

DIRECTORATE OF TOWN & COUNTRY PLANNING, HARYANA

SECTOR-17C, CHANDIGARH

Tele-Fax: 0172-2548475; Tel.: 0172-2549851. E-mail: tcphry@gmail.com. Website: www.tcpharyana.gov.in

To

Vatika I.T. Parks Pvt. Ltd.
(Formerly known as Hind Enterprises Pvt. Ltd.)
7th floor, Vatika Triangle, Sushant Lok-I, Block A,
M.G Road, Gurgaon 122002

Memo No. NC/LC-685/2015/ 2933 Dated 20/2/15

Subject: Approval of service plans/estimates of IT Park on the land measuring 8.793 acres falls in Sector-27B, Faridabad.

Reference on the subject noted above.

2. The service plan/ estimates of IT Park on the land measuring 8.793 acres falling in Sector-27B, Faridabad being developed by you at Faridabad has been checked and corrected wherever necessary by Chief Administrator, HUDA, Panchkula and are hereby approved subject to the following terms and conditions :-

- (i) You will have to pay the proportionate cost of external development charges for the services like water supply, sewerage, storm water drainage, roads, bridges, Community Buildings, street lighting, Horticulture, etc. on gross acreage basis as and when approved by the Director. These charges are modifiable as and when approved by the Government and modified charges will be binding upon the colonizer.
- (ii) You are liable to maintain the colony developed by you as per HUDA norms till such time the colony is taken over by the Local Authority/ State Govt.
- (iii) You will be sole responsible for water supply disposal of sewage and storm water drainage of the colony as per requirement of HSPCB/Environment Department till such time the HUDA services are made available as per proposal of the Town. All the link connection with the HUDA services shall be made by you at your own cost.
- (iv) It is made clear to you that roof top rain water harvesting system shall be provided by them as per Central Ground Water Authority norms / Government notification and the same will be kept operational maintained all the time.
- (v) Till the water supply and other services are made available by HUDA, you will have to make your own arrangement Tubewells can be bored with permission from CGWB and others concerned authority for the purpose.
- (vi) You will not make connection with the master services without prior approval of the competent authority.
- (vii) You will have to ensure that sewer/storm water drainage to be laid by you will be connected by gravity with the master services laid/to be laid by HUDA/ State Govt. in this area as per your scheme.
- (viii) The correctness of the levels of the colony will be sole responsibility of the colonizer for integrating the internal sewer/storm water drainage of the colony by gravity with the master services. In case pumping is required the same will be done by you at your own cost.
- (ix) The estimate includes the provision of street light only of the colony, however it is clear to you that for electrification the supervision charges and O & M charges shall be paid by you directly to the HVPNL / DHVNVL.

For VATIKA LIMITED

Authorised Signatory

- (x) You will be responsible for the construction of various structures such as RCC underground tank etc. according to the standard specifications, good quality and its workmanship. The structural stability responsibility will entirely rest upon you.
- (xi) In case some additional structures are required to be constructed and decided by the Director/HUDA at a later stage, the same will be binding upon you. Flow control valves will be installed preferably of automatic type on water supply connection with HUDA water supply line.
- (xii) Levels/extent of the services to be provided by the HUDA i.e. Water Supply, sewerage will be proportionate of EDC deposited.
- (xiii) You will comply with the conditions as specified in Annexure 'A' attached with service plan/estimates.
- (xiv) You will be solely responsible to lay the services upto the external services laid / to be laid by HUDA on sector dividing road at respective locations / points.
- (xv) The wiring system of street lighting will be as per the relevant standard of HVPNL/DHBNL and being followed by HUDA in their sector.
- (xvi) It is made clear to you that the 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 by you from the competent authority before undertaking any construction.
- (xvii) You have made provision of separate flushing line, storage tank, metering system, pumping system and plumbing and also clarified to you 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.
- (xviii) In case it is decided by the Government that master services be extended on 24 mtr. wide internal circulation road additional amount at rates as decided by the Authority will recoverable from you over and above the EDC.
- (xix) It is made clear that recycled water is proposed to be utilized for flushing purposes. The firm has made provision of separate flushing line, storage tank, metering system, pumping system and plumbing. It is also made clear 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 ablution taps should be avoided.
 - (1) Two separate distribution systems, independent of each other, will be adopted, one for potable water supply and second for recycled water. Home/office/business establishment will have access to two water pipe line.
 - (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 foot. If not possible then readily identifiable sleeve should be used.
- (xx) That in case any services are crossing revenue rasta / bundh, you shall be obtain requisite permission from the Competent Authority and submit the same in this office.

