SERVICES ESTIMATE & PLANS

"RANGOLI-GREENS"
RESIDENTIAL PLOTTED COLONY
(AREA: 105.286 ACRES)
AT SEC-16&17, SONEPAT

Developed by:
M/s RANGOLI BUILDTECH(P) LTD.
1105, Akashdeep Building
Barakhamba Road, New Delhi-110001
Tel: 011-23352611

ESTIMATE FOR PROVIDING INTERNAL (INFRASTRUCTURE) DEVELOPMENT WORKS IN RESIDENTIAL PLOTTED COLONY NAMED "TDS-GREENS" AREA MEASURIN 105.286 ACRES IN SEC – 16 & 17 BEARING LICENCE NO. 65 TO 98, SONIPAT(HARYANA) BEING DEVELOPED BY M/S RANGOLI BUILDTECH PVT. LTD.

DESIGN REPORT:

SONIPAT Town of Haryana state is situated on Delhi- Chandigarh National Highway, a distance of about 50KM from Delhi. Being in close proximity to the NCT Delhi, It also shares the rapidly growing residential / industrial load of Delhi. In order to relieve the ever increasing pressure of population in NCT Delhi, It has been decided by the Haryana Govt. to establish various residential, industrial and other infrastructure sectors in Sonipat. Thus a lot of Residential development is taking places in the town.

A Residential Plotted colony Named "TDS-GREENS" AREA MEASURING 105.286 ACRES IN SEC – 16 & 17 BEARING LICENCE NO. 65 TO 98, SONIPAT(HARYANA) BEING DEVELOPED BY M/S RANGOLI BUILDTECH PVT. LTD, N. Delhi has been issued by the Director General, Town & Country Planning Dept. Haryana

The total licensed area is 105.286 acres, out of which 43.889 acres area shall be develop as Plotted Colony & 4.157 acres for Commercial Area. All other area are being developed by the Green Parks & Roads.

This Infrastructure development services Estimate has been framed for plotted area of 105.286 acres of "TDS Greens" residential colony being developed by "M/S RANGOLI BUILDTECH PVT. LTD, N. Delhi. The Total Services have been designed with a view to Integrate any further extension of area with the presently licensed area under development and also with master / external services to be laid by HUDA, with the salient features given as under:

WATER SUPPLY SCHEME:

i) SOURCE:

The present Source of water supply in this area is primarily with proposed Tube Wells as the underground water in this area is potable and fit for domestic & drinking purpose. However HUDA water supply is also being taken to the site. Since Water is available at a reasonable depth, the average yield of Tube wells drilled to a depth of about 100-150m bgl. with 100' strainer/submersible pump at a cap 4000 GPH or about 20KL/hr. It has been proposed to install 3nos. Tube wells to meet up the present water supply for entire campus. This arrangement shall be made available till the HUDA is supplying the Water for which EDC is being paid to HUDA.

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

ii) DESIGN:

The Water supply distribution Scheme has been designed for a total ultimate population of 25000 person approx. D.I (Ductile Iron) pipe lines have been designed on ' Hazen-William formula' with C Value of 140 & peak factor of 3.0 is considered as per the Manual & guidelines. Minimum pipe size of 100mm dia is taken. Water from OHSR is being supplied thru underground distribution lines by gravity.

iii) PUMPING MACHINERY:

It has been proposed Submersible pumping set of required capacity in the proposed Tube wells. From this TW water is stored in the UGT, from which a Separate pumping has been proposed to store Water in to OHSR. Provision of 2 working + 1 stand by pumps have been considered for entire campus. Provision of DG set of required capacity also been made for essential & emergency load as power-back up.

1. SEWERAGE SCHEME:

i) DESIGN OF SEWERS:

The proposed sewers have been designed by using "Manning's Formula' with running Half-full of peak flow, i.e 3 x DWF of Domestic Waster demand. It has been considered that about 80% of the Domestic Water supply shall find its way in to the Sewerage system. RCC (NP2 & NP3) is considered in sewerage system, and these lines are laid in such a way that the required slope (gradients) so as to minimum required self-cleansing velocity is maintained. The Hydraulic Design Sheets have been prepared and attached along with the Estimate.

ii) STP & Re-cycling of Treated Effluent:

It is also proposed to install 2nos STPs of required Cap. at appropriate location in the total Colony and Treated effluent from these STPs shall be used in Horticulture/ Washing, etc. Surplus Treated effluent is taken to discharge in to existing HUDA Sewerage System.

