

PROJECT REPORT

FOR

MULTI SPECIALITY HOSPITAL

VARDAN SEVA SANSTHAN

Sector – 8, Raj Nagar, GHAZIABAD (UP) 201 002

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1. PROJECT HIGHLIGHTS

NAME OF THE PROJECT	:	VARDAN MULTISPECIALITY HOSPITAL
NATURE OF HOSPITAL	:	Multispeciality
NUMBER OF BEDS	:	222 (In First Phase-120 Beds)
PROMOTERS	:	Vardan Seva Sansthan
Land PLOT SIZE	:	:6330 Sq.Yds.(Land has been Purchased)
F.A.R. ALLOWED	:	2.5
TOTAL BUILT AREA (Approx.) 1 st Phase	:	45,800 Sq. Ft.
BUILDING COST (Approx.) 1 st Phase	:	Rs. 420 Lacs
TOTAL PROJECT COST (1 st Phase)		Rs. In Lacs
Building Cost	:	420.00
Hospital Services	:	80.00
Hospital Furniture & Fabrication	:	50.00
Medical Equipment & Instruments:		300.00
Preliminary & Pre-Operative	:	30.00
Contingencies	:	40.00
Margin Money	:	10.00
TOTAL	:	930.00
MEANS OF FINANCING	:	Donations &Contributions
IMPLEMENTATION PERIOD 1 st Phase of 120 beds	:	2 ½ years

2. HEALTH CARE – “An Overview”

2.1 THE BACKGROUND:

Today, the city of Ghaziabad, with a population of over 25 lacs has become one of the most crowded cities in India. There is an exponential increase in environmental pollution and occupational health hazards due to rapid industrialisation. The food stuffs are largely adulterated, drinking water supply becoming scare and unsafe for consumption and lastly industries and automobiles have increased the atmospheric air pollution to an alarmingly unsafe levels. This has led to a steep fall in health standards of the people. There is a need for an early accurate diagnosis and proper treatment of diseases, especially after the growing awareness of sound health in the mind of the public.

2.2 HEALTH CARE SCENE – A COMPARISON:

Comparison between various developed and developing countries in respect of Hospital Bed to population Ratio, Infant Mortality, Expectancy of Life and Birth Rates etc., bring out the inadequacy of the health care in INDIA. Better and quality health care is to be made available to one and all by the Government and Private agencies.

The ability of Government owned hospitals to render quality medical services to all has decreased because of the population growth. The bed to population ratio in India is 1: 1238 compared to 1:92 in Japan, 1:82 in USSR, 1:150 in USA and 1:350 in Sri Lanka.

Joseph Bhole committee appointed by the Government of India to go into the various aspects of medical care in India and to suggest remedies, has recommended agencies in the Government and Private Sector to increase the bed to population ratio to at least 567:1000

2.3 NATIONAL HEALTH POLICY & PRIVATE HEALTH CARE:

National Health Policy of India was aiming to attain the goal of “Health For All” by 2000 AD, which it could not. As the concentration of the Government is on providing primary health care and preventive treatment, the curative care rests mostly with the private sector with all practitioners, consultants, Nursing Homes, and Hospitals.

The delivery of advanced health care to the growing population has become the responsibility of the Private Sector, religious institutions / philanthropists.

3. THE PROPOSED PROJECT

3.1 Brief Profile: -

NAME	VARDAN MULTI SPECIALTY HOSPITAL
LOCATION OF THE PROJECT	VILLAGE: - GARHI DHARGAL, DELHI MEERUT ROAD, GHAZIABAD (OPP. GULDHAR)
PROMOTERS	VARDAN SEWA SANSTHAN
REGISTERED OFFICE	46, NEHRU APTT., NEHRU NAGAR-III, GHAZIABAD
ADMINISTRATIVE OFFICE	SECTOR-8, RAJ NAGAR, GHAZIABAD, UP, INDIA PIN: - 201002 TEL: 0120 – 2822440, 2827440, 4130213 EMAIL: - VARDAN1994@YAHOO.CO.IN WEB: - WWW.VARDAN.ORG
LINE OF ACTIVITY	MULTI – SPECIALTY HOSPITAL CAPACITY – 222 BEDS
SECTOR	PRIVATE
CONSTITUTION	REGISTERED CHARITABLE SOCIETY
INDUSTRY	SERVICE

3.2 Covered Area: -

As per U.P. Government new directions regarding permissible FAR is 2.5 for Hospitals of 100 beds and above. In such cases, the ground coverage allowed is 30 % of the plot area.

