

Directorate of Town & Country Planning, Haryana

SCO-71-75, 2nd Floor, Sector-17-C, Chandigarh, Phone: 0172-2549349

Web site tcpharyana.gov.in - e-mail: tcpharyana2@gmail.com

Regd.

To

Ananddham Realtors Pvt. Ltd.,
C/o Ansal Properties & Infrastructure Ltd,
115, Ansal Bhawan, 16 Kasturba Gandhi Marg,
New Delhi-110001.
Email - apisanctions_hr@ansalapi.com

Memo. No. LC-1575-PA(SN)-2016/ 16982

Dated: 23/5/2016

Subject: Approval of service plan/estimate in license no 291 of 2007 dated 31.05.2007 granted for setting up of a Commercial colony over an area measuring 4.237 acres falling in Sector-67 of Gurgaon-Manesar Urban Complex, Distt. Gurgaon.

Kindly refer your application on the subject noted above.

The Service Plans/Estimates in respect of commercial colony under the Licence no. 291 of 2007 dated 31.05.2007 granted for an area measuring 4.237 acres falling in Sector-67 of Gurgaon-Manesar Urban Complex, Distt. Gurgaon being developed by you has been checked and corrected wherever necessary by Chief Administrator, HUDA, Panchkula and are hereby approved subject to the following terms and conditions :-

- a. 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.
- b. 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.
- c. You are liable to maintain the estate developed by you as per HUDA norms till such time the colony is taken over by the Local Authority/State Govt.
- d. The wiring system of the street lighting will be under ground and the specifications of the street lighting fixture etc. will be as per relevant standard of HVPNL.
- e. That appropriate provision for fire fighting as required in the NBC/ISI code should also be provided by you and a fire safety certificate will be obtained by you from the Competent Authority before undertaking any construction. You will be sole responsible for fire safety arrangements.
- f. You will be fully responsible to make the arrangement of disposal of sewerage and storm water drainage till such time these are made available by HUDA and all link connections with the external system will be done by you at your own cost. 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. In case pumping is required the same will be done by you at your own cost.

- g. It is made clear that there will be no pollution due to disposal of sewerage of the colony. The disposal of effluent should be in accordance with the standard norms fixed by the Haryana State Pollution Control Board/Environment Department.
- h. You will be responsible regarding the portability of the water before supply the water to the resident as presently tubewell based water supply is proposed.
- i. That you will have to make provision of separate flushing line, storage tank, pumping system and plumbing of recycled water. 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.
- j. It is made clear that roof top rain harvesting system shall be provided by you as per norms and the same shall be kept operational/maintained all the time. The arrangement for segregation of first rain shall be made by you.
- k. 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.
- l. The estimate do not include the provision of electrification of the colony, therefore the supervision charges and O & M charges shall be paid by the you directly to the HVPNL.
- m. 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.
- n. In case some additional structures are required to be constructed and decided by the Director General/HUDA at a later stage, the same will be binding upon you.
- o. You will not make the connection with the master services i.e. water supply, sewerage, storm water drainage without getting its approval from the competent authority.
- p. Levels/extent of the services to be provided by the HUDA i.e. water supply, sewerage will be proportionate of EDC deposited.
- q. 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 be part of the building works.
- r. Solar water heating system shall be provided by you as per the norms approved by the Haryana Govt.
- s. That the land under service road shall be transferred to HUDA for construction of service road and the proportionate cost for the same shall be paid by you.

- t. In case, it is decided by Govt. that HUDA/Govt. will construct 24 m wide road and will extend master services on 24 m internal circulation road then additional amount at rate as decided by the authority/Govt. will be recoverable over an above EDC.
- u. That construction of master road is yet to take place. Therefore, you will get the road level/formation level of your services fixed from the concerned SuperIntending Engineer, before execution.
- v. In case, some additional structures are required to be constructed and decided by the HUDA at a later stage, the same will be binding upon you. Flow control valve will be installed preferably of automatic type on water supply connection with HUDA water supply line.
- w. You will comply with the conditions as specified in Annexure 'A' attached with service plan/estimates and also abide by terms and conditions mentioned in the approved letter of Service Plan Estimate of said colony, issued by CA, HUDA vide letter dated 10.04.2015 (Copy enclosed).
- x. That you shall submit the approved electrical estimates plan for electrical infrastructure from HVPN within 60 days and submit the same in this office for approval.

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.


DA/As above


District Town Planner (HQ)
O/o Director General, Town & Country Planning
Haryana, Chandigarh

Endst. No LC-1575-PA(SN)-2016/

Dated :

A copy is forwarded to the Chief Administrator, HUDA, Panchkula with reference to his memo No. CE-1/EE(W)/CHD(G)/2015/4054 dated 10.04.2015 for information and necessary action please.


District Town Planner (HQ)
O/o Director General, Town & Country Planning
Haryana, Chandigarh

From

The Chief Administrator,
HUDA, Panchkula.

To

The Director General,
Town and Country Planning,
Haryana, Chandigarh.

Memo No: - CE-I/EE (W)/CHD(G)/2015/ 4054

Dated:-10/4/15

SUB:-

Approval of Service plan estimate for Commercial Colony for an area measuring 4.237 acres (license No 291 of 2007 dated 31.12.2007) at Village Badshahpur, Sector-67, Gurgaon being developed by M/S. Ansal API, C/o JMD Ltd.

Please refer to your office Endst. No. ZP-347/ AD(RA)/2013/57350- 58 dated 13.11.2013, vide which the revised building plans of Commercial Colony cited in the subject above were approved by your office.

The rough cost estimate / service plans for providing Public Health/B&R Services to be provided by the colonizer M/S. Ansal Properties & Infrastructure Ltd. C/o JMD Ltd. falling in their Commercial Colony on the land measuring 4.237 acres area (license No. 291 of 2007 dated 31.12.2007) at Village Badshahpur, in Sector-67, Gurgaon, have been received from SE, HUDA, Circle-II-Gurgaon vide his Memo No. 2732 dated 04.03.2015. The same have been checked and corrected wherever necessary and are sent herewith for execution as well as for Bank Guarantee purpose, subject to the following comments:-

1. EXTERNAL DEVELOPMENT CHARGES:-

The colonizer will have to pay the proportionate cost to the external development charges for setting up Commercial Colony for the services like water supply, sewerage, storm water drainage, roads, bridges, community building, street lighting, horticulture and maintenance thereof etc. on gross acreage basis as and when determined by HUDA. These charges will be modifiable as and when approved by the authority/State Govt. and will be binding upon the colonizer.

2. DENSITY/AREA/POPULATION:-

The scheme has been designed considering one person per 3 Sqmt. on G.F. , One Person per 6 Sqmt. on F.F. for retail in block-A,B & C and One person per 10 Sqmt. on upper floor i.e. 2nd floor to 8th floor for office use in block-C and 135 Nos. service apartment on upper floor i.e. 2nd floor to 6th floor in block-B, within 29996.665 Sqmt. FAR. have been proposed. This may be checked and confirmed by your office that overall density as taken is correct and overall density of sector should be maintained according to final development plan of Gurgaon Town. The category wise area as shown on the plans and proposed density of population thereof has been treated to be correct for the purpose of estimation/services.

3. All technical notes and comments incorporated in this estimate in two sheets will also apply. A copy of these are also appended as Annexure-'A'.
4. The title and name of the License may be examined by your office.

gbb
5. STREET LIGHTING:-

The wiring system of street lighting will be as per the relevant standard of HVPNL/DHBVNL and being followed by HUDA in their sector. The firm shall provide automatic on off system street lighting in the complex.

6. FIRE FIGHTING:-

The provision made in the estimate has been checked for estimation purpose. However, it may be made clear to the colonizer that the appropriate provision for firefighting arrangement, as required in the NBC/ISI, should also be provided by the colonizer and fire safety certificate should also be obtained by the colonizer from the competent authority before undertaking any construction. The colonizer will be solely responsible for fire safety arrangement.

7. AIR TRAFFIC RULES/REGULATIONS:-

The Commercial Complex Project consists the construction of multi-storeyed building(G+8) storeyed building. RCC water tower has been proposed on the top of the building. The total height of the building and top of the water tower above ground level has not been defined/indicated on the plans. The violation of Air Traffic Rules/Regulations and height of the building may be examined by DGTCPO office.

8. The revised layout plan for setting up of Commercial Colony having an area of 4.237 acres area approved by your office No. ZP-347/AD(RA)/2013/57350-58 dated 13.11.2013 annexed with the estimate have been considered to be correct for the purpose of estimation/service only.

562
b
9/4
EE(10)
LC
19/11/18
9. MAINTENANCE OF SERVICES:-

The Mtc. charges for various services like water supply, sewerage, SWD, roads, street lighting, Hort., etc. and resurfacing of roads have been included in the estimate as per details given in the estimate and the total cost works out to be **Rs. 134.04 Lacs**, as they are liable to maintain the estate developed by them as per HUDA norms, till such time, the colony is taken over by the local authority/State Govt.