For VATIKA LIMITED

Authorised Signatory

this letter.

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

(Sunita Sethi)

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

Endst. No. NC/LC-685/2015/

Dated

A copy is forwarded to the Chief Administrator, HUDA, Panchkula with reference to his letter No. 12645 dated 27.10.2014 for information and necessary action please.

(Sunita Sethi)

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

For VATIKA LIMITED

Authorised Signatory

VATIKA, MIND SCAPE, FARIDABAD

REPORT / ESTIMATES
FOR
PROVIDING EXTERNAL & INTERNAL
SERVICES, WATER SUPPLY, SEWERAGE, STORM WATER
DRAINAGE SYSTEM

'VATIKA IT PARK'
IN SECTOR -27 B
FARIDABAD

Being Developed by:

VATIKA LIMITED

(A Private Limited Company Registered in India)

For VATIKA LIMITED


Authorised Signatory

PROPOSED VATIKA MIND SCAPE , FARIDABAD

REPORT

Faridabad town of Haryana State is situated on Delhi - Agra National Highway No.2 at a distance of 30 kms for Delhi. Being in the national capital Region, the town has fast developing tendency and potential. Further, it has also started sharing the growing Industrial load of Delhi. In order to relieve the growing pressure of population in National Capital of Delhi, it has been decided by the Haryana Government to establish various residential Sectors along with infrastructure facilities in Faridabad. This report is for Proposed Commercial Complex on land measuring 8.793 Acres at Vatika Land Scape @ Faridabad.

WATER SUPPLY

At present the source of water supply in this area is bore well. It may be noted that HUDA is laying main water trunk lines As the underground water is potable, provision for 4 numbers of Bore wells have been made in this estimate. It has been proposed to construct underground tanks of capacity as per attached details, for domestic purpose. The underground tanks will be filled up from the proposed bore wells or HUDA riser and the water will be pumped to the tank proposed on the roof of the building. The water supply has been designed as per Hazen Willam's formula for pressure pipes.

DESIGN :

The scheme has been designed for population as given in attached sheets.

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

SEWERAGE SCHEME

This scheme is designed for captive Sewage Treatment and Recycling Plant within the Complex and only emergency overflow to be connected to HUDA sewer to be laid along main 30 m wide HUDA sector road. The sewerage system has been marked on the respective plans.

The sewer lines have been designed for three times average D.W.F in relation to water supply demand. It has been assumed that about 90% of the domestic water (as per MoEF guidelines for EIA approval) supply shall find its way into the underground sewer. Sewer lines shall be laid to a gradient maintaining minimum 2.46 ft/sec self cleaning velocity. Necessary provisions for laying S.W pipe sewer line, construction of required number of manholes etc., have been made in the estimate. Manning's formula has been used for the design of sewerage system (Non-pressure under gravity flow).

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

PROPOSED VATIKA MIND SCAPE , FARIDABAD

STORM WATER DRAINAGE

Complete rainwater harvesting system has been adopted in accordance with CGWA and MoEF EIA guidelines. Fours rainwater harvesting pits have been provided as per EIA norms. The rainwater harvesting pit design details have been attached with the estimates (Annexure-II) and details incorporated in the drawings also.

Manning's formula has been used for the design of underground stormwater drainage system (Non-pressure under gravity flow).

SPECIFICATIONS

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

Roads:

Cost of road has been taken in the estimate.

Street Lighting

Provision for external lighting of proposed area has been made.

Horticulture

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

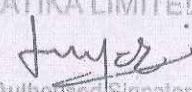
Rates


The estimate has been based on the present market rates.

Total Cost:

The total cost of the scheme, including cost of all services works out to be ~~847.013~~ ^{885.80} Lakhs including 3% contingencies and 49% departmental charges, price escalation, unforeseen administrative charges.

