0.382	0.00	0.382	6.25	4.64	91.85	400	450	0.923	116.07	OK	0.14	216.900	215.700	216.900	215.562	1.20	1.34	1.27	5	5	0	0
3	R-03	18.5	196	0.020	0.607	0.627	6.25	7.62	117.74	400	450	0.923	116.07	OK	0.04	216.900	215.562	216.900	215.521	1.34	1.36	1.36	1	1	0	0
4	R-04	33.5	1757	0.176	0.000	0.176	6.25	2.14	62.33	400	450	0.923	116.07	OK	0.07	216.800	215.600	216.800	215.526	1.20	1.27	1.24	3	3	0	0
5	R-05	9.5	570	0.057	0.000	0.057	6.25	0.69	35.50	400	450	0.923	116.07	OK	0.02	216.800	215.600	216.800	215.579	1.20	1.22	1.21	1	1	0	0
6	R-06	21.5	357	0.036	0.233	0.268	6.25	3.26	77.03	400	450	0.923	116.07	OK	0.05	216.800	215.526	216.900	215.478	1.27	1.42	1.35	2	2	0	0
7	R-07	93.5	2042	0.204	0.895	1.100	6.25	13.36	155.92	400	450	0.923	116.07	OK	0.21	216.900	215.478	216.850	215.270	1.42	1.58	1.50	7	7	0	0
8	R-08	19.5	627	0.063	0.000	0.063	6.25	0.76	37.23	400	450	0.923	116.07	OK	0.04	216.850	215.650	216.850	215.607	1.20	1.24	1.22	1	1	0	0
9	R-09	120.5	5792	0.579	1.162	1.742	6.25	21.16	196.22	400	450	0.923	116.07	OK	0.27	216.850	215.270	216.750	215.002	1.58	1.75	1.66	10	10	0	0
10	R-10	RWH	125.5	5174	0.000	0.517	6.25	6.29	106.95	400	450	0.923	116.07	OK	0.28	216.750	215.550	216.750	215.271	1.20	1.48	1.34	10	10	0	0
11	R-11	RWH	20.0	150	0.015	2.274	6.25	27.63	224.22	400	450	0.923	116.07	OK	0.04	216.750	215.002	216.750	214.958	1.75	1.79	1.77	2	0	2	0

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PROJECT :- AFFORDABLE RESIDENTIAL PLOTTED COLONY, SONIPAT, HARYANA (5.76875 ACRE)
 TITLE :- STORM WATER QTY. SHEET

EXCAVATION

S. No	Line No.	PIPE MATERIAL	Length (mtr.)		Size of Pipe		Depth		EXCAVATION				Total No. of Manhole	Manhole			Extra Depth			Catch Basin (600x600)		
			(mtr.)	(mtr.)	(mm)	(M)	Start (mtr.)	End (mtr.)	Avg. (mtr.)	0-1.5mtr	1.5-3.0 mtr	3.0-4.5 mtr		4.5 - above	Type-A	Type-B	Type-C	Type-A	Type-B		Type-C	
1.	R-01	RCC NP-2	50.5		400	0.400	1.20	1.31	1.26	50.5	0.0	0.0	0.0	4	4	0	0	1.380	0.000	0.000	-	
2.	R-02	RCC NP-2	62.0		400	0.400	1.20	1.34	1.27	62.0	0.0	0.0	0.0	5	5	0	0	1.800	0.000	0.000	-	
3.	R-03	RCC NP-2	18.5		400	0.400	1.34	1.38	1.36	18.5	0.0	0.0	0.0	1	1	0	0	0.450	0.000	0.000	-	
4.	R-04	RCC NP-2	33.5		400	0.400	1.20	1.27	1.24	33.5	0.0	0.0	0.0	3	3	0	0	0.975	0.000	0.000	-	
5.	R-05	RCC NP-2	9.5		400	0.400	1.20	1.22	1.21	9.5	0.0	0.0	0.0	1	1	0	0	0.300	0.000	0.000	-	
6.	R-06	RCC NP-2	21.5		400	0.400	1.27	1.42	1.35	21.5	0.0	0.0	0.0	2	2	0	0	0.870	0.000	0.000	-	
7.	R-07	RCC NP-2	93.5		400	0.400	1.42	1.58	1.50	93.5	0.0	0.0	0.0	7	7	0	0	4.134	0.000	0.000	-	
8.	R-08	RCC NP-2	19.5		400	0.400	1.20	1.24	1.22	19.5	0.0	0.0	0.0	1	1	0	0	0.310	0.000	0.000	-	
9.	R-09	RCC NP-2	120.5		400	0.400	1.58	1.75	1.67	0.0	120.5	0.0	0.0	10	10	0	0	7.550	0.000	0.000	-	
10.	R-10	RWH	125.5		400	0.400	1.20	1.48	1.34	125.5	0.0	0.0	0.0	10	10	0	0	4.300	0.000	0.000	-	
11.	R-11	RWH	20.0		400	0.400	1.75	1.79	1.77	0.0	20.0	0.0	0.0	2	0	2	0	0.000	0.200	0.000	-	
Total			575							341	234	0.0	0.0	46.0	44.0	2.0	0.0	22.1	0.2	0.0	0.0	
Excavation Depth			(0.0 - 1.51.5 - 3.03.0 - 4.5.5-above)																			
	200 mm Dia pipe		0		0	0	0	0														
	400 mm Dia pipe		341		234	0	0	0														
	450 mm Dia pipe		0		0	0	0	0														
	500 mm Dia pipe		0		0	0	0	0														
	600 mm Dia pipe		0		0	0	0	0														