10. It may be made clear to the colonizer that level/extent of external services to be provided by HUDA will be in accordance with EDC deposited. The colonizer will be fully responsible to meet the demand, to dispose off effluent and rain water till these services are provided by HUDA.
11. The correctness of the levels of the colony will be sole responsibility of the colonizer for integrating the internal/sewerage, storm water drainage of the colony by gravity with the master services.
12. The service estimate as received has been checked in this office with the consideration that layout plans appended in the services estimate has been checked/ approved by competent authority.
13. The estimate includes the provision of electrification of the colony. (Street lighting only) However, it may be made clear to the colonizer that the supervision charges and O & M charges shall be paid by them directly to the HVPNL/DHBVNL. The firm shall provide automatic on-off system for street lighting in the complex.

14. It shall be mandatory for the firm to provide Solar Water Heating System as per HAREDA specifications. An undertaking in this regard shall be furnished by the owner to DGTCP (Hr.) at the time of Grant of Occupation Certificate.

15. It is made clear to the colonizer that release of water for external source will take about 2 to 3 years for the new licensed area subject to the following:-

- i) Supply of adequate quantity of raw water at tail of NCR water supply channel by Irrigation Deptt. and timely completion of water treatment plant at Chandu Budhera Water Works.
- ii) Availability of litigation and encroachment free land.
- iii) Required quantity of raw water will be made available by irrigation deptt.
- iv) Permission within reasonable period from forest and environment department where ever required.
- v) Till the water supply and other services are made available by HUDA, the licensees will have to make their own arrangements. T/Well can be bored with permission from Central Ground Water Board and other concerned authority, for the drinking purposes only. But no under ground water supply shall be used for construction purposes.
- vi) HUDA shall supply the drinking water only to the license granted in the master plan area.
- vii) HUDA shall provide water supply along NPR/SPR at the initial stage and various colonizer will have to take connection from this water supply main up to their site at their own expenses till the land of master road in circling the licensed area is acquired and the area in between licensed area and the NPR/SPR is further acquired by HUDA or licensees.
- viii) Developers will disclose the source of water for construction purposes.

16. 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 may be clarified to developer 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 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 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

SF2
6
9/4
EGW
8/4/11

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.

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

- (a) Recycle water pipes, fittings, Appurtenances, valves, taps, meters, hydrants will be of Red Color 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 color bearing words "Recycle Water" should be fixed at suitable interval on pipes.
 - (d) Octagonal covers, red in color or painted Red and words "Recycle Water-Not fit for Drinking" embossed on them should be used for recycled water.
17. It shall be mandatory for the firm to provide dual/two button or lever flush system in toilets.
 18. It may be made clear to the colonizer that there will be no pollution due to disposal of sewerage of their colony. The disposal of effluent should be in accordance to the standard norms, fixed by the Haryana State Pollution Control Board/Environment Deptt.
 19. The colonizer will be responsible for the construction of various structures such as RCC UGT and OHSR; water/sewage treatment plant etc. according to the standard specification. Good quality workmanship and water tightness of all the structures will be responsibility of the colonizer.
 20. In case some additional structures are required to be constructed, as decided by the HUDA at a later stage, the same will be binding upon the colonizer. Flow control valves will be installed, preferably of automatic type, on water supply connection with HUDA water supply line.
 21. In case it is decided by Govt. that HUDA/Govt. will construct 24 Mtrs. Wide road and will extend master services on 24 Mtrs. Internal circulation road then additional amount and rates as decided by the authority/Govt. will be recoverable over and above EDC.
 22. Since the construction of master road is yet to take place, the developer will get the road level/formation level of his services fixed from the concerned Superintending Engineer, before execution.
 23. The formation level of internal roads should match with the sector roads, similarly other services of colonizer like water supply, sewerage and SWD level etc. should also be fixed in integration of levels of EDC services of water supply, sewerage & SWD etc.
 24. CFL lamp shall be provided by the firm for external lighting in respect of energy conservation.
 25. Levels of the external services to be provided by HUDA i.e. water supply sewerage will be proportionate to EDC deposited.
 26. That the owner will not resort manual scavenging by engaging sanitation works for cleaning of septic tanks/ such cleaning as per the decision taken in the meeting of the Central Monitoring Committee (CMC) held under the Chairmanship of Cabinet

SFI
6
9/4
EED(w)
20
21/4/14

Secretary on 22.03.2013 (D.O. No. Q. 11021/12/2010-PHE-II (Vol. IV dated 7th Feb. 2013 of secretary to the Govt. of India of Urban Development and further order by the Principal Secretary to Govt. Haryana, Urban Local Bodies Deptt., Chandigarh vide letter No. 16/24/2013-2C1 dated Nil.

27. SPECIAL CONDITIONS:-

The developer has to dismantle and relocate his services even after laid, wherever required to suit the size, capacity and levels of HUDA services in the area/sector, if any.

- These services at later stage, if required, will have to correlate with the services falling in the land of other licensee/developer adjacent to the land of this colonizer have to re-lay & relocate for their size, capacity and levels to give continuity of proper approach, to maintain the loops and grid of water supply distribution line and functioning of sewer and storm water drainage & other services in the public interest. The developer has to obtain prior permission from the concerned authority if the services are to be laid through revenue rasta or other land before laying of services. It will be ensured by the colonizer to install double bottom system in flushing cistern in all toilets in various building to be constructed in his licensed area.
- Similarly, the common services if decided to be laid by HUDA along 24mtr wide road / master roads against the development charges charged by HUDA for common benefit of all developers in the sector, the developer shall have to dismantle and relocate his already laid services, wherever required to suit the size, capacity and levels of HUDA services in the area / sector.
- Permission for competent authority shall be obtained prior to boring/drilling of tube wells. Further, approval of service plan/estimate with tube well provision does not entitle the colonizers to drill tube well. It is pertinent to mention here that at present HUDA has not laid master water supply in the area. Water so obtained from tube well shall be used only for drinking purposes and shall not be used for construction purpose.

28.COMMON SERVICES:-

- (i) The estimate does not include the common services like water supply, storage tank on the top of the building block, the plumbing works etc. and will be part of the plumbing work.
- (ii) The firm will provide solar water heating system as per the guidelines issued by the Haryana Govt./Ministry of Environment, Govt. of India.

29. CONSTRUCTION ACTIVITY OF PROJECT:-

- a) It is clearly stated that the firm/developers shall not be allowed to carry out the construction with underground water.
- b) The firm shall also show the source from where the water supply will be taken for construction purpose.

5/2

6/9/4
EE(4)
2/11/11

270

The estimated cost of various services to be provided by the colonizer for the development of internal services has been checked and corrected for the purposed of bank guarantee and work out as under:-

| <u>Sr. No:</u> | <u>DESCRIPTION</u> | <u>AMOUNT IN LACS.</u> |
|----------------|---|-------------------------------------|
| 1. | Water Supply | Rs. 144.90 Lacs. |
| 2. | Sewerage | Rs. 95.39 Lacs. |
| 3. | Storm Water Drainage | Rs. 53.32 Lacs. |
| 4. | Roads | Rs. 105.22 Lacs |
| 5. | Street Lighting | Rs. 16.24 Lacs. |
| 6. | Horticulture | Rs. 5.75 Lacs. |
| 7. | Maintenance of services for ten years including resurfacing of road after 1st five years and IInd five years of maintenance (as per HUDA norms) | Rs. 134.04 Lacs. Rs. 554.86 Lacs |

Say Rs: 554.90 Lacs.

Dev. Cost per acre = 554.90 Lacs/4.237 acres= Rs 130.96 Lacs per gross acre.

Two copies of the estimate along with Four plans and proposal as received are returned herewith duly corrected and signed for further necessary action.

It is requested to get three copies of the estimate/service plan from the colonizer for distribution amongst the field station.

DA/-Estimate in duplicate
along with Four plans
& Annexure-A.

For Executive Engineer (W),
Chief Administrator, HUDA,
Panchkula
Dated:-

Endst. No: -

A copy of the above is forwarded to the Superintending Engineer, HUDA, Circle-II-Gurgaon for information with reference to his Memo No. 2732 dated 04.03.201.

For Executive Engineer (W),
Chief Administrator, HUDA,
Panchkula

C.E. No. 4074
Dated 10/4/11

Annexure-A

SUB:- Approval of Service plan estimate for Commercial Colony for an area measuring 4.237 acres (license No. 291 of 2007 dated 31.12.2007) at Village Badshahpur, Sector-67, Gurgaon being developed by M/S. Ansal API, C/o JMD Ltd.