For Vatika I.T.Park Pvt.Ltd
(Previously known as Hind Enterprises Pvt.Ltd)


Authorized Signatory


Executive Engineer
HUDA Division No. 3
Faridabad

For VATIKA LIMITED

Authorized Signatory

PROPOSED VATIKA MIND SCAPE, FARIDABAD

ABSTRACT OF COST

Sub Work No.	Description	Amount in Rs. Lakhs.
SUB WORK NO. I	WATER SUPPLY SCHEME	441.07 261.72 Lacs
SUB WORK NO. II	SEWERAGE SCHEME	104.09 102.00 Lacs
SUB WORK NO. III	STORM WATER DRAINAGE	53.47 40.98 Lacs
SUB WORK NO. IV	ROAD	89.55 183.58 Lacs
SUB WORK NO. V	STREET LIGHTING	13.50 20.25 Lacs
SUB WORK NO. VI	HORTICULTURE	0.933 2.59 Lacs
SUB WORK NO. VII	MAINTENANCE CHARGES FOR 10 YEARS INCLUDING RESURFACING OF ROADS AFTER 1 ST 5 YEARS AND 2 ND 5 YEARS OF MAINTENANCE	144.40 274.66 Lacs
	TOTAL	Rs 885.78 Lacs 847.013

Cost per Acre = Rs. 96.328 Per Acre $\frac{885.80 \text{ Lacs}}{8.79385} = \text{Rs. } 100.74 \text{ Lacs}$

For VATIKA LIMITED

[Signature]
Authorised Signatory

Executive Engineer
HUDA Division No. 3
Faridabad

Checked subject to comments
in forwarding letter No. 1264
Dt. 21.12.14 and notes attached
with the estimate

[Signature]
SUPERINTENDING ENGINEER
HUDA CIRCLE, FARIDABAD

Executive Engineer (W)
for Chief Engineer
HUDA Panchkula

Saviram Engineering consultants Pvt. Ltd.

For VATIKA LIMITED

[Signature]
Authorised Signatory

Director General
Town & Country Planning
Haryana, Chandigarh

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PROPOSED VATIKA MIND SCAPÉ, FARIDABAD

I. DESIGN CALCULATIONS

1.	Total Plot Area	=	8.793 Acres	-	355345.188 Sqm
2.	Green Belt & Service Road Area	=	0.939 Acres	-	3801.98 Sqm
3.	Net Site Area	=	7.854 Acres	-	351543.208 Sqm
4.	Ground Coverage	=	40%	-	14136.885 Sqm
5.	Proposed FAR	=		-	86513.895 Sqm

6. Water Calculations

EXPECTED POPULATION:

The population is calculated as per N.B.C 2005:

For Office area : 10 sqm./person
Water usage per head / day : 45 lt / day

Block A : 21781 sqm.
Block B : 30686 sqm.
Block C : 19889 sqm.
Block D : 21010 sqm.

Total Business floor area : 93366 sqm.

Office Population : $93366/10$ = 9337 persons
Add for maintenance, staff, security etc. = 100 persons
9437 persons

a) Domestic and flushing water demand = 9437×45 litres/day

= 424,665 litres/day (as Annexure I)

Potable water demand (2/3 WD) = 283,110 litres/day
Flushing water demand (1/3 WD) = 141,555 litres/day

b) Garden irrigation (horticulture) demand = 39,250 litres/day (as Annexure I)

c) Equipment backwash water demand = 23,890 litres/day (as Annexure I)

d) HVAC make-up water demand = 240,000 litres/day (as Annexure I)

e) DG set cooling tower make-up demand = 121,500 litres/day (as Annexure I)

f) Water body make-up demand = 1,000 litres/day

TOTAL WATER DEMAND = 850,305 litres/day (A)

f) Sewage influent to STP = 411,059 litres/day

Treated effluent available from STP@90% = 369,953 litres/day (B)

g) NET DAILY REQUIREMENT OF FRESH WATER (A-B) = 439,246 litres/day
SAY 440 KLD

will be met
from treated
effluent

at their own
level by the
firm.

PROPOSED VATIKA MIND SCAPE , FARIDABAD

II. Fire demand

As per NBC of India 2005, static underground fire storage = 100 kL
 Provided 250 kL

III. <u>Underground water tanks provided:</u>	Fire	200 kL
	Raw water	600 kL
	Treated water	800 kL
	Recycled STP	325
	Treated water	500 kL 150
	Soft water	800 kL
	Total	2700 kL

975

IV. BOREWELLS

Approx discharge of borewells @ 12 KL/hr. and working 12 hrs/day

a)	Total fresh Water demand	440 kLD
b)	Number of borewells 491/ (12x12)	3.41-no. 3.05
c)	Add 10% as standby 440	0.341
	Total	3.751 nos. , Say 4 nos.