Two basements are also allowed which are not included in the total FAR.

In 1st phase, the VSS proposes to construct only following areas.

SN	Block	Floor	Area in Sq. Ft	Total Area In Sq. Ft
1	Hospital Block Tower -1	Basements	6183	
		Lower Ground Floor	7,500	
		Upper Ground Floor	8949	
		First Floor	6301	
		Second Floor	6301	
		Third Floor	5355	
		Fourth Floor	4903	
Total constructed area in 1st Pahse			45863	

This will accommodate approx. 120 beds to start with and the administrative block / services. Top floor is to be temporarily used as nursing hostel.

This will accommodate another 120 beds

3.3 Departments/ Facilities: -

Following disciplines / facilities should be accommodated in the OPD

1. Medicine: -
 - a. General Medicine
 - b. Chest & TB
 - c. Endocrinology
2. Surgery: -
 - a. General Surgery
 - b. Laparoscopic Surgery
3. Obstetric & Gynecology
4. Orthopaedics
5. Paediatrics
6. ENT
7. Dermatology
8. Urology
9. Dental
10. Gastroenterology
11. Homeopathy
12. Ayurvedic
13. Blood Collection Room

Note: - Some special clinics - such as – Diabetic Clinic, Blood Pressure Clinic, Thyroid Clinic, Well baby clinic will be run in same rooms at designated time and day.

3.4 Support Services: -

Following Support Services shall be provided: -

1. Operation Theatre Block with 2 ORs
2. Emergency Block – with 5 beds and one Minor OT
3. Blood Bank
4. Radiology (Conventional X-Ray & Mobile X-ray, CT will be planned later on)
5. Ultrasound
6. Pathology Lab
7. Physiotherapy (Both OT & PT). It should be a well equipped area as the VSS will also run two courses for students. One is in Physiotherapy and the other is in Nursing.
8. CSSD (Central Sterile & Supply Department)
9. Central Medical Gases
10. Pharmacy
 - a. Shop
 - b. Bulk Store
11. General Stores
12. Kitchen / Canteen
13. Mortuary
14. Biomedical Waste Management
15. Generators

This will comprise of hospital **kitchen** for preparation and distribution of general, special and therapeutic diets to the patients and commercial catering for ambulatory patients, their relatives and staff, sterile supply services (**C.S.S.D.**) for recycling and replenishment of re-usable sterile supplies to various areas of patient care; **medical records** services for management of hospital informatics including filing and retrieval of outpatient records and statistical evaluation of hospital performance; **medical and general store** for inventory management of hospital supplies and their distribution to the areas of patient care.

Note: - Laundry is not planned at this stage.

3.5 Hospital Services: -

The hospital will have the following three major services:

- a. EMERGENCY SERVICES
- b. OUTPATIENT SERVICES
- c. INPATIENT SERVICES

3.6.a In the EMERGENCY SERVICES (EMR), which will be operating round the clock, there will be qualified medical and paramedical staff to attend to any emergency, including trauma cases, which is increasing in the region everyday. There will be well equipped emergency operation theatre, with the facilities for general / special surgical procedures. Round the clock X-ray and Laboratory services are attached to the emergency services.

3.6.b In the OUTPATIENT SERVICES (OPD), specialist consultation facility will be available through out the week or on specified days both in the morning and evening. The patient services will be ably supported by diagnostic services and laboratory services.

3.6.c In the INPATIENT SERVICES (IPD), facilities will be made available for all Surgical and Medical cases, except in the case of infectious / communicable diseases. The super speciality cases like Cardio-Thoracic Surgery, Micro Neuro-Surgery, Renal Transplant Surgery, etc. will be referred to big hospitals in the city / region. Special equipment will be made available for Paediatric and Neonatology inpatients and also for ICU/CCU.