Technical note and comments:-

1. All detailed working drawings would have to be prepared by the colonizer for Integrating the internal services proposals with the master proposals of town.
2. The correctness of the levels will be the sole, responsibility of the colonizer for the integration of internal proposals, with the master proposals, of town and will be got confirmed before execution.
3. The material to be used shall the same specifications as are being adopted by HUDA and further shall also confirm to such directions, as issued by Chief Engineer, HUDA from time to time.
4. The work shall be carried out according to Haryana PWD specification or such specifications as are being followed by HUDA. Further it shall also confirm to such other directions, as are issued by Chief Engineer, HUDA from time to time.
5. The colonizer will be fully responsible to meet the demand of water supply and allied services till such time these are made available by State Government/ HUDA. All link connections with the State Government/ HUDA system and services will be done by the colonizer. If necessary extra tube-wells shall also be installed to meet extra demand of water beyond the provision according to EDC deposited.
6. Structural design & drawings of all the structures, such as pump chamber, boosting chamber, RCC OHSR underground tanks quarters, manholes chamber, sections of RCC pipes sewer and SW pipes, sewer, ventilating shafts for sewerage and Masonry Ventilation Chamber for Chamber for storm water drainage, temporary disposal/ arrangement etc. will be as per relevant I.S codes and PWD specifications; colonizer himself will be responsible for structural stability of all structures.
7. Potability of water will be checked and confirmed and the tube-wells will be put into operation after getting chemical analysis of water tested.

sf2
6/4
6/4
6/4
6/4

872

C.E. No. 4054
Dated:- 10/4/15

8. Only C.I/D.I pipes will be used in water supply and flushing system, UPVC/HDPE pipe for irrigation purposes.
9. A minimum 100 i/d C.I/D.I, 200mm i/d SW and 400mm id RCC NP-3 pipes will be used for water supply, sewerage and storm water drainage respectively.
10. Standard X-section for S.W. pipes sewer, RCC pipes sewer etc. will be followed as are being adopted in Haryana Public Health Engineering Deptt. or HUDA.
11. The X-section, width of roads, will be followed as approved by the Chief Town Planner, Haryana, Chandigarh. The kerbs and channels will also be provided as per approved X-section and specifications.
12. The specifications for various roads will be followed as per IRC/MORTH specifications.
13. The wiring system of street lighting and specifications of street lighting fixture will be as per relevant standards.
14. This shall conform to such other conditions as are incorporated in the approved estimate and the letter of approval.

For

Executive Engineer (W),
Chief Administrator, HUDA,
Panchkula

9/4/15
[Signature]

**EXTERNAL DEVELOPMENT WORKS DESIGN
AND COST ESTIMATES**

**FOR
PROPOSED MIX-USE DEVELOPMENT
JMD SUBURBIO-1
on 4.237 ACRES in SECTOR-67, GURGAON
(HARYANA)**

M/S Ansal APF c/o JMD Ltd

DEVELOPED BY:

M/S JMD Developers Pvt. Ltd.

**PROPOSED MIX-USE DEVELOPMENT JMD SUBURBIO-1 IN SECTOR - 67 (ON 4.237 ACRES) IN
GURGAON HARYANA**

REPORT

ESTIMATE FOR PROVIDING WATER SUPPLY, SEWERAGE, STORM WATER DRAINAGE, ROADS, STREET LIGHTING AND HORTICULTURE IN RESPECT OF 4.237 ACRES JMDSUBURBIO-1 IN SECTOR-67, GURGAON, HARYANA

GURGAON town of Haryana State situated on National Highway No.8 at a distance of 20 km. from Delhi. Being in the national capital Region, the town has fast developing tendency and potential. Further, it has also started sharing the growing 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 Gurgaon. This report is for Proposed Mix-Use Development on 4.237 Acres in, Sector - 67 at Gurgaon.

WATER SUPPLY

The source of water supply in this area is by HUDA. It has been proposed to construct underground tanks of capacity as per attached details and at location for domestic purpose and for fire protection. The underground tanks will be fed from the HUDA supply, which will feed O.H. tanks on the roof of the Buildings. The water supply system has been designed as per the Hazen Williams formula.

DESIGN

The scheme has been designed for population of approx. 4535 persons considering five persons for each main dwelling unit. The combined quantum of water supply (domestic + flushing) per head/day has been taken as 172.50 Liters per head per day for apartment and 45 Liters per day for office/retail.

PUMPING REQUIREMENTS

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 sewer connecting to the STP and bypass connection to HUDA sewer scheme.

The sewer lines have designed for three times average D. W. F. in relation to water supply demand. It has assumed that about 90% of the domestic water supply shall find its way into the proposed sewer. Sewer lines would be laid in a gradient maintaining minimum 2.46 ft/sec self-cleaning velocity. Sewer line upto 200mm dia has been designed to run half-full and above 400mm dia has been designed to run three fourth full at peak flow. Necessary provision for laying SW/ RCC pipe sewer line, construction of required number of manholes etc., have been made in the estimate.

Necessary design statement for entire sewerage system has been prepared and attached with estimate. Manning's formula has been used on the design of sewerage system.

STORM WATER DRAINAGE

It has proposed to lay underground RCC pipe drains with required number of catch basins for disposal of storm water, which will be connected to the HUDA drain. The intensity of rainfall has been taken as 8.25 mm per hour. A minimum size of 200 mm dia RCC storm water line will be provided and designed as per manning's formula. Necessary rainwater harvesting arrangement also has been provided.

RISING MAIN

Rising main from HUDA water main or sector road to water work have also been proposed as provision has been made in this estimate.

FIRE

As per N.B.C. (National Building Code), fire tanks & required capacity pumps have been provided the plan as shown on the plan. Similarly irrigation pumps of required capacity provided as shown on the plan.

SPECIFICATIONS

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

ROADS

Roads have been provided to above zones and estimate is prepared as revised specifications adopted by HUDA.

STREETLIGHTING

Provision of lighting on surrounding area has been made.

HORTICULTURE

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

RATES

The estimate has been prepared based on the present market rates.

COST

The total cost of the scheme, including cost of all services works out to Rs. ~~494.85~~ ^{554.90} Lacs including 3% contingencies and 45% departmental charges, price escalation & other unforeseen charges.

for M/s JMD DEVELOPERS Pvt. Ltd.

For JMD Limited



(Authorized Signatory) Signatory

Block-A

| Shop | | | | Permanent | Floating |
|------|----|-----------------------------|-----|-------------|-----------|
| | | | | | |
| Shop | GF | $388.11 \text{ srm} / 3 =$ | 130 | 39 nos room | 91 person |
| | FF | $384.881 \text{ srm} / 6 =$ | 64 | 58 no | 6 |

Block-B

| | | | | | |
|------|----|------------------|-----|-----|-----|
| Shop | GF | $1269.369 / 3 =$ | 423 | 127 | 296 |
| | FF | $1003.713 / 6 =$ | 167 | 150 | 17 |

2nd floor to 6th floor service apartment = 135 No,

5699.15 srm

135
occupancy @ 2 Person Per Room

$$135 \times 2 = 270 \text{ Person}$$

Block-C

| | | | | | |
|-------|----|------------------|---------|--------|-----|
| Shops | GF | $3929.769 / 3 =$ | 1310 No | 917 No | 393 |
| | FF | $3191.007 / 6 =$ | 532 No | 439 | 53 |

Office | 2nd to 8th Floor

$$14130.69 \text{ srm} / 10 = 1413 \quad \begin{array}{r} 1272 \\ \hline 3042 \text{ Nos} \end{array} \quad \begin{array}{r} 141 \\ \hline 997 \text{ No} \end{array}$$

Total FAR = 29996.665 srm

Permanent Population @ 45 Lpcd $\times 3042 = 136890 \text{ Ch}$

Floating population @ 15 Lpcd $\times 997 = 14955 \text{ Ch}$

Service apartment @ 172.50 $\times 270 = 46575 \text{ Ch}$

198420 Ch

Add 10% for misc. staff

19842 Ch

218262 Ch

or 218.26 Ch

Say 220 Ch

PROPOSED MIX-USE DEVELOPMENT JMD SUBURBIO-1 IN SECTOR - 67 (ON 4.237 ACRES) IN GURGAON HARYANA

1. DESIGN CALCULATION

| S. No | Description | No. Of Floors | Total Sqn | No. of persons per sqm | Total population | Litres / Capita / Day LPCD | Total Water Requirement in LPD |
|--|--------------------------|---------------|-----------|------------------------|------------------|-------------------------------|-----------------------------------|
| DOMESTIC WATER REQUIREMENT | | | | | | | |
| BLOCK A | | | | | | | |
| a) | Ground Floor | 1 | 385.11 | 3 | 105 | 45 | 5850 |
| b) | First Floor | 1 | 384.881 | 6 | 95 | 45 | 2825 |
| BLOCK B | | | | | | | |
| a) | Ground Floor | 1 | 1269.368 | 3 | 425 | 45 | 19125 |
| b) | First Floor | 1 | 1001.713 | 6 | 170 | 45 | 7650 |
| c) | Second Floor | 1 | 1462.363 | 10 | 95 | 145 | 44350 |
| d) | Third Floor | 1 | 1105.75 | 10 | 95 | 125 | 44350 |
| e) | Fourth Floor | 1 | 1468.75 | 10 | 95 | 145 | 44350 |
| f) | Fifth Floor | 1 | 1468.75 | 10 | 95 | 145 | 44350 |
| g) | Sixth Floor | 1 | 1468.75 | 10 | 95 | 145 | 44350 |
| BLOCK C | | | | | | | |
| a) | Ground Floor | 1 | 3523.768 | 3 | 1310 | 45 | 58950 |
| b) | First Floor (1st to 4th) | 1 | 2191.007 | 6 | 535 | 45 | 24075 |
| c) | Second Floor | 1 | 2318.268 | 10 | 235 | 45 | 10575 |
| d) | Third Floor | 1 | 2333.62 | 10 | 235 | 45 | 10575 |
| e) | Fourth Floor | 1 | 2333.62 | 10 | 235 | 45 | 10575 |
| f) | Fifth Floor | 1 | 2333.62 | 10 | 235 | 45 | 10575 |
| g) | Sixth Floor | 1 | 2333.62 | 10 | 235 | 45 | 10575 |
| h) | Seventh Floor | 1 | 1703.801 | 10 | 175 | 45 | 7875 |
| i) | Eighth Floor | 1 | 745.144 | 10 | 75 | 45 | 3375 |
| Total | | | | | 4631 | | 92430 |
| Adding 10% For Wast & Contingencies | | | | | 463 | | 5054 |
| Grand Total | | | | | 5094 | | 97484 |
| Day in L/D | | | | | | | 392 |

