DIRECTORATE OF TOWN & COUNTRY PLANNING, HARYANA
SCO 71-75, Sector 17C, Chandigarh
Phone:0172-2549349; e-mail:tcphry@gmail.com
http://tcpharyana.gov.in

Regd. To

Alaska Constructions Pvt. Ltd.
(now known as Shiv Ganesh Buildtech Pvt. Ltd.)
In collaboration with Vatika Ltd.
Vatika Triangle, 4th Floor, Sushant Lok, Phase-I,
Block-A, Mehrauli, Gurugram Road, Gurugram.

Memo. No. LC-1269-PA(B)-2018/ 13708 Dated: 04-05-18

Subject: **Approval of service plan/estimates for plotted colony being developed over an area measuring 174.373 acres (license No. 256 of 2007 dated 07.11.2007 & 100 of 2014 dated 13.08.2014) in Sector 21, 22, 23 & 25, Ambala City.**

Kindly refer your application on the subject cited above.

The service plan/estimates for plotted colony being developed over an area measuring 174.373 acres (license No. 256 of 2007 dated 07.11.2007 & 100 of 2014 dated 13.08.2014) in Sector 21, 22, 23 & 25, Ambala City have been checked and corrected wherever necessary by the Chief Administrator, HUDA & 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, Ambala Town, which is under finalization.
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. 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.
4. 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.
5. 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.
6. 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 gravity with the master services.
7. You shall be sole 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.
8. 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 HVPNL.
9. That you shall be solely responsible to lay the services upto the external services laid/to be laid by HUDA or any developing agency on Sector dividing road at respective locations/points.

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10. It is clarified that HUDA can make available the water only after HUDA sector, in which licensed area falls, is developed subject to the following:-
    (i) Availability of litigation and encroachment free land.
    (ii) Permission within reasonable period from Forest & Environment Department, wherever required.
    (iii) Sufficient funds are made available for carrying out the External Development Works.
    (iv) Till the water supply and other services are made available by HUDA, the licensee will have to make his own arrangement T/Wells can be bored with prior permission from Central Ground Water Board and other concerned authority for the purpose.
    (v) HUDA shall supply the drinking water only to the license granted in the master plan area.

11. You have proposed to utilize recycled water for flushing purposes and provision of separate flashing 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 ablution 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.
    (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.

12. That it shall be mandatory to provide dual/two button or lever flushing system in toilets.
13. You shall be sole 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.
14. In case some additional structures are required to be constructed and decided by HUDA/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 HUDA.
15. 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.
16. In case it is decided by Govt. that HUDA/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.
17. Since, the construction of master plan is yet to take place, you will get the road level/formation level of your service fixed from the concerned Superintending Engineer, before execution.
18. 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.
19. 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.
20. 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.

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21. That the detailed technical proposal/scheme shall be got approved from CA, HUDA before execution of work at site.
22. The firm will provide solar water heating system as per the guidelines issued by Haryana Govt./Ministry of Environment/Govt. of India.
23. 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 shall be kept operational/maintained all the time. The arrangement for segregation of first rain water not to be entered into the system shall also be made by you.
24. That you shall transfer the land under master plan road as well as service road to Govt./HUDA for construction of road/service road free of cost and proportionate cost for construction of service road shall also be paid by you.
25. That the permission from competent authority shall be obtained prior to boring/drilling of tubewells. Further, the approval of service plan estimates with tubewell provision does not entitle you to drill tubewell.
26. That the ground water shall not be used for purpose of construction of work in terms of order of Hon'ble High Court dated 16.07.2012 in CWP No. 20032 of 2008, 13594 of 2009 & 807 of 2012.

NOTE(1):-

In order to implement the directions given by National Green Tribunal dated 26.11.2014, 04.12.2014 and 19.01.2015 in original Application No. 21 of 2014 in the matter of Vardhman Kaushik V/s Union of India and Ors, the following instruction issued vide letter No. 2613 dated 5.3.2015 be incorporated for implementation at site as under:-

i) It shall be ensured that there should be no hot mixing on the road side. During construction and maintenance of road, it shall be also ensure that coal tar, bitumen and asphalt is brought in molten condition and same is neither burnt nor fire is put to melt these substances on open roads.
ii) The demolition material and construction material is transported with proper coverage and precautions, in order not to be cause serious air pollution.
iii) No Govt. authority, contractor, builders would be permitted to store and dump construction material or debris on the metalled road.
iv) Such storage does not cause any obstruction to the free flow of traffic and/ or inconvenience to the pedestrians. Every builder, contractor or person shall ensure that the construction material is completely covered by tarpaulin. To ensure that no dust particles are permitted to pollute the air quality as a result of such storage.
v) The builder/contractor will be responsible and ensure that their activity does not cause any air pollution during the course of the construction and/or storage of material or construction activity. Defaulter shall be liable to be prosecuted under the law in force.
vi) All trucks or vehicles of any kind which are used for construction purposes and/or are carrying construction materials like cement send and other allied material shall be fully covered dust free and/or other precautions would be taken to ensure that enroute their destination, the dust, send or other particles are not permitted to be released in the air and/or contaminate air. Any truck which is not complying with these directions would not be permitted to enter in the NCR region.

NOTE(2):-

Implementation of instruction used by Hon'ble NGT during hearing held on 28.4.2015 in OA No. 21 of 2014 and OA No. 95 of 2014 in the matter of Vardhman Kaushik V/s Union of India and Ors, the following instruction issued vide letter No. CEIEE-W/CHD(G)/4971-89 dated 30.4.2015 shall be complied with in the construction work as under:-

a. All the direction contained in our order dated 4th December, 2014 shall continue to be in force and the Authorities concerned would carry out the said directions in their true spirit and substance.
b. There shall be complete prohibition of burning of any kind of garbage leave, waste plastic, rubber, self-moulding compound and such other materials in the open. Any person affected or concerned would have a right to make a complaint in writing.
c. Immediately upon receipt of such complaint, the concerned Authority and for Authorities the designed Officers would proceed to take action in accordance with law.
d. For every incident of burning of any such above stated material, the person who is found actually burning such and/ or responsible for or abating such burning would be liable to pay compensation in terms of the Section 15 of the Nation Green Tribunal Act, 2010 for polluting the environment and would be liable to pay a sum Rs. 5000/- (to be paid instantaneously).
e. In the event such offender refuses to comply with the directions of the Authorized Officers, the Authorized Officers would be at liberty to serve a notice upon him for appearing before the Tribunal and to show cause why the person burning, abating or responsible for such burning materials afore indicated, be not directed to pay compensation as may be determined by the Tribunal in accordance with law.