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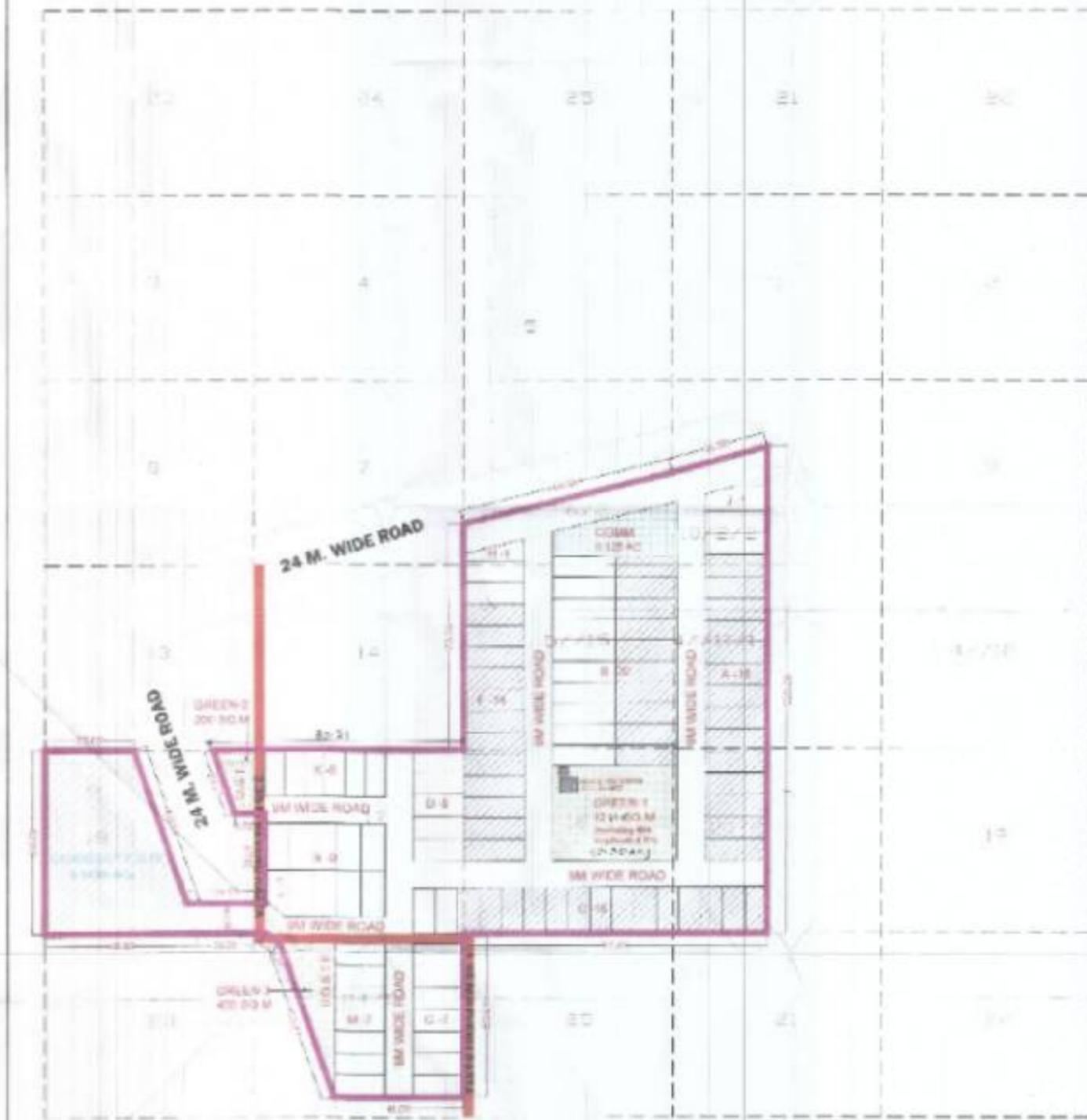
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HYDRAULIC SEWER DESIGN SHEET