Total Water Demand is m^3/day

- (a) For Domestic Purpose $\text{C } 65\%$
(b) For Flushing Purpose $\text{C } 35\%$
(c) For Horticulture Purpose $\text{C } 10\%$ per Acre (4.237 Acre)
(d) For Road Plantation Purpose
(e) For Landscape/Gardening Purpose (41+26)
Say
Or

IV. UNDERGROUND & OVERHEAD WATER TANKS

- | | |
|-----|---|
| (A) | Total water demand (Daily for Domestic purposes) |
| (B) | Proposed Underground tanks for domestic use. (One Day Storage) |
| (C) | Proposed Overhead tanks for domestic use. (Half Day Storage) |
| (d) | Minimum Espanso Static Storage for fire fighting purpose provided |

But it is proposed to construct an underground tank of 110 for raw water, 110 KJ for domestic use in two compartments, non portable water from STP and 340KJ for the fighting purpose in three compartments as the location shown in plan

۷۴

X. BOOSTING MACHINERY (Water Supply Pumps)

- (a) Transfer Machinery for raw water treatment
(b) Discharge per hour @ 12 hr. pumping / day
Say
(c) Proposed Pump discharge (Working)
Say

- (d) Gross Working Head
(e) Suction lift - positive suction
(f) Frictional Loss in Mains & Specials
(g) Max. Clear Head required
Total

- (h) H.P. of each pump required
Pump H.P. = $\frac{(2 \times 320,475 \times 0.65)}{746}$
Say

| | | |
|-----|-----|-----------------|
| 205 | 350 | KLD |
| 17 | 15 | KL |
| 283 | 283 | LPM |
| 283 | 283 | LPM |
| 4 | 4 | LPS (Each Pump) |
| 3 | 3 | Meters |
| 10 | 10 | Meters |
| 30 | 30 | Meters |
| 43 | 43 | Meters |
| 3 | 3 | HP |
| 3 | 3 | HP |

It is proposed to provide 2 Nos. of pumps (1 working + 1 standby) of 4 lps discharge at 30mts head of 3 HP Each

- (a) Daily Domestic Water Demand
(b) Discharge per hour @ 12 hr. pumping / day
Say
(c) Proposed Pump discharge (Working)
Say

- (d) Gross Working Head
(e) Suction lift - positive suction
(f) Frictional Loss in Mains & Specials
(g) Max. Clear Head required
Total

- (h) H.P. of each pump required
Pump H.P. = $\frac{(4 \times 58,425 \times 0.65)}{746}$
Say

| | | |
|-----|-----|-----------------|
| 205 | 350 | KLD |
| 17 | 15 | KL |
| 283 | 283 | LPM |
| 283 | 283 | LPM |
| 4 | 4 | LPS (Each Pump) |
| 3 | 3 | Meters |
| 10 | 10 | Meters |
| 45 | 45 | Meters |
| 58 | 58 | Meters |
| 5 | 5 | HP |
| 5 | 5 | HP |

$$\frac{210 \times 58}{4500 \times 0.60} = 4.51$$

12.50 KLD
208.33 LPM
210 LPM

It is proposed to provide 2 Nos. of pumps (1 working + 1 standby) of 4 lps discharge at 60mts head of 5 HP Each

- (a) Daily Flushing Water Demand
(b) Discharge per hour @ 12 hr. pumping / day
Say
(c) Proposed Pump discharge (Working)
Say

- (d) Gross Working Head
(e) Suction lift - positive suction
(f) Frictional Loss in Mains & Specials
(g) Max. Clear Head required
Total

- (h) H.P. of each pump required
Pump H.P. = $\frac{(2 \times 58,425 \times 0.65)}{746}$
Say

| | | |
|-----|-----|-----------------|
| 205 | 350 | KLD |
| 17 | 15 | KL |
| 283 | 283 | LPM |
| 283 | 283 | LPM |
| 4 | 4 | LPS (Each Pump) |

$$77 \text{ KL} + 67 \text{ M}^3/\text{hr}$$

12 KLD or 200 LPM

$$\frac{200 \times 58}{4500 \times 0.60}$$

It is proposed to provide 2 Nos. of pumps (1 working + 1 standby) of 600 discharge at 50mts head of 2 HP Each

- (a) Daily Irrigation Water Demand
(b) Discharge per hour @ 12 hr. pumping / day
Say
(c) Proposed Pump discharge (Working)
Say

- (d) Gross Working Head
(e) Suction lift - positive suction
(f) Frictional Loss in Mains & Specials
(g) Max. Clear Head required
Total

- (h) H.P. of each pump required
Pump H.P. = $\frac{(2 \times 58,425 \times 0.65)}{746}$
Say

| | | |
|-----|-----|-----------------|
| 205 | 350 | KLD |
| 17 | 15 | KL |
| 283 | 283 | LPM |
| 283 | 283 | LPM |
| 4 | 4 | LPS (Each Pump) |
| 3 | 3 | Meters |
| 10 | 10 | Meters |
| 30 | 30 | Meters |
| 43 | 43 | Meters |
| 3 | 3 | HP |
| 3 | 3 | HP |

It is proposed to provide 2 Nos. of pumps (1 working + 1 standby) of 200 discharge at 40mts head of 2 HP Each

VI. PUMPS FOR FIRE PROTECTION

| S. No. | Parameters | Water Curtain | Sprinkler | Hydrant | Jockey | Diesel |
|--------|------------------|---------------|-----------|---------|--------|--------|
| a) | Discharge in lpm | 2250 | 2250 | 2250 | 880 | 4500 |
| b) | Head in meters | 70 | 88 | 88 | 88 | 88 |
| c) | HP | | | | 5 | 125 |
| d) | Quantity in Nos | | | | 2 | 1 |

VII. GENERATING SETS

HP of Treatment Pump
 HP of Domestic Pump
 HP of Flushing Pump
 HP of Irrigation Pump
 HP of Jockey pump
 Total
 Is KVA
 Say

Add for lighting

$$\begin{array}{r}
 10 \\
 5 \\
 5 \\
 10 \\
 \hline
 30 \\
 10 \\
 \hline
 40
 \end{array}
 \begin{array}{r}
 2 \\
 5 \\
 2 \\
 2 \\
 \hline
 11 \\
 17.12 \\
 \hline
 28.12
 \end{array}
 \begin{array}{l}
 \text{HP} \\
 \text{KVA} \\
 \text{KVA}
 \end{array}$$

$$40 \times 0.746 \times 1.50 = 44.76 \text{ KVA}$$

Say 50 KVA

PROPOSED MIX-USE DEVELOPMENT JMD SUBURBIO-1 IN SECTOR - 67 (ON 4.237 ACRES) IN GURGAON HARYANA

FINAL ABSTRACT OF COST

| | | Amount in Rs. (Lacs) | |
|------------------|--|-------------------------|--------------|
| SUB WORK NO. I | WATER SUPPLY & FIRE FIGHTING SCHEME | 172.33 | 216.31 |
| SUB WORK NO. II | SEWERAGE SCHEME | 144.90 | 76.85 |
| SUB WORK NO. III | STORM WATER DRAINAGE | 95.39 | 84.03 |
| SUB WORK NO. IV | ROADS & FOOT PATHS | 53.32 | 136.85 |
| SUB WORK NO. V | STREET LIGHTING | 105.22 | 8.15 |
| SUB WORK NO. VI | HORTICULTURE | 16.24 | 3.61 |
| SUB WORK NO. VII | MTG CHARGES INCL RESURFACING OF ROADS AFTER 1st 5 YEARS AND 2nd YEAR OF MTG ASA HUDA | 5.75 | 123.85 |
| | TOTAL | 554.86 | 649.65 lacs. |
| | | | 554.90 lacs |

(Rupees Four crore ninety four lac and five thousand only)

~~Six crore forty five lacs and sixty five thousand only~~

AUTHORISED SIGNATORY

For JMD Li

[Signature]
Authorised Signatory

Cost Per Acre = $\frac{554.90}{4.237} = \text{Rs. } 130.97$
~~649.65~~



[Signature]
Superintending Engineer,
HUDA, Circle-II, Gurgaon

[Signature]
Executive Engineer
HUDA Division No. I
GURGAON

Checked subject to comments
in forwarding letter No. 4054
Dated 11/11/15 and notes attaches
with the estimate

[Signature]
Executive Engineer (W)
for Chief Engineer
HUDA Panchkula

[Signature]
Director General
Town & Country Planning
Haryana

SUB WORK No. 1 (Abstract of Cost)

Water Supply & Fire Fighting

| | | | | |
|---|-----------------|-------------------------------------|------------|------------|
| 1 | Sub Head No. 01 | Head Works | 477000.00 | 1470000/- |
| | | | 34.55 | |
| 2 | Sub Head No. 02 | Pumping Machinery | 710000.00 | 825000/- |
| | | | 35.50 | |
| 3 | Sub Head No. 03 | Rising Main | 440000.00 | 1523000/- |
| | | | 3.84 | |
| 4 | Sub Head No. 04 | Distribution System | 220400.00 | 662000/- |
| | | | 7.38 | |
| 5 | Sub Head No. 05 | Fire rising Main | 107000.00 | 1433750/- |
| | | | 11.34 | |
| 6 | Sub Head No. 06 | Irrigation | 46000.00 | 955800/- |
| | | | 1.81 | |
| | | TOTAL | 4428880.00 | 14094550/- |
| | | Add 3% contingencies & P.H. Charges | 33886.56 | 422837/- |
| | | | 94.42 | |
| | | | 2.83 | |
| | | TOTAL | 4462766.56 | 14517387/- |
| | | Add 18% Departmental charges | 803298.00 | 2113519/- |
| | | | 97.25 | |
| | | | 47.65 | |
| | | TOTAL | 5266064.56 | 21630906/- |
| | | | 194.90 | |
| | | Say in lacs | 526.61 | |

216.31 lacs.