It may be noted that HUDA is laying main water trunk lines in the vicinity of the development to supply potable water to the proposed Vatika Mind Scape Development and adjoining areas. Therefore, it is proposed to provide (4) Nos of Borewells as supplementary source to the HUDA water supply network.

V. PUMPING MACHINERY FOR BOREWELLS

Gross working head	45.00 mts.
Average fall in S.L.	5.00 mts.
Depression Head	5.00 mts.
Friction loss in main	10.00 mts
Total	65.00 mts.

$$HP = \frac{12000 \times 65 \times 1}{60 \times 60 \times 75 \times 0.6} = 4.81$$

SAY-5 HP
 10 HP

VI. BOOSTING MACHINERY (Water distribution pumps).

a. Potable water supply

- Daily demand/shift	283,110 litres/day
- Pumping per hour @ 6 hr. pumping day	47,185 litres/hr
	786.42 lpm
	Say 790 lpm

-Proposed two pumps of 790 lpm each (1-working+1 standby)

Gross working head [Each pump configuration]	
- Suction lift	0.00 metre
- Delivery head (residual)	5.00 metres
- Frictional loss in mains & specials	10.00 mtres.
	15.00 metres
- Clear Head required	56.35(G+13roof)+ 5 metres
	61.35 metres
Total	76.35 metres
Say	80 metres

PROPOSED VATIKA MIND SCAP, FARIDABAD

$$\text{Pump HP} = \frac{790 \times 80}{60 \times 75 \times 0.65} = \frac{23.40}{21.60} \text{ HP} \quad \text{SAY} \quad 25\text{HP}$$

It is proposed to provide 2 nos of domestic water transfer pumping sets of 790 lpm discharge each at 80 m. head of 25 HP each (one pump in working and one as standby).

b. Flushing water supply

- Daily demand/shift 141,555 litres/day
- Pumping per hour @ 6 hr. pumping day 23,592.50 litres/hr
or 393.21 lpm
Say 400 lpm

- Proposed two pumps of 590 lpm each (1 working+1 standby)

Gross working head [Each pump configuration]	
- Suction lift	0.00 metre
- Delivery head (residual)	5.00 metres
- Frictional loss in mains & specials	10.00 metres.

	15.00 metres
- Clear Head required	56.35(G+13roof)+ 5 metres
	61.65 metres
	76.35 metres
	80 metres

	11.85
	Total
	SAY

$$\text{Pump HP} = \frac{400 \times 80}{60 \times 75 \times 0.65} = \frac{11.85}{10.94} \text{ HP} \quad \text{SAY} \quad 15\text{HP}$$

It is proposed to provide 2 nos of flushing water transfer pumping sets of 400 lpm discharge each at 80 m. head of 15 HP each (one pump in working and one as standby).

c. Soft water transfer pumps

- Daily demand/shift 362,500 litres/day
- Pumping per hour @ 6 hr. pumping day 60,416.66 litres/hr
or 1006.94 lpm
Say 1010 lpm

- Proposed two pumps of 1010 lpm each (1 working+1 standby)

Gross working head [Each pump configuration]	
- Suction lift	0.00 metres
- Delivery head (residual)	5.00 metres
- Frictional loss in mains & specials	10.00 metres.

	15.0 metres
- Clear Head required	5.00 metres(@GL)
	20.00 metres

	7.48
	Total
	SAY
	20 metres

$$\text{Pump HP} = \frac{1010 \times 20}{60 \times 75 \times 0.65} = \frac{7.48}{6.90} \text{ HP} \quad \text{SAY} \quad 7.5\text{HP}$$

It is proposed to provide 2 nos of soft water transfer pumping sets of 1010 lpm discharge each at 20 m. head of 7.5 HP each (one pump in working and one as standby).