S No	Line No.	Number of Plots	Population @ 15 persons / Plot	Water Requirement @ 155.25 Ltr / day	Type of Building	Other Water Requirement	Total Water Requirement (Load on Line)	Sewage Flow (Self Load on Line) LPG	Sewage Flow (Self Load on Line) KLD	Previous Load	Prog-ressive Discharge	Prog-ressive Discharge (Average)	Prog-ressive Discharge (Peak)	Infiltration @ 25% Av. Discharge	Total Dis-charge	Length	Pipe Dia	Slope (1 in)	Fall	Velocity	Capacity of Pipe	Road Formation level at Start	Invert Levels at Start	Road Formation level at End	Invert Levels at End	Manhole Start Depth	Manhole Depth End	Average Depth	Number of Manhole	Type of Manhole				
																														910 Dia 1.67m	1200 Dia From 1.67 to 2.25m	1520 Dia From 2.25 to 4.15m	1820 Dia Above 4.15m	
	From	To	No.	lpc		lpc	lpc	lpc	Kld	Kld	lpc	lpc	lpc	lpc	lpc	(mtr.)	(mm)	(mm)	(mtr.)	(mtr.)	lpc	(mtr.)	(mtr.)	(mtr.)	(mtr.)	(mtr.)	(mtr.)	(nos.)	A	B	C	D		
1	S-01	S-03	27	436	75452	COMMERCIAL	4326	75477	63562	63.58	0.90	63.58	0.74	2.21	0.18	2.38	130	200	145	0.89	1.13	17.70	216.750	215.750	216.850	214.857	1.00	1.99	1.50	10	10	0	0	0
2	S-02	S-03	4	72	11178	PLOTS	0	11178	8042	8.94	0.90	8.94	0.10	3.31	0.03	0.34	28	200	145	0.19	1.13	17.70	216.850	215.850	216.850	215.007	1.00	1.19	1.10	2	2	0	0	0
3	S-03	S-05	7	126	19582	PLOTS	0	19582	15646	15.65	72.52	88.17	1.02	3.06	0.25	3.32	47	200	145	0.32	1.13	17.70	216.850	214.857	216.850	214.533	1.99	2.32	2.16	4	0	4	0	0
4	S-04	S-00	25	450	66993	MILK BOOTH	1000	70893	56990	56.99	0.30	56.89	0.66	1.97	0.16	2.13	112	200	145	0.77	1.13	17.70	216.750	215.750	216.850	214.981	1.00	1.87	1.43	9	9	0	0	0
5	S-05	S-09	5	90	13973	PLOTS	0	13973	11178	11.18	144.86	156.04	1.61	5.42	0.45	5.87	40	200	145	0.27	1.13	17.70	216.850	214.533	216.900	214.260	2.32	2.64	2.48	3	0	0	3	0
6	S-06	S-08	11	198	30740	PLOTS	0	30740	24582	24.59	0.90	24.59	0.28	0.95	0.07	0.93	46	200	145	0.31	1.13	17.70	216.800	215.800	216.800	215.486	1.00	1.31	1.16	4	4	0	0	0
7	S-07	S-08	3	54	8384	PLOTS	0	8384	6707	6.71	0.90	6.71	0.06	0.23	0.02	0.25	22	200	145	0.15	1.13	17.70	216.800	215.800	216.800	215.646	1.00	1.15	1.08	2	2	0	0	0
8	S-08	S-09	2	36	5589	PLOTS	0	5589	4471	4.47	31.30	35.77	0.41	1.24	0.10	1.35	22	200	145	0.15	1.13	17.70	216.800	215.486	216.900	215.338	1.31	1.56	1.44	2	2	0	0	0
9	S-09	S-11	0	0	0	PLOTS	0	0	0	0.00	191.81	191.81	2.22	6.96	0.56	7.52	16	200	145	0.11	1.13	17.70	216.900	214.260	216.900	214.150	2.64	2.75	2.68	1	0	0	1	0
10	S-10	S-11	14	252	39123	PLOTS	0	39123	31298	31.30	0.60	31.30	0.36	1.09	0.09	1.18	53	200	145	0.37	1.13	17.70	216.900	215.900	216.900	215.534	1.00	1.37	1.18	5	5	0	0	0
11	S-11	S-13	6	90	13973	PLOTS	0	13973	11178	11.18	223.11	234.29	2.71	8.13	0.66	8.81	39	200	145	0.27	1.13	17.70	216.900	214.150	216.900	213.894	2.75	3.02	2.88	3	0	0	3	0
12	S-12	S-13	0	0	0	COMMUNITY CENTRE	14420	14420	11536	11.54	0.60	11.54	0.13	0.40	0.03	0.43	33	200	145	0.22	1.13	17.70	216.900	215.900	216.900	215.676	1.00	1.22	1.11	2	2	0	0	0
13	S-13	STP	0	0	0	PLOTS	0	0	0	0.00	245.82	245.82	2.85	8.54	0.71	9.25	6	200	145	0.34	1.13	17.70	216.900	213.894	216.900	213.843	3.02	3.06	3.04	1	0	0	1	0