530
470
950
incl. 310/- for
200 Corroded + 200 Free
TOTAL
Construction of U.G. Tanks 750 KL @ Rs. 4000/KL
C/O To Asstt. of Cost for Subwork No 1)

100% for Plumbing near STP1 = 630/-

2. Pav. for one 20.7m. for drinking
(13) 7.00
Purposes only. Complete in all respects

3. Pav for 5/100 value with Grades
Complete in all respects (2.5)
0.12 lbs

4. Pav for bushy sh. suitable
capacity. (2.5)
5.00 lbs

5. Pav for concrete of moderate
0.50 lbs
34.5 lbs

Amount in Rs.
22.05 lbs
14.10 lbs
14.10 lbs
22.05 lbs

Sub Work No. 1
Sub Head No. 02

Water Supply & Fire Fighting
Pumping Machinery

Amount in Rs.

1. Providing and installing electricity driven pumping Set capable of delivering about 200 LPM of water against a total Head of 58 M complete with motor and other accessories (2HP)
- 1 nos (1+1s) @ Rs. 125,000/- Each
10,000/- 2-00 las 10HP
2. Provision for diesel engine genset each for standby arrangements For Pumps complete with gear head arrangements of following capacities.
- 1 No. 15 KVA @ Rs. 990,000/- Each
10,000 1000/- 30 50
3. Providing and installing pumping set of following capacities for Fire protection:
- 180 lpm at 88M head 2 No. @ Rs. 260,000/- Each
- 2850 lpm at 88M head 2 No. DG pump @ Rs. 15,000/- Each
7.50
- 2850 lpm at 88M head 1 Nos. @ Rs. 1000,000/- Each
- 4000 lpm at 88M head 1 Nos. @ Rs. 2500,000/- Each
2000 7.50
4. Provision for installing pumping set of following capacities for domestic water
4 lps at 58 mtr head 2 nos @ 100000 (2H-P)
0.75
5. Provision for installing pumping set of following capacities for flushing water
2 lps at 58 mtr head 2 nos @ 200000 (2H-P)
0.75
6. Provision for installing pumping set of following capacities for irrigation water
2 lps at 45 mtr head 2 nos @ 125000 (2H-P)
7. Provision for chlorination plant complete
- 1 No. @ Rs. 80000/- Each
100000/-
8. Provision for making foundations and erection of Pumping Machinery:
- Lump Sum
9. Provision for pipes, valves and specials inside boosting chamber
- Lump Sum
10. Provision for electric service connection including electrical
- Lump Sum *incl. cost of transformer (L.S.)*
11. Provision for carriage of material and other unforeseen items etc. L/S

TOTAL
(CO To Abstract of Cost for Subwork No. 1)

300000/-
200000.00
2-00 las

10,00,000/-
200000.00
5-00 las

500000.00
340000.00
1000000.00
2000000.00
300000/-
7.50
1.50
300000.00

1.50
400000.00

200000.00
200000.00
100000.00
1.00

1.00
800000.00

2.50
800000.00
300000/-
400000.00

300000.00

7100000.00
82,50,000/-
Rs 35.50 las

Sub-Work No. 1
Sub Head No. 03

Rising Main from HUDA

1. Providing, laying, jointing and testing pipe lines including Cost of excavation etc. complete in all respects.
- 100 mm dia. GI pipe 150m @ Rs. 800/- *1250/- P.mtr.*
2. Providing and fixing sluice valve including cost of surface box and masonry chamber etc. complete in all respects.
- 100 mm dia 2 No. @ Rs. 4000/- *8000/-*
3. Providing and fixing indicating plates for sluice valve and air Valves - 2 No. @ Rs. 1000/- each *5500/- 1000*
4. Providing and fixing air release valve and scour valve 2 Nos. @ Rs. 10000/- each *20000/-*
5. Provision for carriage for materials and other unforeseen items (Lump Sum) *100000/-*
6. Making Water Supply Connection *with HUDA Master line*
7. Provision for cutting of roads and making good to its original Conditions.

TOTAL

(C/O To Abstract of Cost for Subwork No. 1)

Amount in Rs.

| | | |
|-----------------------|--------------|---------------|
| 180000.00 | <i>1.88</i> | <i>1250</i> |
| 120000.00 | <i>0.24</i> | <i>8000</i> |
| 20000.00 | <i>2000</i> | <i>5500</i> |
| 30000.00 | <i>20000</i> | <i>100000</i> |
| 60000.00 | <i>0.50</i> | <i>0.50</i> |
| 80000.00 | <i>0.50</i> | <i>0.50</i> |
| 1450000.00 | <i>3.84</i> | <i>66</i> |
| <i>1523.00</i> | | |

Amount in Rs.

1. Providing, Laying, jointing and testing ~~of~~ pipe line including fittings, cost of excavation etc. complete in all respect.
- C/S/D*
~~1.1 Pipe 100 mm, 83 M @ Rs. 258/- per meter~~ *12.50*
~~1.2 Pipe 65 mm, 479 M @ Rs. 240/- per meter~~ *115.16*
~~1.3 Pipe 65 mm, 218 M @ Rs. 400/- per meter~~ *87.20*
~~1.4 Pipe 65 mm, 23 M @ Rs. 240/- per meter~~ *5.52*

242 + 267 m = 509 m @ Rs. 125/-

2. Provision for carriage of materials and other unforeseen items. (LS)

3. Providing and fixing valves *valves including cost of surface box & chamber etc.*
- 100 mm dia 4 Nos. @ Rs. 1600/- each
 - 80 mm dia 4 Nos. @ Rs. 750/- each
 - 65 mm dia 4 Nos. @ Rs. 500/- each
 - 50 mm dia 4 Nos. @ Rs. 470/- each

4. Provision for indication plates of valves 4 Nos. @ Rs. 1000/- Each

Total

(C/O To Abstract of Cost for Subwork No. 1)

| | | |
|-----------|---------|------|
| 64500.00 | 1032.00 | - |
| 63600.00 | 179.00 | - |
| 67500.00 | 164.50 | - |
| 4700.00 | 137.50 | - |
| 22000.00 | 0.50 | 6.36 |
| 45000.00 | 45.00 | - |
| 22500.00 | 20.00 | - |
| 88000.00 | 22.00 | - |
| 18800.00 | 18.80 | - |
| 16000.00 | 16.00 | - |
| 274195.00 | 6.62 | 0.48 |
| | 6.62 | 0.04 |
| | 7.38 | 0.52 |

WATER SUPPLY EXTERNAL - (MATERIAL STATEMENT)

Domestic

| S. No. | Line References | Size of the Pipe Recommended (mm) | Length (M) |
|--------|--------------------------|-----------------------------------|------------|
| 1 | PLANT ROOM (1) TO NODE-2 | 100 | 33 |
| 2 | NODE-2 - CHIT-Block B | 80-100 | 30 |
| 3 | NODE-2 - Node-3 | 80-100 | 149 |
| 4 | NODE-3 - CHIT-Block C | 80-100 | 30 |

179 mtr.

Flushing

| S. No. | Line References | Size of the Pipe Recommended (mm) | Length (M) |
|--------|-----------------------|-----------------------------------|------------|
| 1 | STP TO NODE-A | 100 | 52 |
| 2 | NODE-A - BLOCK B-CHIT | 80-100 | 25 |
| 3 | NODE-A- NODE B | 80-100 | 159 |
| 4 | NODE-B - BLOCK C-CHIT | 80-100 | 30 |

189 mtr.

| | Domestic | Flushing | Total |
|------------|--------------|------------------|------------|
| 100 mm dia | 33 | 52 | 85 mtr. |
| 100 mm i/d | 149+30 = 179 | — | 179 mtr. |
| 100 mm i/d | 30 | 159+30 = 189 | 219 mtr. |
| 100 mm i/d | — | 25 mtr = 25 mtr. | 25 mtr. |
| | <u>242 m</u> | <u>267</u> | <u>509</u> |

Sub Work No. 1
Sub-Head No. 05

Fire Fighting
Fire Rising Main

Amount in Rs.

1. Providing, Laying, joining and testing M.S. pipes lines for fire rising main including cost of fittings, valves, connection etc. complete in all respect.

- (i) 80 mm M.S. pipe line 225 m @ Rs. 460/- per Mtr.
(ii) 150 mm M.S. pipe line 365m @ Rs. 1400/- per Mtr.