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f. The orders of the NGT are to be complied with as a decree / order of the Civil Court. All these Authorities and the Police are duty bound to carry out the directions/orders of the Tribunal in accordance with law. The money so collected, shall be maintained by the Corporation and / or any Authority as a separate fund to be utilized for improvement, restoration and restitution of the environmental degradation resulting from such activity or otherwise.

g. The payment of such compensation shall not absolve the offender of other liabilities that such person may incur under different laws in force including other provisions of the National Green Tribunal Act, 2010.

h. Hon'ble NGT has directed that there is no burning of leaves or horticulture residue, all the Corporations, Authorities and the State Governments to ensure that there is proper composting pits area-wise prescribed within one week from today (28.04.2015). The composting will be only at those sites and all the Corporations, Authorities and the State Governments shall be responsible to provide due space for collection and deposit of horticulture waste including leaves for composting purposes at these sites.

i. Each officer under whose jurisdictions the area would fall, would be personally responsible for imposition of compensation and costs.

j. The compositing sites should be provided nearer to the places where there is large numbers of trees, gardens and compost bits which also convert into self-manure should be used for horticulture purposes to ensure that the burden on the site does not increase beyond its capacity.

k. Decision in regard the land fill sites should be taken expeditiously as possible. Such adequate number of sites if not earmarked, should be identified by the respective corporations and authorities if not done so far.

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, HUDA, Panchkula under intimation to this office.

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

Endst. No. LC-1269-PA(B)-2018/ Dated :

A copy is forwarded to the Chief Engineer, HSVP, Panchkula with reference to his office Memo No. 71018 dated 21.04.2017 with the request to clarify about the delay in forwarding the service plan estimates of the colony in the year 2017, whereas, the final layout plan of the colony was approved in the year 2014.

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

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REPORT

For VATIKA LIMITED

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Report (Revised estimate)

1. INTRODUCTION

- Ambala is the industrial and financial center of Haryana.
- **It is located on National Highway No.1**

2. LOCATION

- The project is located within approved master plan of Ambala in Sector- 21, 22, 23, 24& 25
- Vatika Limited Vatika Triangle, Block B, Sushant Lok-1, Mehrauli Road, Gurgaon, is developing residential colony, Vatika in proposed sector 21, 22, 23, 24& 25Ambala.
- The total area is 174.373 acres, (vide Drg. No DTCP-4761 dt. 18-7-2014)
- Break up of area is given as under: 151.704 acre + 22.669 acre = 174.373 acres

License No. 100 of 2014 dt 13/8/2014 = 22.669 Acs
" " 255 of 2007 dt. 7-11-2007 = 151.704 Acs
174.373 Acs.

3. ROADS

3.1 Roads

3.1.1 Proposed Site Grading

The concept adopted for site grading and estimating the earth work quantities is described below.

a. The top soil of the project site consists of sity claye-sandy soil accordingly the top soil of 150 mm needs to be removed for attaining the sub grade free from roots & debris and other dumped material.

b. Sufficient natural slopes are available on the ground.

c. The master roads been constructed by HUDA have already been planned & the road grading has been finalized.

d. In general roads levels are about 0.3 to 0.6 Mtr below the master roads levels while the slopes are in accordance with the natural gradient available.

3.1.2 ROAD NETWORK

3.1.3 Road Cross Sections

The ROW of various road are decided as per the min. requirements of deptt of TCP Haryana & have been cross checked with the IRC requirements of roads in Urban area based on the traffic assessment criteria as mentioned above.

3.1.4 Road Design

3.1.4.1 Earth Work

- The fill sections or from sub grade level at cut sections should be compacted to a dry density corresponding to the minimum state of compaction likely to be achieved. As per normal practice the dry density of the embankment shall be 95 % while in case of sub-grade to the depth of 500 mm below the curst shall be 97% in case of major roads that is 24 Mtr roads.

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3.1.4.2 Internal Streets

- All Internal Streets of 12 & 15 Mtr have been proposed with the following crust thickness

GSB	-	150 mm
Granular Base (WMM)	-	225 mm
BM	-	50 mm
SDBC	-	25 mm
All Roads of 24 Mtr width		
GSB	-	200 mm
Granular Base (WMM)	-	225 mm
DBM	-	50 mm
SDBC	-	25 mm

Table:-4

SR. NO.	NAME OF ROAD	ROAD WIDTH	ROAD CROSS SECTION				
			Berms of Main Road Upper side	Main Road	Central Verge	Paved Parking	Berms of Main Road Lower side
		M	M	M	M	M	M
1	12 m wide	12	3	6			3
2	15 m wide	15	4.5	6			4.5
3	18 m wide	18	4.5	6		3	4.5
4	24 m wide	24	4	14	2		4

4. WATER SUPPLY

4.1 Source of Water

- To meet Intial Demand 3 no tube wells have been proposed which stands approved in earlier approval issued by Town & Country Planning Department Govt of Haryana.
- Main source of water will be Canal Water to be made available by HUDA authorities
- **Boosting Station is under construction in Sector23.**
- **One no connection is required from HUDA Source**
- Rising Main from the proposed HUDA water pipe line to Boosting Station in Sector-23