PROPOSED VATIKA MIND SCAPE, FARIDABAD

VII. PUMPS FOR FIRE PROTECTION

S.NO.	PARAMETERS	LOCATION	PUMP SETS		
			JOCKEY	MAIN	DIESEL
a.	Discharge in lpm	Pump room	180	2850	2850
b.	Head in meters		150	150	150
c.	HP		15	120	120
d.	Quantity in nos		2	2	1

VIII. CAPACITY OF GENERATING SETS

S.NO.	EQUIPMENT	QTY	HP	TOTAL HP
1	TUBEWELL	4-3	5	20-15
2	DOMESTIC+FLUSHING PUMP+SOFT WATER (1 working pump only considered)	1 each from each set	20+20+7.5 =27.5 12+50+25+10 2	47.5
3	JOCKEY PUMP	2	15	30
	TOTAL			97.5HP 92.50
				72.735 KW 69.4
				91.92 KVA 103.50

Since diesel engine pump is provided no electrical back up is required for main fire pump.

Sag 105 KVA
Executive Engineer
HUDA Division No. 3
Faridabad

PROPOSED VATIKA MIND SCAPE , FARIDABAD

SUB WORK No. I

Water Supply

1.	Sub Head No. 01	Water Supply Head Works	200,26,250	76.79 Lacs
2.	Sub Head No. 02	Pumping Machinery	52,70,000	60.20 Lacs
3.	Sub Head No. 03	Rising Main from HUDA	67,70,000	6.14 Lacs
4.	Sub Head No. 04	Distribution System	4,60,000	4.76 Lacs
5.	Sub-Head No. 05	Fire fighting	14,48,100	17.01 Lacs
6.	Sub-Head No. 05	Irrigation / Flushing	8,58,500	5.63 Lacs
		TOTAL	283,39,850	170.53 Lacs
		Add 3% contingencies & PH Charges	86,21,955	5.12 Lacs
		TOTAL	296,020,45.5	175.65 Lacs
		Add 49% Departmental charges, Price escalation, unforeseen, Admn. charges	14505002.295	86.07 Lacs
				261.72 Lacs
		TOTAL	441,07,047.795	

Say

441.07 Lakhs

Executive Engineer
HUDA Division No. 3
Faridabad

PROPOSED VATIKA MIND SCAP, FARIDABAD

Sub Work No. I
Sub Head No. 01

Water Supply
Head Works

Amount in Rs.

1. Boring and installing 510 mm I/d bore well with reverse Rotary rig Complete with pipe and strainer to a depth of About 120-metre. 3 Nos @ Rs. 300000/- each.

Rs. 31.00 Lacs
Rs. 32,00,000.

2. Provision for rising mains, connecting bore wells with Water main and Bye-pass arrangements.

a) 80 MM X 541 M @ Rs. 1250/-

150 mm 155 m @ Rs. 1575/-

200 mm 10 m @ Rs. 2150/-

Rs. 4.50 Lacs
Rs. 6,76,250
Rs. 2.44 Lacs
Rs. 0.22 Lacs

3. Providing Boosting arrangement by pumps: 1000 lph @ 40 m, 7.5 HP - 2 nos. @ Rs. 1,500.00 each.

Rs. 5,00,000
Rs. 3.00 Lacs

4. Provision for carriage for materials 2 Nos @ 1.50 L.S.

Rs. 3,00,000

5. Construction of U.G. tanks 2700 KL Rs. 3500/ KL

Rs. 148,50,000
34.13 Lacs

6. Provision for Construction of chamber
Size 1.50 x 1.5 x 4.00 M for housing
Tube well - 3 nos @ Rs. 1,00,000- each

Rs. 3,00,000

TOTAL

Rs. 200,26,250-
76.79 Lacs

(C.O. cost to final abstract of cost Sub Work No.1).

Bill of Materials [Reference drawing: PL-601]

BOREWELL SUPPLY LINE MATERIAL STATEMENT

S.No	Name of Line	Length in metre
		800 100 mm
1	BW1 - BW1A	49
2	BW1 - BW2A	147
3	BW2 - BW2A	1
4	BW2A - BW2B	60
5	BW2B - BW2C	60
6	BW2C - BW2D	45
7	BW2D - UGT	10
8	BW4 - BW4A	1
9	BW4A - BW3A	135
10	BW3 - BW3A	1
11	BW3A - BW3B	4
12	BW3B - BW3C	28
13	BW3C - UGT	10
	TOTAL	644

360 m

150 mm

200 mm

60 m

50 m

45 m

10

150 mm

10 mm

For VATIKA LIMITED

Authorised Signatory