2. Providing & fixing sluice valve 80 mm dia
12 Nos. @ Rs. 8000/- each

3. Providing and fixing fire Hydrant
12 Nos. @ Rs. 10000/-

4. Providing for cartage of material (L.S.)

5. Providing for Indication Plates
12 Nos. @ Rs. 1000/-

Total

(C/O To Abstract of Cost for Subwork No.1)

FIRE FIGHTING EXTERNAL - MATERIAL STATEMENT

148750/- 2.25 Lacs
136000.00
620000.00
90000/- 6.07 Lacs
60000.00
1.20

130000.00

50000.00

12000.00

300000.00

1090000.00

1433750/- 11.34 Lacs

| MATERIAL STATEMENT FOR FIRE RING MAIN PIPE | | | | | |
|--|--------|-----------------|-----------|------------|---------------------|
| S. No. | Sector | Line References | 80 mm (M) | 150 mm (M) | Fire Hydrants (No.) |
| 1 | Sta | A-B | 0.00 | | 12 |
| | | B-B | | 10.00 | |
| | | B-B | 8.00 | | |
| 2 | | B-C | | 15.00 | |
| 3 | | C-C | 79.00 | 50.00 | |
| 4 | | C-D | | 21.00 | |
| 5 | | D-E | 45.00 | 40.00 | |
| 6 | | E-E | 3.50 | | |
| 7 | | E-F | | 62.00 | |
| 8 | | F-F | 19.00 | | |
| | | F-G | | 45.00 | |
| 9 | | G-G | 45.00 | 24.00 | |
| | | G-H | | 42.00 | |
| | | H-H | 9.00 | | |
| | | H-I | | 53.50 | |
| | | I-I | 9.00 | | |
| 10 | | I-O | | 3.50 | |
| | TOTAL | | 204.5 | 206.5 | 12.0 |

607.44

Sub-work No. 1
Sub-Head No. 66

Irrigation

Amount in Rs.

1. Providing, Laying, Jointing and testing pipe line
Confirming to IS 4985 (UPVC) including cost of excavation
etc. complete in all respect.

a) 20 mm ^{125 mm} dia 60 metre @ Rs. 560/- M. (L.S.)
d) 68 mm dia 452 metre @ Rs. 500/- M.

~~36000.00~~
~~48000.00~~ 3.00

2. Providing and fixing 20 mm dia. irrigation hydrant
Valve complete in all respect.
15 Nos. @ Rs. 1000/- each

15000.00 0.56 L.S.

3. Provision for carriage of Material and other as foreseen
Items.

10000.00 0.25

TOTAL
(C/O To Abstract of Cost for Subwork No.1)

4. ~~Pro. for road cutting & cutting its original credits~~ L.S. ~~20000.00~~
~~7558.00~~ 1.81 L.S.

| MATERIAL STATEMENT FOR GARDEN HYDRANT (IRRIGATION) RING MAIN PIPE | | | | |
|---|--------|------------------------------|------------|-----------------------|
| S. No. | Sector | Line References | Qs. in (M) | Garden Hydrants (No.) |
| 1 | 38a | External Garden hydrant ring | 462.00 | 15 |
| | TOTAL | | 462.0 | 15 |

SEWERAGE SCHEME

Sub-Work No. II

Amount in Rs.

1. Providing, jointing, cutting and testing ~~RHS~~ ^{S.W.} pipe and lowering into trenches including cost of excavation, bed concrete, cost of manholes etc. complete

a) ~~RHS~~ ^{S.W.} pipe 200 mm i/d avg. depth 0-1.5 M

200 M @ Rs. 100000

135 ~~CLP~~ ^{CLP} ~~pipe~~ ^{to HUDA line = 125 mtr. @ 1500/- p.mtr.}

2. Provision for cartage of material

3. Provision for lighting and watching

4. Provision for making HUDA Connection

5. Sewage Treatment Plant of 240 KLD

C. Prov. for cutting of ~~road~~ ^{with Master line} ~~and~~ ^(Tertiary Treatment) ~~its original and.~~ ^{CL.}

over flow line from STP to main line

1) Prov. for rent for cut suitable places as per P.H. requirement (L.S.)

TOTAL

(Cost to Final abstract of cost)

EXTERNAL SEWERAGE - MATERIAL STATEMENT

| NONE REFERENCE | | LENGTH | | Diameter |
|----------------|---|----------------|-----|----------|
| A | - | B | 33 | 200 |
| B | - | C | 33 | 200 |
| C | - | D | 15 | 200 |
| E | - | F | 33 | 200 |
| F | - | D | 5 | 200 |
| | | | 5 | 200 |
| | | | 5 | 200 |
| D | - | STP | 5 | 200 |
| STP | - | Municipal Line | 125 | 200 |

1.69
+18750/-
=278000.00

+187500/-
100000.00

200000.00
0.50
=800000.00

30,000.00
=830000.00

177700.00
=1007700.00

200000.00
=1207700.00

-800000.00
=407700.00

-90.00
=2483.092/-

2483.092/-

2483.092/-

2483.092/-

2483.092/-

2483.092/-

2483.092/-

2483.092/-

2483.092/-

2483.092/-

2483.092/-

2483.092/-

2483.092/-

2483.092/-

2483.092/-

2483.092/-

2483.092/-

2483.092/-

2483.092/-

2483.092/-

1.93

48-m la

500,000/-

50,06,280/-

1,50,188/-

51,56,438/-

25,26,654/-

24,83,092/-

31.37

31.37

31.37

31.37

31.37

31.37

31.37

31.37

31.37

31.37

31.37

31.37

31.37

31.37

31.37

31.37

31.37

31.37

95.39

4 p. 26.85 lacs.

STORM WATER SCHEME

Sub-Work No. III

Amount in Rs.

1. Providing and laying R.C.C. pipe drain class NP-3
With cement joint, manholes excavation etc complete
in all respect.

- a. 300 mm dia 150 m @ Rs. 1500/m ✓
b. 400 mm dia 615 m @ Rs. 2500/m ✓

2. Provision for Road gullies L.S. *with 300 mm dia pipe connection*

3. Providing Rain Harvesting pit arrangements with drilling chamber
and oil and grease chamber
4 nos @ Rs. 250,000 /Acie

4. Provision for submersible pumps in SSO pit

5. Provision for Shoring & Timbering (L.S.)

6. Provision for Lighting, Watching & Temp. Drain Arrangements (L.S.)

7. Provision for Carriage of Material (L.S.)

8. Provision for Making Connection to HUDA Line (L.S.) *on master Road*

9. Provision for cutting of roads *to make it in original condition.*

Total
Add 3% for contingencies and P.H. charges
Total
Add 4% Departmental charges

price escalation, inflation, Admin
Say in lacs

TOTAL

(Cost to Final abstract of cost)

225000.00
4267500.00 *1300000/-*

1980000.00
1.52

1000000.00

400000.00

100000.00

500000.00

0.50
850000.00

0.50
200000.00

1.00
800000.00

5082500.00 *5475000* *-34.75*
1078750.00 *164250* *-1.04*
6425000.00 *5639250*
3660000.00 *2763933* *35.79*
9075000.00 *8402483* *17.53*

57 mtr. 520 mtr.
53.32

EXTERNAL STORM - MATERIAL STATEMENT

| S.No. | STORM LINE | Size of Pipe | Length of Line |
|-------|------------|--------------|----------------|
| 1 | 1 To 2 | 400 | 87 |
| 2 | 2 To 3 | 400 | 86 |
| 3 | 3 To 4 | 400 | 126 |
| 4 | 4 To 5 | 400 | 92 |
| 5 | 5 To 6 | 400 | 21 |
| 6 | 6 To 7 | 400 | 30 |
| 7 | 7 To 8 | 400 | 90 |
| 8 | 8 To 9 | 400 | 20 |
| 9 | 9 To 10 | 400 | 36 |
| 10 | 10 To 11 | 400 | 20 |
| 11 | 11 To 12 | 400 | 20 |
| 12 | 12 To 13 | 400 | 5 |

57 mtr. 520 mtr.

Sub-Work No. IV
ROAD AREA As Per
Drawing Attached

Road Work

| ROAD NO. | | AREA |
|----------|---|---------|
| 1 | - | 1149.29 |
| 2 | - | 240.00 |
| 3 | - | 134.04 |
| 4 | - | 90.00 |
| 5 | - | 121.69 |
| 6 | - | 47.37 |
| 7 | - | 300.00 |
| 8 | - | 47.37 |
| 9 | - | 655.34 |
| 10 | - | 47.37 |
| 11 | - | 107.67 |
| 12 | - | 366.50 |
| 13 | - | 133.07 |

TOTAL AREA (SQM)

SAY

Area for surface parking
Add 10% for curves & cut

3442.80
~~3500.00~~ 1312.50
3102.83
~~2544.83~~
557.98

NOTE: Rates as per HUDA norms

3442 + 1312.50 + 140.69 = 4895.19 sqm

1. Provision for levelling & earth filling as per site conditions.
As per cut & fill plan @ Rs. 50,000/- per Acre

4 acres

200000.00

by 7200000000
4900

2. i) Spring coat 200 mm thick (20-40 mm gauge compacted
to 75 mm thickness) 400-6, Grading No. 3-

1.20

1.80

4900

ii) WMM Top coat 200 mm thick (20-40 mm
gauge compaction (Table 400-6, Grading No. 3)