4.2 Daily Water Demand

- Water requirement of 152.304 acre is 3.6 MLD
- Water requirement of 174.373 Acre area is 4.30 MLD
- There is marginal increase in water demand=0.7 MLD
- Structures constructed as per earlier approval for temporary arrangement of tube well source & permanent arrangement of canal water are sufficient to cater for additional demand.
- Hence no change in head works structures are proposed in revised proposal

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Table:-5

PROPOSAL FOR CONSTRUCTION OF UNDER GROUND SERVICE RESERVOIR					
Sr.No.	Description	Water Demand	Fire Demand	Capacity of UGT Required	Total Capacity Provided
		KL	KL	KL	KL
1	Zone1	4300	427		
	Main UGT in sector 22	1433		=1433+427=1680	2200

4.3 Distribution Net Work

- Distribution mains shall be designed for minimum carrying capacity of 250% of the average rate of supply

Table:-6

ABSTRACT OF WATER SUPPLY LENGTH						
Description	100 mm i/d	150 mm i/d	200 mm i/d	250 mm i/d	300 mm i/d	400 mm i/d
	M	M	M	M	M	M
(Distribution Main)	DI K9	DI K9	DI K9	DI K9	DI K9	DI K9
Revised Proposal 174.373 Acres	8743	2714	1215	1210	793	290
Original Proposal 152.304Acres	6705	2645	565	475	700	290
Additional Quantity	2038	69	650	735	93	0

5. SEWERAGE SYSTEM

Proposal

- The Estimated Waste Water Generation = 2.552 MLD in plotted area
- Two out fall are proposed in Mater sewer in sector 23 in original approval
- Additional area in Sector 25 is proposed to be connected with master sewer on main road dividing Sector 23& 25.
- Additional area in Sector 23 is proposed to be connected with master sewer on main road dividing Sector 23& 22

5.1 Waste Water Collection System

Table:-7

ABSTRACT OF SEWER LENGTH							
Description	200 mm i/d	250 mm i/d	300 mm i/d	450 mm i/d	500mm i/d	600	Total
	M	M	M	M	M	M	M
(Distribution Main)	SW PIPE	SW PIPE	SW PIPE	RCC NP 3	RCC NP 3		
Revised Proposal 174.373 Acres	10614	944	696	306	480	40	12735
Original Proposal 152.304Acres	7890	544	625	82	480	40	9790
Additional Quantity	2724	0	71	224	0	0	2945

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6. STORM WATER DRAINAGE SCHEMES

6.1. Proposal

- As per proposal for Storm Water Drainage the storm runoff from the area will be drained off in the master storm drain(Ambala Drain) passing through proposed area
- **Cast in situ drains are proposed**

Table-8

	APPURTENANCES OF STORM WATER DRAIN					
	Length of Drain					
Description	Storm Drain 0.3M x0.3 M	Storm Drain 0.45 M x0.30 M	Storm Drain 0.60 M x0.0.3 M	Storm Drain 0.75 M x0..90M	Storm Drain 0.9 M x0.90 M	Total Length
Revised Area	M	M	M	M	M	M
174.373 Acres	9130	2335	1505 1539	547	320	13857 13890
152.304 Acres	6240	2245	1175	340	190	10190
Additional Area	2890	110	330	207	130	3665 3667

7. STREET LIGHTING

- As per latest instructions issued by Govt. of Haryana energy efficient street lighting is to be provided in Govt. buildings, Boards, Corporations and public places.
- 150Watt sodium vapour lamps have been proposed on 24 m road on both sides at 40 m distance in a staggered manner i.e. 20 m centre to centre.
- 150Watt sodium vapour lamps have been proposed on 18 m road at 20 m distance on one side of the road. (60 Nos).
- 70Watt HPSV lamps on 12 mt. & 15 mt. roads at a spacing of 20 mts. on one side of roads.
- Clearance of poles from edge is proposed to be 0.6 mts.
- The Street light points shall be supplied power through 25 sq. mm PVC Cables.

8. HORTICULTURE

- Green area acts in the similar manner as lungs performs in human body.
- Hence its development is important for ecofriendly development.
- Fine grassing & landscaping is proposed in all the parks.
- Shrubs and creepers will be provided at suitable places.
- Water body will also be provided at suitable points.
- Side plantation will be carried out as per norms on foot paths.
- The different variety of plants will be used as per requirements i.e. for parking area, side, commercial area etc.

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9. SPECIFICATIONS:

- The work will be carried out in accordance with the Haryana Schedule of rates / HUDA and as per Guide lines of the Haryana Govt.

10. RATES & COST

- Estimate for providing services in this project has been prepared on the basis of recent market rates and H.S.R.
- Total Cost of earlier approval Issued by Director, Town & Country Department Govt. \of Haryana is Rs. 8062.45 Lacs for 152.304 Acre Area. Including Maintenance cost for 10 Years.
- Cost per acre works out Rs. 53.00 lacs per Acre
- Additional Area 22.07 Acre is added to the project area.
- Total Cost of Additional is Rs 1259 Lacs for 22.07 Acre Area. Including Maintenance cost for 10 Years.
- Cost per acre works out Rs. 57.05 lacs per Acre
- Total Cost works out to be (Rs. 8062.45 +Rs.1259) =9321.45 lacs

For total area i.e. already approved area & Additional Area and cost per acre works out to Rs. 53.50 lac per acre including maintenance cost.