Provision of uPVC/ HDPE Distribution lines are taken for Horticulture from these STPs Treated Effluent Tank. The Estimate is prepared accordingly.

3 . STORM WATER DRAINAGE SCHEME :

It is proposed to lay underground piped storm water drainage system in the colony with RCCNP-2 pipes . In order to improve the ground water table/sub soil aquifer, It is proposed to harvest the storm run-off in to Rain Water Harvesting Structures which are proposed with de-silting chambers for Pre-Filtration along the SWD System in the colony, so that maximum rain water is harvested in to the sub-soil aquifer and the surplus/ overflow run–off shall be taken & connected to existing HUDA S W Drain System. This will also minimize pumping requirements of storm run-off from the colony to HUDA SW Drain. For design of piped SWD system , the intensity of rainfall has been taken as 30mm per hour and SWD pipes have been designed as running – full with Manning 's formula. Minimum size of 200 mm I /d RCC pipe has been proposed. Estimate has been made accordingly. The Hydraulic Design Sheets have been prepared and attached along with the Estimate.

IV. ROADS:

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

Necessary provisions have been made in the estimate accordingly as per revised specification for roads by HUDA.

VI. HORTICULTURE:

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

VII. SPECIFICATIONS:

The work will be carried out in accordance with the standard specifications as laid down by Haryana Govt./ HUDA.

VIII. RATES:

The estimate has been prepared on the rates as per recently approved estimates by HUDA.

IX. COST:

The total cost of the "Internal Development Works" including cost of all services works out to **Rs. 4799.78 Lacs**(@ Rs.45.60 Lacs / acre) including 3 % contingencies & PE charges, and 49% administrative,price escalation & other unforeseen charges.

PROJECT: TDS GREENS - PLOTTED DEVELOPMENT COLONY AT SONEPAT

ESTIMATE FOR PROVIDING INTERNAL DEVELOPMENTS WORKS - BEING DEVELOPED IN AN AREA OF 105.286 ACRES BY M/s RANGOLI BUILDTECH PV. LTD. IN SECTORS 16&17, SONIPAT(HARYANA)

FINAL ABSTRACT OF COST

SUB. WORK NO.	NAME OF WORK	COST
		(Rs. In Lacs)
SUB WORK NO.I	WATER SUPPLY WORKS	866.78
SUB WORK NO.II	SEWERAGE SYSTEM	608.00
SUB WORK NO.III	STORM WATER DRAINAGE & RWH.	656.00
SUB WORK NO.IV	ROAD WORKS	2,460.00
SUB WORK NO.V	STREET LIGHTING	162.00
SUB WORK NO.VI	HORTICULTURE	47.00
	TOTAL	**4,799.78**
	Cost Per Acre =	**4799.78/105.286**
		45.59
	=	**Rs. 45.60 Lacs**

SUB. WORK NO.	NAME OF WORK	COST
ESTIMATE FOR PROVIDING INTERNAL DEVELOPMENTS WORKS - BEING DEVELOPED IN AN AREA OF 105.286 ACRES BY M/s RANGOLI BUILDTECH PV. LTD. IN SECTORS 16&17, SONIPAT(HARYANA)		
SUB WORK NO.1		**WATER SUPPLY**
ABSTRACT OF COST		
SUB HEAD	NAME OF WORKS	
SUB HEAD NO. 1	Head works	184.95
SUB HEAD NO. 2	Pumping Machinery	39.00
SUB HEAD NO. 3	Distribution System/ Rising Mains	340.84
	Sub Total	564.79
	Add contingencies & PE @3%	16.94
	Sub Total	581.73
	ADD Administrative, Price escalation & Unforseen charges @ 49%	285.05
	Sub Total	**866.78**
		Lacs