4900
7200000000

49.00

7200000000

iii) 24 mm thick bituminous surface coat @ Rs. 3000 per sqm

6680 SQ. M.

4470000000

4470000000

3. Provision for kerbs & channels of CC 1:1:1 1/2:3

5624000/- Rs. 500/- per RM

500 RM

2810000000

2810000000

4. Provision for making approach and pavement to building (L.S.)

96

7.50

7200000000

5. Provision for parking arrangement

traffic with control

2.00

2000000000

- Lump sum

6. Provision for carriage of material (L.S.)

2.00

2000000000

7. Provision for Guide Maps

2.00

2000000000

8. Provision for Unforeseen

2.00

2000000000

TOTAL

Add 3% contingency & P.E. charges

TOTAL

49% depl. Charges & Price escalation

, unforgiven, Admin. charges

Say (Rs. in Lacs)

(Cost to Final abstract of cost)

Say in lacs

5000000000
+7700000000
8700000000
+2675100000
11375100000
+2684266000
14059366000
-4000000000
10059366000
+13684920000
23744286000
-68.56
267510
-2.06
3184510
-70.62
4500410
-34.60

say Rs. 136.85 lacs. 105.22

Car on surface parking = 105000

105 X 200 X 5.0 = 1312.50 sqm

Road area = 3442.0 sqm

Add 12 m wide
service lane

140.69 sqm
3582.69

+ 1312.50
4895.19 sqm say 4900 sqm

Sub Work No. V

1) Providing lighting at surrounding Area as per standard specifications. *on streets*
 Total light poles @ Rs. 42500/- per pole *for 4.237 Acre (width of 10 ft)*
 Add: 3% contingencies & P.E. charges *2.50 Lacs*
 TOTAL

40% Departmental *change, uniform, Admin. protocol*
 TOTAL
 Say (Rs. in Lacs) *change*

Street Lighting

Amount in Rs.

10.59 Lacs
 324920.00
 45000.00 *15889/-* *0.31 Lacs*
 343010.00 *545514/-* *10.90 Lacs*
 355610.00 *267302/-*
 355610.00 *812816/-* *5.34 Lacs*
 -3.0
8.15
16.24 Lacs

C.O. to detail abstract of cost

(Cost to Firm) abstract of cost)

Sub Work No. VI

Plantation & Road Side Trees

Amount in Rs.

1. Development

a) Laying of

- Removal of ordinary soil upto depth of 60 cm to be removed & staked at level of 60 M and making up the trench area for proper levels by filling with earth or earth mixed with manure before and after flooding trench with water to soil of imported earth and manure
- Rough dressing of buried area
- Grassing with "DOCK GRASS" to watering and maintenance of lawns for 30 days till the grass turns a thick lawn. Free from weeds and fill for mowing in row 7.5 cm apart in either direction.

2.00 Acres organized Green areas @ Rs. 75,000/- per acre

1.50

2. Providing and planting trees along

boundary @ 2m interval

Total Road length

No. of trees

Total No. of Trees

Cost Details:

Excavation

Manure

Tree Plant

Tree Guard

TOTAL

250 Trees @ Rs. 100 each

25000/-

TOTAL

Add 2% contingencies & P.T. charges

TOTAL

Add 49% Departmental charges

TOTAL

500 (Rs. in Lacs)

(Cost to Firm) abstract of cost)

Excavation, Manure, Tree Plant, Tree Guard, TOTAL

250 Trees @ Rs. 100 each

25000/-

TOTAL

Add 2% contingencies & P.T. charges

TOTAL

Add 49% Departmental charges

TOTAL

500 (Rs. in Lacs)

(Cost to Firm) abstract of cost)

Excavation, Manure, Tree Plant, Tree Guard, TOTAL

250 Trees @ Rs. 100 each

25000/-

TOTAL

Add 2% contingencies & P.T. charges

TOTAL

Add 49% Departmental charges

TOTAL

500 (Rs. in Lacs)

(Cost to Firm) abstract of cost)

Excavation, Manure, Tree Plant, Tree Guard, TOTAL

250 Trees @ Rs. 100 each

25000/-

TOTAL

Add 2% contingencies & P.T. charges

TOTAL

Add 49% Departmental charges

TOTAL

500 (Rs. in Lacs)

(Cost to Firm) abstract of cost)

Excavation, Manure, Tree Plant, Tree Guard, TOTAL

250 Trees @ Rs. 100 each

25000/-

TOTAL

Add 2% contingencies & P.T. charges

TOTAL

Add 49% Departmental charges

TOTAL

500 (Rs. in Lacs)

(Cost to Firm) abstract of cost)

Excavation, Manure, Tree Plant, Tree Guard, TOTAL

250 Trees @ Rs. 100 each

25000/-

TOTAL

Add 2% contingencies & P.T. charges

TOTAL

Add 49% Departmental charges

TOTAL

500 (Rs. in Lacs)

(Cost to Firm) abstract of cost)

Excavation, Manure, Tree Plant, Tree Guard, TOTAL

250 Trees @ Rs. 100 each

25000/-

TOTAL

Add 2% contingencies & P.T. charges

TOTAL

Add 49% Departmental charges

TOTAL

500 (Rs. in Lacs)

(Cost to Firm) abstract of cost)

Excavation, Manure, Tree Plant, Tree Guard, TOTAL

250 Trees @ Rs. 100 each

25000/-

TOTAL

Add 2% contingencies & P.T. charges

TOTAL

Add 49% Departmental charges

TOTAL

500 (Rs. in Lacs)

(Cost to Firm) abstract of cost)

Excavation, Manure, Tree Plant, Tree Guard, TOTAL

250 Trees @ Rs. 100 each

25000/-

TOTAL

Add 2% contingencies & P.T. charges

TOTAL

Add 49% Departmental charges

TOTAL

500 (Rs. in Lacs)

(Cost to Firm) abstract of cost)

Excavation, Manure, Tree Plant, Tree Guard, TOTAL

250 Trees @ Rs. 100 each

25000/-

TOTAL

Add 2% contingencies & P.T. charges

TOTAL

Add 49% Departmental charges

TOTAL

500 (Rs. in Lacs)

(Cost to Firm) abstract of cost)

Excavation, Manure, Tree Plant, Tree Guard, TOTAL

250 Trees @ Rs. 100 each

25000/-

TOTAL

Add 2% contingencies & P.T. charges

TOTAL

Add 49% Departmental charges

TOTAL

500 (Rs. in Lacs)

(Cost to Firm) abstract of cost)

Excavation, Manure, Tree Plant, Tree Guard, TOTAL

250 Trees @ Rs. 100 each

25000/-

TOTAL

Add 2% contingencies & P.T. charges

TOTAL

Add 49% Departmental charges

TOTAL

500 (Rs. in Lacs)

(Cost to Firm) abstract of cost)

Excavation, Manure, Tree Plant, Tree Guard, TOTAL

250 Trees @ Rs. 100 each

25000/-

TOTAL

Add 2% contingencies & P.T. charges

TOTAL

Add 49% Departmental charges

TOTAL

500 (Rs. in Lacs)

(Cost to Firm) abstract of cost)

Excavation, Manure, Tree Plant, Tree Guard, TOTAL

250 Trees @ Rs. 100 each

25000/-

TOTAL

Add 2% contingencies & P.T. charges

TOTAL

Add 49% Departmental charges

TOTAL

500 (Rs. in Lacs)

(Cost to Firm) abstract of cost)

Excavation, Manure, Tree Plant, Tree Guard, TOTAL

250 Trees @ Rs. 100 each

25000/-

TOTAL

Add 2% contingencies & P.T. charges

TOTAL

Add 49% Departmental charges

TOTAL

500 (Rs. in Lacs)

(Cost to Firm) abstract of cost)

Excavation, Manure, Tree Plant, Tree Guard, TOTAL

250 Trees @ Rs. 100 each

25000/-

TOTAL

Add 2% contingencies & P.T. charges

TOTAL

Add 49% Departmental charges

TOTAL

500 (Rs. in Lacs)

(Cost to Firm) abstract of cost)

Excavation, Manure, Tree Plant, Tree Guard, TOTAL

250 Trees @ Rs. 100 each

25000/-

TOTAL

Add 2% contingencies & P.T. charges

TOTAL

Add 49% Departmental charges

TOTAL

500 (Rs. in Lacs)

(Cost to Firm) abstract of cost)

Excavation, Manure, Tree Plant, Tree Guard, TOTAL

250 Trees @ Rs. 100 each

25000/-

TOTAL

Add 2% contingencies & P.T. charges

TOTAL

Add 49% Departmental charges

TOTAL

500 (Rs. in Lacs)

(Cost to Firm) abstract of cost)

Excavation, Manure, Tree Plant, Tree Guard, TOTAL

250 Trees @ Rs. 100 each

25000/-

TOTAL

Add 2% contingencies & P.T. charges

TOTAL

Add 49% Departmental charges

TOTAL

500 (Rs. in Lacs)

(Cost to Firm) abstract of cost)

Excavation, Manure, Tree Plant, Tree Guard, TOTAL

250 Trees @ Rs. 100 each

25000/-

TOTAL

Add 2% contingencies & P.T. charges

TOTAL

Add 49% Departmental charges

TOTAL

500 (Rs. in Lacs)

(Cost to Firm) abstract of cost)