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PROVIDING SERVICE ESTIMATE FOR VATIKA CITY CENTER AT AMBALA

DESIGN CAL CULATION

(I) WATER SUPPLY

A. Domestic water requirement per Day

(i)	No's of Plots of Various category	= 1159 No's
(ii)	No's of person	=13.50 Person per Plot
(iii)	No's of total Person	= 1159x13.50=15646.50 Person Say 15647 Person

B. EWS PLOTS

(i)	No's of Plot	= 292 No's
(ii)	No's of Person	= 9 Persons per plot
(iii)	No's of Total Persons	= 292x9=2628persons
	Total Persons A+B =15647+2628	=18275 persons
	Daily Water allowance per head/Day	= 135LPCD+15%U.F.A
	Total Daily Requirement	=18275x135=2467125ltr +15% U.F.A370069ltr
	Total	=283, 7194ltror 2837.19kl Say 2840.00kl

C. OTHER REQUIREMENTS

i.	Commercial 3.67 acres @32 KLD Per each		= 117.44 K.L
ii.	Community center 2.00 acres @25KLD each		=50 K.L
iii.	Religion building 1No's @5.KLD each		=5 K.L
iv.	High School	1No's @150.00 KLD each	= 150 K.L
v.	Primary School	2No's@50KLD each	=100 K.L
vi.	Nursery School	4No's @10.00KLD each	= 40 K.L
vii.	Crèche 1No's	@10.00KLD each	= 10 K.L
viii.	Dispensary	1No's or 1.26 acre @50.00KLD	= 63 K.L
			535.00K.L

D. HORTICULTURAL WATER REQUIREMENT

Total area 8.89 acres @25.00KD per acre =225.25K.L
Say =225.00KL } Will be met from Treated effluent

E. FIRE FIGHTING DEMAND

18275 persons@100 persons in thousand =√18275/1000/100
=4.2749x100=427.49KLD
Say 428.00KLD

Total Daily Requirement =2840+535+225+428 =4028.00KL

NO'S OF TUBEWELLS

I.	Expected discharge of tube well	=45.00K.L or 10000 gallons/hour
II.	Proposed working hours	=16 hours/day
III.	Total daily requirement	3863=4028.00K.L
IV.	No's of proposed tube well	3863= 4028/16x45=5.59No's
V.	Add 10 % standby arrangement	=0.56 No's
	Total No's of tube well	6.15No's Say 6.00No's

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Note. Since the water to the proposed development is to be supplies by the HUDA from Canal filtration Scheme in future, "Hence it is proposed to install 50% capacity or 3No's tube well at present "The balance 3Nos of tube well shall be installed as and when required. The drilling depth of proposed tube well 300Mtr below ground level.

PUMPING MACHINERY

Discharge	= 12.66LPS or 45.KL per Hours Or 760LPM
Total head	= 105.00mtr
H.P 760x105/60x75x0.60	= 29.56HP Say 30.00Hp

Installed 3No's Tube well with 3 No's submersible pumping set with a discharge of 760LPM at a head of 105Mtr driven with electric motor of 30.00 HP.

UNDER GROUND TANK

i.	Daily requirement excluding firefighting	=4028(-) 428=3600.00KL
ii.	Capacity of proposed UGT	= 3600x1/2=1800KLD

Heroic therefore it is proposed to construct underground tank of 900K.L in two compartment for domestic use 900kl water and 400kl for firefighting purpose in two compartment .the location marked in the plan.

PUMPING MACHINERY (FOR U.G.T)

I.	Total daily Requirement		= 4028KLD
II.	Purposed working hours		= 10hours
III.	Pumping Capacity per hours		=4028/10=402.80 say 403KLH
IV.	No's of pump set Purposed		= 2No's
V.	Capacity of each pumping Set		= 403/2 = 201.50 K.L H Say 202KL or 3370 LPM
	Head		= 45.00mt
	H.P Required	3370x45 60x75x0.60	=56.17 Say 55.00 HP already approved

Installed 3No's horizontal commercial pumping set of 3370 L.P.M discharge with head of 45mtr driven with electric motor of 55.00 HP(1 No's. pumping set stand by arrangement)

GENERATING SET

Installed 1No's generating set of 140 KVA at UGT and 3No's set, 40KVA set at Tube Well

RISING MAIN

(A) **From Tube well No's 1 to A**

i.	Discharge of proposed Tube well	=10000gallas/hours Or 45KL/hours
ii.	Working hours	= 16 hours
iii.	Total daily requirement	= 10000x16=160000gallon
iv.	Hence rising main design@1.5 time per day	=160000x1.50=240000gal/day

Hence it is proposed to provide 8" (200mm)I/D; CI/DI rising main giving a discharge of 25.0000Gallons of water per day with loss of head 1.62ft per 1000 feet (300mtr) and velocity 1.33ft per second.

(B) **From Tube well No's 2 to A**

i.	Discharge of proposed tube well	= 10000gallas per hours Or 45 Kl/hours

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ii. Working hours purposed = 16hours
iii. Total daily requirement = 10000x16=160000gall/day
iv. Hence rising main design@ 1.5time per day =160000 x1.50=2,40000gallons

Hence it is proposed to provide 8" (200mm)I/D, CI/DI rising main giving a discharge of 250000 gallons of water per day with loss of head 1.62ft per 1000 ft.(300mtr) and velocity 1.33ft per second.

(C) **From Point A-B**

i. Discharge of proposed 2No's tube well =2x10000gall=20000gall/hours
ii. Working hours proposed =16 hours
iii. Total daily requirement = 20000x16 =320000gallons
iv. Hence rising main designed @1.50time per day =320000x1.5=480000gallons/day

Hence it is proposed to provide 10" (250mm) I/D,CI/DI rising main giving a discharge of 500000gallons of water per day with loss of head 1.97ft per 1000ft (300mtr) and velocity 1.70ft per second

(D) **From tube well No's 3 to point – B**

i. Discharge of proposed tube well No's 3 =10.000gallons /hours
ii. Working hours proposed = 16 hours
iii. Total daily requirement = 1000x16 =160000gallons
iv. Hence rising main designed @1.5time/day =1,60,000x1.5=2,40,000 gallons/day

Hence it is proposed to provide 8"(200mm)I/D,CI/DI rising main giving a discharge of 2,50,000 gallons of water per day with loss of head 1.62ft per 1000ft(300mtr)and velocity 1.33ft per second

(E) **From Point- B to UGT**

i. Discharge of 3No's tube well =3x10000=30000gallon
ii. Working hours proposed =16hours
iii. Total daily requirement =3,0000x16= 4, 80,000gallons