FOR SMN REALTY LLP

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Designated Partner



AREA STATEMENT			
NO. OF PLOTS	AREA (SQ. M)	PERCENTAGE	REMARKS
1	1000	10.00	
2	1000	10.00	
3	1000	10.00	
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98	1000	10.00	
99	1000	10.00	
100	1000	10.00	

TYPE	NO.	AREA	TOTAL AREA
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55	1000	1000	1000
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78	1000	1000	1000
79	1000	1000	1000
80	1000	1000	1000
81	1000	1000	1000
82	1000	1000	1000
83	1000	1000	1000
84	1000	1000	1000
85	1000	1000	1000
86	1000	1000	1000
87	1000	1000	1000
88	1000	1000	1000
89	1000	1000	1000
90	1000	1000	1000
91	1000	1000	1000
92	1000	1000	1000
93	1000	1000	1000
94	1000	1000	1000
95	1000	1000	1000
96	1000	1000	1000
97	1000	1000	1000
98	1000	1000	1000
99	1000	1000	1000
100	1000	1000	1000

TYPE	NO.	AREA	TOTAL AREA
1	1000	1000	1000
2	1000	1000	1000
3	1000	1000	1000
4	1000	1000	1000
5	1000	1000	1000
6	1000	1000	1000
7	1000	1000	1000
8	1000	1000	1000
9	1000	1000	1000
10	1000	1000	1000
11	1000	1000	1000
12	1000	1000	1000
13	1000	1000	1000
14	1000	1000	1000
15	1000	1000	1000
16	1000	1000	1000
17	1000	1000	1000
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19	1000	1000	1000
20	1000	1000	1000
21	1000	1000	1000
22	1000	1000	1000
23	1000	1000	1000
24	1000	1000	1000
25	1000	1000	1000
26	1000	1000	1000
27	1000	1000	1000
28	1000	1000	1000
29	1000	1000	1000
30	1000	1000	1000
31	1000	1000	1000
32	1000	1000	1000
33	1000	1000	1000
34	1000	1000	1000
35	1000	1000	1000
36	1000	1000	1000</