Excavation, Manure, Tree Plant, Tree Guard, TOTAL

250 Trees @ Rs. 100 each

25000/-

TOTAL

Add 2% contingencies & P.T. charges

TOTAL

Add 49% Departmental charges

TOTAL

500 (Rs. in Lacs)

(Cost to Firm) abstract of cost)

Excavation, Manure, Tree Plant, Tree Guard, TOTAL

250 Trees @ Rs. 100 each

25000/-

TOTAL

Add 2% contingencies & P.T. charges

TOTAL

Add 49% Departmental charges

TOTAL

500 (Rs. in Lacs)

(Cost to Firm) abstract of cost)

Excavation, Manure, Tree Plant, Tree Guard, TOTAL

250 Trees @ Rs. 100 each

25000/-

TOTAL

Add 2% contingencies & P.T. charges

TOTAL

Add 49% Departmental charges

TOTAL

500 (Rs. in Lacs)

(Cost to Firm) abstract of cost)

Excavation, Manure, Tree Plant, Tree Guard, TOTAL

250 Trees @ Rs. 100 each

25000/-

TOTAL

Add 2% contingencies & P.T. charges

TOTAL

Add 49% Departmental charges

TOTAL

500 (Rs. in Lacs)

(Cost to Firm) abstract of cost)

Excavation, Manure, Tree Plant, Tree Guard, TOTAL

250 Trees @ Rs. 100 each

25000/-

TOTAL

Add 2% contingencies & P.T. charges

TOTAL

Add 49% Departmental charges

TOTAL

500 (Rs. in Lacs)

(Cost to Firm) abstract of cost)

Excavation, Manure, Tree Plant, Tree Guard, TOTAL

250 Trees @ Rs. 100 each

25000/-

TOTAL

Add 2% contingencies & P.T. charges

TOTAL

Add 49% Departmental charges

TOTAL

500 (Rs. in Lacs)

(Cost to Firm) abstract of cost)

Excavation, Manure, Tree Plant, Tree Guard, TOTAL

250 Trees @ Rs. 100 each

25000/-

TOTAL

Add 2% contingencies & P.T. charges

TOTAL

Add 49% Departmental charges

TOTAL

500 (Rs. in Lacs)

(Cost to Firm) abstract of cost)

Excavation, Manure, Tree Plant, Tree Guard, TOTAL

250 Trees @ Rs. 100 each

25000/-

TOTAL

Add 2% contingencies & P.T. charges

TOTAL</

SUB WORK - VII

SERVICES & RESURFACING OF ROADS

Amount in Rs.

1. Provision of MTC charges for Ws, SWD, Sewerage, Roads, Street Lighting, Horticulture etc.

(a) Complete in all aspect, including operational and establishment charges as per HUDA norms for 10 years completion 4.237 acres @ Rs. 2.73 lacs per acre

2. Provision for resurfacing of road after 1st 5 year of M.T.C. i.e. 100 mm thick BUSG compacted to 75 mm thick with 25 mm thick premix carpet with seal coat with mechanical paving machine

3. Provision for resurfacing of road after 10 year

Add 3% contingencies & P.E. charges

Add 46% Departmental charges & Escalation charges

TOTAL

Say (Rs. in Lacs)

(Cost to Final abstract of cost)

TOTAL

| | |
|------------|--------------|
| 21.19 L | |
| 489875.00 | |
| 4320.000 | - 29.40 |
| 1023000.00 | |
| 2160.000 | - 36.75 |
| 642750.00 | |
| 945750.00 | |
| 87.34 | 8068875/- |
| 102728.75 | |
| 2.62 | 2420.66/- |
| 2661361.35 | |
| 4248088.94 | 8310941/- |
| 8305449.00 | |
| 89.96 | 4072361/- |
| 44.08 | 12383302/- |
| | |
| | 44.08 |
| | 123.85 lacs. |
| | 134.04 L |

un-jorden
Adum charges

Annexure-A

SUB:- Approval of Service plan estimate for Commercial Colony for an area measuring 4.237 acres (license No. 291 of 2007 dated 31.12.2007) at Village Badshahpur, Sector-67, Gurgaon being developed by M/S. Ansal API, C/o JMD Ltd.

Technical note and comments:-

1. All detailed working drawings would have to be prepared by the colonizer for Integrating the internal services proposals with the master proposals of town.
2. The correctness of the levels will be the sole, responsibility of the colonizer for the integration of internal proposals, with the master proposals, of town and will be got confirmed before execution.
3. The material to be used shall the same specifications as are being adopted by HUDA and further shall also confirm to such directions, as issued by Chief Engineer, HUDA from time to time.
4. The work shall be carried out according to Haryana PWD specification or such specifications as are being followed by HUDA. Further it shall also confirm to such other directions, as are issued by Chief Engineer, HUDA from time to time.
5. The colonizer will be fully responsible to meet the demand of water supply and allied services till such time these are made available by State Government/ HUDA. All link connections with the State Government/ HUDA system and services will be done by the colonizer. If necessary extra tube-wells shall also be installed to meet extra demand of water beyond the provision according to EDC deposited.
6. Structural design & drawings of all the structures, such as pump chamber, boosting chamber, RCC OHSR underground tanks quarters, manholes chamber, sections of RCC pipes sewer and SW pipes, sewer, ventilating shafts for sewerage and Masonry Ventilation Chamber for Chamber for storm water drainage, temporary disposal/ arrangement etc. will be as per relevant I.S codes and PWD specifications; colonizer himself will be responsible for structural stability of all structures.
7. Potability of water will be checked and confirmed and the tube-wells will be put into operation after getting chemical analysis of water tested.

592
6/9/15
R.G. (m)
K
S. K. (m)

C.E. No.

Dated:-

8. Only C.I/D.I pipes will be used in water supply and flushing system, UPVC/HDPE pipe for irrigation purposes.
9. A minimum 100 i/d C.I/D.I, 200mm i/d SW and 400mm id RCC NP-3 pipes will be used for water supply, sewerage and storm water drainage respectively.
10. Standard X-section for S.W. pipes sewer, RCC pipes sewer etc. will be followed as are being adopted in Haryana Public Health Engineering Deptt. or HUDA.
11. The X-section, width of roads, will be followed as approved by the Chief Town Planner, Haryana, Chandigarh. The kerbs and channels will also be provided as per approved X-section and specifications.
12. The specifications for various roads will be followed as per IRC/MORTH specifications.
13. The wiring system of street lighting and specifications of street lighting fixture will be as per relevant standards.
14. This shall confirm to such other conditions as are incorporated in the approved estimate and the letter of approval.

For **Executive Engineer (W),
Chief Administrator, HUDA,
Panchkula**

9/4/15
Stylis

PROPOSED MIX-USE DEVELOPMENT JMD SUBURBIO-1 IN SECTOR - 67 (ON 4.237 ACRES) IN GURGAON HARYANA

SUBHEAD : SEWERAGE SCHEME - DESIGN CALCULATION.

| Node References | Length (M) | | | | Water Consumption @ 172.5 LPD for Apartment and 45 LPD for Office/Retail | Average Discharge in Cusec @ 90% of Daily Demand | Peak Discharge @ 3DMVF in cusec | Sizs of the Pipe (mm) | Gradient | Velocity (M/Sec) | Carrying Capacity (Cusec) | Ground Level | RECEIVE | | Depth | | Fall in Line (MM) |
|-----------------|------------|------|--------|-------|--|--|---------------------------------|-----------------------|----------|------------------|---------------------------|--------------|-------------------------------------|---------------------------------|--------------------------|----------------------|-------------------|
| | | Self | Branch | Total | | | | | | | | | Invert Level (for starting Manhole) | Invert Level (for next Manhole) | Starting (Depth) manhole | Last (Depth) manhole | |
| All Towers | | | | | | | | | | | | | | | | | |
| A - B | 33 | 3270 | 0 | 3270 | 147150.0 | 0.0015 | 0.0045 | 200 | 150 | 0.75 | 0.012 | 800.00 | (900) | (1,120) | 1,800 | 2,020 | 220 |
| B - C | 33 | 3270 | 0 | 3270 | 147150.0 | 0.0015 | 0.0045 | 200 | 150 | 0.75 | 0.012 | 800.00 | (1,120) | (1,340) | 1,720 | 1,840 | 220 |
| C - D | 15 | 3270 | 0 | 3270 | 147150.0 | 0.0015 | 0.0045 | 200 | 150 | 0.75 | 0.012 | 800.00 | (1,340) | (1,440) | 1,840 | 2,040 | 100 |
| E - F | 33 | 185 | 0 | 185 | 8775.0 | 0.0001 | 0.0003 | 200 | 150 | 0.75 | 0.012 | 600.00 | (650) | (670) | 1,250 | 1,470 | 220 |
| F - D | 5 | 535 | 0 | 535 | 52287.5 | | | | | | | | | | | | |
| | 5 | 535 | 185 | 730 | 32850.0 | | | | | | | | | | | | |
| | 5 | - | - | 1265 | 125137.5 | 0.0013 | 0.0039 | 200 | 150 | 0.75 | 0.012 | 800.00 | (870) | (803) | 1,470 | 1,503 | 33 |
| D - STP | 5 | 4535 | 0 | 4535 | 272287.5 | 0.0028 | 0.0085 | 200 | 150 | 0.75 | 0.012 | 600.00 | (1,440) | (1,473) | 2,040 | 2,073 | 33 |

STP - 125