Hence rising main designed @1.5time per day =4,80000x1.50=720000 gallons/day

Hence it is proposed to provide 10" (250mtr)I/D, CI/DI rising main giving a discharge 27,50,000gallons of water per day with loss of head 4.18ft(1.27mtr) per1000ft (300mtr)and velocity 2.55ft per second

(F) **Rising main from canal water**

i. Total Daily Requirement = 4028kl or 4028000Ltr
Or 8, 87,225 gallons
ii. Considering 50 % water from canal of HUDA W/works =8, 87225/2
=443613gallons
iii. Rising main designed @1.50 time per day =4,43613x1.5=6,65420 gallons/day

Hence it is proposed to provide 10"(250mtr) CI/DI rising main giving a discharge of 6,67000 gallons of water per day with loss of head 3.38ft(1.03mtr)per 1000 ft.(300mtr) and velocity 2.27ft per second.

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For VATIKA LIMITED

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Final Abstract of Cost of VatikaAmbala , in Sector 21,22, 23&25 being developed by Vatika Group

Sr No	Description	Basic Cost	Contingency Charges & PE Charges 3%	Price Escalation Unforeseen item 49%	152.30 Acres Amount in Lacs	Basic Cost	Contingency Charges & PE Charges 3%	Price Escalation Unforeseen item 49%	Addl. 22.07 Acres Amount in Lacs
1	Sub Work No. 1 (Roads)	1586.07 (2978.42 lacs)	47.58	800.46	2434.15	245.00	7.35	123.85	376.01 (278.76)
2	Sub Work No. 2 (Water Supply)	715.79 (1482.96 lacs)	21.47	361.26	1098.52	83.70	2.51	42.24	128.45
3	Sub Work No. 3 (Waste Water Collection System)	581.04 (1195.75 lacs)	17.43	293.25	891.72	66.00	1.98	33.31	101.29 (149.26)
4	Sub Work No. 4 (Storm Water)	466.65 (1143.91 lacs)	14.00	235.52	716.18	143.22	4.30	72.28	219.80
5	Sub Work No. 5 (Horticulture & Road Side Plantation)	162.05 (598.08 lacs)	4.86	81.79	248.70	23.48	0.70	11.85	36.03
6	Sub Work No. 6 (Lightings & Fittings)	152.30 (669.62 lacs)	4.57	76.87	233.78	22.07	0.66	11.14	33.87
	Sub Total				5623				895.46 (968.69)
	Sub Total								
	Maintenance for 10 years including								
	Mtc charges & Resurfacing of Roads after 5th yr. and 2nd phase i.e. 10 yr. of mtc (as per norms) Rs 4288.81 lacs				2,439.64				363.35
	Sub Total				8,062.45				1,259 (1279.94)
	Total of Per Acre				52.94				57.04

Rs 12056.96 lacs

For Ky Consultants

DEV. Cost Per acre = Rs. 12056.96 lacs / 174.373 ACs = Rs. 69.14 lacs per gross acre.

~~Total = Rs 8062.45 lacs~~

~~= Rs 1271.94 lacs~~

~~Total = Rs 9334.39 lacs~~

~~Checked for Rs 9334.39 lacs.~~

c/s

Director General,
Town and Country Planning,
Haryana, Chandigarh

Executive Engineer
HUDA, Division
Ambala.
1/12/16

Checked subject to comments in forwarding letter No. 71018 Dt. 21-06-2017 and notes attached with the estimate

Executive Engineer (HQ)
for Chief Engineer HUDA
Panchkula

Ky Consultants Pvt. Ltd.

For VATIKA LIMITED

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Revised Cost Estimation of Sub Work No. 1 (Roads)

SUB HEAD NO. 1 — 182.30 Acres — Additional Area 22.07Acres

S No	Description	Qty	Unit	Rate in Rs	Amount in Rs	Qty	Unit	Rate in Rs	Amount in Rs
				Roads					
NS/1	Earth work in embankment Lead Up to 10 Km	102000.000	cum	227.30	11368600	37460.000	cum	227.30	8514638
2.2.4.1	Preparation of Sub grade including trenching rough dressing of spoil, final dressing of earth to give levels and camber, watering rolling with road roller, and compacting the bed.	92000	sq mtr	4.35	399754	14045	sq mtr	4.385	61028
NS/3	Providing and laying granular sub base 200 mm thick one layer	27600	cum	881.20	24321120	4205	cum	881.20	3705446
NS/4	Providing and laying Wet Mix Macadam 2 Layer of 125mm thick each layer	23000	cum	962.00	22126000	3842	cum	962	3378544
NS/5	Providing and laying priming coat with Rapid emultion@ 60 kg per 100sqm	92000	sqm	21.00	1932000	14,045	sqm	21	294945
NS/6	Providing and laying priming coat with Rapid emultion @ 25 sqm per 100 sqm	92000	sqm	11.50	1058000	14,045	sqm	11.50	161518
NS/7	Providing and laying 40mm thick DBM including cost of bitument grade 60/70	3560	Mt	2830.80	10077648	0	mtr	2,830.80	2009.16
NS/8	Providing and laying 20 mm thick M-35	40590	Sqm	130.35	5290906	83.00	mtr	130.35	10.69
NS/9	Providing and laying 25mm thick Premix carpet with B type seal with paver complete in all respect	51315	Sqm	174.40	8949336	14045	mtr	174.40	2449448
NS/10	Providing and laying of kerbs and channels complete in all respect								31.92
a	Kerbs	24460	Mtr	608.35	14880241	5110	Mtr	608.35	3108669
b	channel	24460	Mtr	459.80	11246708	5110	Mtr	459.80	2349538
NS/11	Providing for Guide Map and other unforseen item	LS			500000	LS			200000
12	Provision on footpath on 24 Mtr wide road on both sides(2761x2x2.5)13805+5%	14495	sqm	450.00	6522863	0.00	sqm	450	0
13	Provision for survey and leveling	153	Area	1200.00	183600	22.07	Area	1200.00	26484
14	Provision for demarcation and burzi etc complete in all respect	LS			500000	LS			100000
15	Provision for plot indicating complete in all respect	LS			250000	LS			50000
16	Provision for traffic arrangement	LS			1000000	-			
17	Provision for two Nos culvert on kanwal minor with provision drains	LS			3000000	-			
18	Provision for carriage of material	LS			500000	LS			100000
19	Provision for C.C Pavement in commercial area 4.91 Acre 4.91x4847/2= 9926 sqm 10000 Say	10000	sqm	450	4500000				
	Total				158600776			315.55	24500317
	Add 3 % Contengency and P. E Charge				4758203			9.47	735009
	Sub Total				163364979			325.02	25236326
	Add 49% Dept Price escalation unforseen dept charge				80048840			159.26	12366310
	Grand Total				243413819			484.28	37600636
	Say				2434.14				376.18

Revised cost 2434.14 lacs + 484.28 lacs = 2918.42 lacs

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Abstract of Sub Work No. 2
(Water Supply)

	No. of Sub Head	Name of Sub Head	Amount in Rs		
2	Sub Head No. 1	Water Works & Boosting Station	25182000	No additional amount Required	
3	Sub Head No. 2	Pumping Machinery	4780000	No additional amount Required	
4	Sub Head No. 3	Distribution System & Rising Main	41612000	Distribution System & Rising Main	8370000
	Total		71570000	8370000	8370000
	Add 3 % Contengency and P. E Charge		2147070		251100
	Sub Total		73726270		8621100
	Add 49% Dept, Price escalation unforseen depit charge		36125024		4224339
	Grand Total		109852294		12845439
	Say		1098.52		128.45

Sub Head No. 1

Water Works & Boosting Station

152.30 Acres + 2.07 = 154.37 Acres Additional Area 2.07Acres

	Description	Qty.	Unit	Rate in Rs	Amount in Rs	Qty.	Unit	Rate in Rs	Amount in Rs
1	Boring of tubewells having minimum of 450 mm dia with depth of 300mtr including providing & fixing 200 mm inside dia V - wire Screen of stainless steel of aproved make, blind pipe of MS confirming to IS: 3589 of 4.8 mm thick threaded and sockted as per approved design including cost of all fitting and clamps placed on the girder and coated with antic erosive paint of approved quality, including supply and installation of 40 BHP pumping set, CI colourm pipes, panal board and all other electrical apprutenances to run the tubewell, making provision for the earthing, cost of panal baord etc complete in all respect upto delievery pipe lines including the cost of Sluice valves, scour valves and non return valves etc	3	Nos.	1500000	4500000				
2	Construction of Pump Chamber 4.9 m*3.65 mtrs side dimension as per public Health specification complete in all respect	3	Nos.	225000	675000				
3	Construction of Boosting chamber of 8.5 M *6.0 M L.S	1	Nos.	1000000	1000000				
4	(II) Construction of RCC Under Ground Clear Water Storage Tank, 1800KL capacity in three compartments including inlet, outlet & overflow	2200	Kl	3000	6600000				
5	Rising Main	1	L.S.	7330000	7330000				
6	Provision for carriage of materials and other unforeseen items.	1	L.S.	200000	900000				
7	Construction of Boundary wall and gate around the water works	1	L.S.	400000	400000				
8	Development of campus of water works including construction of approach roads, footpath, hedges and development of lawns and plantation etc complete at water works site	LS	No	300000	300000				
9	Provision for Staff Quarter	LS		3800000	3800000				
10	Provision for Electric Connection	LS		250000	250000				
11	Sundries	LS		127000	127000				
12	Total				25182000				

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Sub Head No. 3

Pumping Machinery

152.30 Acres + 22.07 Acres = 174.37 Additional Area 22.07Acres

	Description	Qty	Unit	Rate in Rs	Amount in Rs	Qty	Unit	Rate in Rs	Amount in Rs
1	Submersible pumping set with 75ø LPM @ 105m head with 30 BHP motor	3	no	300000	900000				
2	Non clog Submersible pumping set with 3260 LPM @ 45m head with 55 BHP motor	3	no	500000	1500000				
3	Gencarting set on tubewell 3 no. 40 KVa & 1 no. 140 Kva	1	LS	1620000	1620000				
4	Lowering of GI pipe 4"		LS	90000	90000				
5	Provision of chlorinator		LS	300000	300000				
6	Sundries		LS	370000	370000				
7	Total				4780000				

Sub Head No.3

Distribution System & Rising Main (Dom + Flushing)

152.30 Acres + 22.07 Acre = 174.37 Additional Area 22.07Acres

	Description	Qty	Unit	Rate in Rs	Amount in Rs	Qty.	Unit	Rate in Rs	Amount in Rs
1	Providing, stringing, cutting and jointing D.I. pipe (Class K-7) Zinc coating outside the pipe and cement lining inside including cost of excavation								
	(For Distribution)								
	100 mm id	6705	Mtr	1200	8046000	2038	Mtr	1,200.00	2445600
	150 mm id	2645	Mtr	1500	3967500	69	Mtr	1,500.00	103500
	200 mm id	565	Mtr	2000	1130000	650	Mtr	2,000.00	1300000
	250 mm id	475	Mtr	2625	1246875	735	Mtr	2,625.00	1929375
	300 mm id	700	Mtr	3500	2450000	93	Mtr	3,500.00	325500
	400 mm id	290	Mtr	5180	1502200	0	Mtr	5,180.00	0
2/NS Recommendation of Committee	Providing and fixing cast iron double falnged sluice valve/ Butter Fly Valve PN 1.6 marked with IS 14846 including cost of all joint of material, carriage, loading, unloading, stacking, handling etc complete in all respect of the satisfaction to the Engineer - in charge								
	100 mm id	29+31	Nos.	12000	348000	31	Nos.	12,000.00	372000
	150 mm id	10+6	Nos.	14000	140000	6	Nos.	14,000.00	84000
	200 mm id	2+8	Nos.	18200	36400	8	Nos.	18,200.00	145600
	250 mm id	2+2	Nos.	24000	48000	2	Nos.	24,000.00	40800
	300 mm id	1	Nos.	30000	30000	0	Nos.	30,000.00	0
	400 mm id	2	Nos.	41120	82240	0	Nos.	41,120.00	0

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3	Providing and fixing Fire Hydrants complete with masonry chambers	4	Nos	5000	20000	7	Nos	5,000.00	35000
4	Construction of Brick masonry Hauld for Sluice Valves & Fire hydrent including surface boxes complete as per Public Health Standard	46	Nos	10955.00	503930	42	Nos.	10,955.00	514485
5	Provision for indicating Arrow plates for Sluice valve & Fire hydrent	46	Nos.	1000	46000	42	Nos	1,000.00	47000
6	Providing and fixing C.I. double Air valves marked with IS : 14845 including carriage, loading, unloading, stacking, handling, re-handling etc., drilling, tapping, screwing in valves connections complete in all respects to the satisfaction of Engineer-in-charge (as per HSR item 28.13 with C.P. nill) 100mm i/d.	4	Nos	10000	40000	1	Nos.	10,000.00	10000
7	Providing and fixingLawnHydrants complete with masonry chambers	1	LS	500000	500000	2	Nos	500,000.00	1000000
8	Provision for Carrige of material	1	LS	500000	500000	1	LS	15000	15000
9	Provision for Cutting of Roads and making good to its orignal condition	1	LS	500000	500000	1	LS	15000	15000
10	Provision for Flushing Line	1	LS	20000000	20000000				
11	Sundries				479855				
12	Total				41617000				8360080

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PROVIDING SERVICE ESTIMATE FOR VATIKA CITY CENTER AT AMBALA

DESIGN CALCULATION

SEWERAGE

I. Total daily requirement
(Excluding firefighting, green belt and 15%UFA) =2467.13K.L+535 K.L
As per water supply design calculation =3002.13 K.L or 3002130Ltr
Or 661262 gallons

II. Assuming 75% waste water
Reach at STP with 1 time D.W.F =661262x75/100 = 495947 gallon
Or 2251597Ltr or 2.25 M.L.D.
Say 2.00 M.L.D

Hence it is proposed to provide 2.00 M.L.D sewage treatment plant (as the same already been approved in the original service estimate)

Total Discharge for sewerage scheme (as per revised plan)

Assuming 75% waste water reach at disposal work with 3 time D.W.F

I) Total daily requirement(excluding firefighting,
Green belt and 15%UFA) as per revised plan =6, 61262 gallons

$$\frac{6,61262x3x75}{22500x24x100} = 2.75 \text{ cusecs}$$

As per original approved service estimate

$$\frac{619147x75x3}{22500x24x100} = 2.58 \text{ cusecs}$$

Difference = 0.17 cusecs

There is a minor difference in discharge, Hence capacity of TPS considered and proposal which detail below. In the approved service estimate 7 No's TPS approved.

TPS (Temporary Pumping Station)

TPS-1 and TPS-7

a) Total discharge in cusecs. With 3 times DWF
And considering 75% sullage waste =0.16 cusecs each
or 0.16x22500x24
= 86400 gallons/day

II) Pumping capacity per hour = 86400/24 = 3600 gallon

III) capacity of collecting tank (sump well)
Considering 10 minutes =3600x10/60 = 600 gallons

IV) Dia of sump with 6.00 ft. working depth $= \sqrt{600 \times 7/22 \times 4/25 \times 1/6 \times 4/1} = 4.51$ft
Say 4.50 ft. dia.

Hence it is proposed to construct 1No's. Sump well of 600 gallons capacity of each at TPS-1 and TPS -7 of 4.50 ft. dia (1.40mtr) with working depth 6 ft. (1.82mtr) B.G.L.

Head of Pumping Machinery

Suction lift = 10.00 feet
Losses in pumping machinery = 5.00 feet
Losses in rising machinery = 10.00 feet
Losses in Pipes &Special = 10.00 feet
35.00 feet say 40.00ft or 12.00mtr

HP $= \frac{3600x40x100x10}{3300x60x60} = 1.21$ HP
Say 1.00 HP

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Or 443LPM

Capacity of collecting tank (sump well)
Considering 10 minutes = 5850x10/60 = 975 gallons
Dia of sump well with 6.00 ft. working depth
$\sqrt{975 \times 7/22 \times 4/25 \times 1/6 \times 4/1}$ = 5.75ft.
Or 1.75mtr.

Hence it is proposal to construct 1 No's. sump well of 5.75ft.(1.75mtr) dia capacity of sump well 975 gallons with working depth of 6.00 ft. (1.82mtr) B.G.L.

HEAD OF PUMPING MACHINERY = 40.00ft. (12.00mtr) as above proposed

H.P of pumping set $= \frac{5850 \times 40 \times 100 \times 10}{33000 \times 60 \times 60}$ = 1.96H.P Say 2.00 H.P

Hence it is proposed to install 2 No's submersible sewage pumping set of 2.00 H.P delivering 5850 gallons(443 LPM) , against a head of 40 feet (12mtr) driven with electric motor of 2.00H.P. one as standby arrangement.

RISING MAIN
Total daily requirement = 140400 gallons/day
Rising main discharge @1 time of daily Requirement
capacity of rising main =140400x1 = 140400 gallons
Hence it is proposed to provide 150 mm i/d CI/DI rising main given a discharge of 150,000 gallons/day with head loss of 0.76mtr per 300mtr and velocity 0.43mtr/second .
Total length 150mm = 60.00mtr.

TPS NO'S-6
Total daily discharge in cusecs with 3 time DWF
And considering 75% sullage waste = 0.60 cusecs
Or 0.60x22500x24
= 3,24000 gallons/day
Pumping capacity per hour = 3,24000/24 =13500 gallons
Or 1022LPM

Capacity of collecting tank (sump well)
Considering 10 minutes = 13500x10/60 = 2250 gallons
Dia of sump well with 6.00 ft. working depth
$\sqrt{2250 \times 7/22 \times 4/25 \times 1/6 \times 4/1}$ = 8.74ft. Say 8.75ft
Or 2.66mtr.

Hence it is proposal to construct 1 No's. sump well of 8.75ft.(2.66mtr) dia capacity of sump well 2250 gallons with working depth of 6.00 ft. (1.82mtr) B.G.L.

HEAD OF PUMPING MACHINERY = 40.00ft. (12.00mtr) as above proposed

H.P of pumping set $= \frac{13500 \times 40 \times 100 \times 10}{33000 \times 60 \times 60}$ = 2.73H.P Say 3.00 H.P

Hence it is proposed to install 2 No's submersible sewage pumping set of 13500 gallons(1022 LPM) , against a head of 40 feet (12mtr) driven with electric motor of 3.00H.P. one as standby arrangement.

RISING MAIN
Total daily requirement = 324000 gallons/day
Rising main discharge @1 time of daily Requirement
capacity of rising main =324000x1 = 324000 gallons
Hence it is proposed to provide 200 mm I/D CI/DI rising main given a discharge of 333,000 gallons/day with head loss of 0.84mtr per 300mtr and velocity 0.54mtr/second.
Total length 200mm = 60.00mtr.

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Cost Estimation of Sub Work No. 3
(Waste Water Collection System)

No. of Sub Head	Name of Sub Head	Amount in Rs	Name of Sub Head	Amount in Rs
1 Sub Head No. 1	Waste Water collection/Sewerage	24662000	Waste Water collection/Sewerage	6600000
2 Sub Head No. 2	Temporary Disposal	33442080	Pro additional amount Required	
3 Total		58104080		6600000
Add 3 % Contingency and P. C Charge		1743120		198000
Sub Total		59847120		6798000
Add 49% Dept. Price excalation unforseen dept charge		29325089		3331020
Grand Total		89172209		10129020
Say		891.72		101.29

Sub Head No. 1

Waste Water collection/Sewerage

152.30 Acres — Additional Area 22.07Acres

	Description	Qty.	Unit	Rate in Rs	Amount in Rs	Qty.	Unit	Rate in Rs	Amount in Rs
1	Providing salt glazed stone ware pipes grade 'A' in standard length of 600 mm each pipe marked with IS: 651 and their lowering, cutting, jointing and testing , including cost of excavation, bed concrete , Man holes jointing materials as well as carriage, loading, unloading stacking, handling, rehandling etc, complete in all respects to the satisfaction of Engineer in Charge								
	200 mm id S.W Pipe								
i	i) Average Depth up to 2 M								
	Above water table	7890	M	850	6706500	2724	M	850	2315400
	250 mm id S.W Pipe								
ii	ii) Average Depth 2 M to 4 M	640	M	1150	736000	112	M	1150	128800
	300 mm id S.W Pipe								
iii	i) Average Depth 2 M to 4 M	625	M	1505	940625	71	M	1505	106855
	350 mm id S.W Pipe								
iv	i) Average Depth 2 M to 4 M	0	M	2214	0	0	M	2214	0
	400 mm id S.W Pipe								
v	i) Average Depth 2 M to 4 M	503	M	2680	1348040	278	M	2680	745040
	450 mm id S.W Pipe								
vi	i) Average Depth 2 M to 5 M	0	M	3231	0	0	M	3231	0
	500 mm id S.W Pipe								
vii	i) Average Depth 2 M to 5 M	480	M	4590	2203200	0	M	4590	0
	600 mm id S.W Pipe								
viii	i) Average Depth 2 M to 5 M	40	M	6325	253000	0	M	6325	0
2	Man Holes								
	200 mm id S.W Pipe								
i	i) Average Depth up to 2 M								
	Above water table	250	Nos.	18500	4625000	95	M	18500	1757500
	250 mm id S.W Pipe								
ii	ii) Average Depth 2 M to 4 M	20	Nos.	21000	420000	0	M	21000	0
	300 mm id S.W Pipe								
iii	i) Average Depth 2 M to 4 M	14	Nos.	22000	308000	2	M	22000	44000

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	375 mm id S.W Pipe							0	
iv	i) Average Depth 2 M to 4 M	0	M	2214	0	0	M	2214	0
	400 mm id S.W Pipe							0	
v	i) Average Depth 2 M to 4 M	8	Nos	50000	400000	10	M	50000	500000
	450 mm id S.W Pipe							0	
vi	i) Average Depth 2 M to 5 M	0	M	3231	0	0	M	3231	0
	500 mm id S.W Pipe							0	
vii	i) Average Depth 2 M to 5 M	17	Nos.	75000	1225000	0	M	75000	0
	600 mm id S.W Pipe							0	
viii	i) Average Depth 2 M to 5 M	1	Nos.	100000	100000	0	M	100000	0
3	MI Steps	1678	Nos.	110	184580	450		198	89100
4	Vent shafts		LS		1000000			100000	400000
5	Lamp holes	545		3500	1907500	19		3500	66500
6	Lowering of sub soil Water Table	3600	M	500	1800000	1540	m	500	770000
7	Extra Concrete due to Water Table	1	LS	500000	500000	1	LS	100000	100000
8	Provision for Carrige of material	1	LS	200000	200000	1	LS	15000	15000
9	Provision for Cutting of Roads and making good to its orignal condition	1	LS	500000	500000	1	LS	150000	15000
10	Total				25407445				6622093
	Say				254.07				66.23

Total cost ₹ 292.24 lacs + 97.81 lacs = ₹ 390.05 lacs

For VATIKA LIMITED

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