3.7 Diagnostic Facilities: -

3.7.a RADIOLOGY DEPARTMENT: X-Ray imaging plays an important role among various imaging modalities. We propose to have a well equipped X-ray Department to cater to the needs of Traumatology and other hospital departments. There will be a high powered X-ray system with an image intensifier TV facility to do all the special investigations. This will help to reduce the patient radiation dosage while screening and also carryout various procedures. There will be another Portable X-ray Machine to take care of needs of the critically ill patients in ICU/ICU/OT etc. A mobile C-arm image intensifier is also planned for this department.

3.7.b SONOGRAPHY: Ultrasound has become a powerful non-invasive diagnostic modality today. We propose to use a multipurpose ultrasound machine for all medical / surgical and Obs./Gynae work of the hospital.

3.7.c LABORATORY SERVICES: Clinical laboratory plays an important role in the diagnosis, prognosis and treatment of diseases. At our hospital, laboratory services will function under the head a Pathologist. Biochemistry department will have the latest multi-channel auto-analyser and electrolyte analyser. In the haematology department there will be

electronic cell counters, blood coagulometers etc. Pathology and Microbiology will be equipped as per the modern needs of hospitals.

3.7.d Video Endoscopy will be provided as an outpatient procedure in the field of Gastroenterology.

3.8 The Engineering Services: -

Engineering services of the hospital will comprise of a sub-station for maintenance of electric supply to the hospital; public health services for water supply, sanitation and fire protection and fire fighting systems, space heating, ventilation and air-conditioning for environmental management of essential areas in the hospital including intensive care, critical and operative care areas, selected intermediate care areas and laboratories. Solar heater with water boiler for hot water supply during winters along with Rain Water harvesting system will be part of the project. Sewage Treatment is to be done before flushing it to municipal system.

Communication services comprising of integrated network of EPABX, public address and nurse call system; medical gases and vacuum services to provide un-interrupted supply of Oxygen & Nitrous oxide, and central vacuum to intensive, critical and operative area

Diesel Generators and Invertors / UPS will be provided to supply uninterrupted power to all areas especially to critical floor.

3.9 Administrative Services: -

This will consist of accommodation for the Chief Executive, Medical & Nursing administrators; Personnel, financial & materials management, computerised hospital information and ancillary accommodation for transport, security, fire, housekeeping and building maintenance staff.

4. LIST OF MAJOR EQUIPMENT:

4.1 SERVICE EQUIPMENT: -

Ambulance
Central Air-conditioning Plant
Central Oxygen / Vacuum, N₂O Piping
Sterilizers / Autoclaves
Electrical Transformer, Generator & Electrical Fittings
Electronic Telephone Exchange
Fire fighting Equipment
Lifts
Kitchen, Mortuary equipment

4.2 MEDICAL EQUIPMENT: -

X-ray Machines (Conventional & Mobile) & Dark Room Accessories
Mobile Image Intensifier (C-Arm Machine)
ECG Machines, Defibrillators, Nebulisers etc.
Ultrasound Machine
Patient Monitoring Equipment
Ventilators
Infusion Pumps/Syringe Pumps
Blood Chemistry Auto Analyser
Electronic Cell Counter (Haematology Counters)
Electrolyte Analyser
Miscellaneous Lab Equipment
Theatre Equipment for 2 Theatres (OT Lights, Tables etc.)
Anaesthesia Machines
Operation Microscope
Video Endoscopes
Hospital Beds & Furniture
Physiotherapy Equipment

Nursery Equipments (Phototherapy, Radiant warmers etc)
Dental Chair, Dental X-ray alongwith other accessories.
ENT Work Station, and Audiometers
Physiotherapy Equipments (Ultrasound Therapy, Short wave therapy, TENS, ICT, etc
Surgical Instruments & Other Miscellaneous Items.

4.3 Office equipment including Computers: -

5. BUILDING PROGRAM

5.1 The building programme of Vardan Multispeciality Hospital will comprise a modern and aesthetically planned synthesis of functions and services described above.

The building program will offer a balanced combination of low and medium rise building character having a simple internal circulation with various functional zones meeting around the central core.

It will also offer optimum relationship between and within the departments for economy of physical stress to the patients and hospital staff.

The mass of the hospital building will be broken down into smaller modules of human scale to relate it to the regional character. Special emphasis will be given to create a congenial internal environment by providing ample natural lighting and ventilation, aesthetic interior, symbolic signage and landscaped internal courtyards.

The external development will include a hierarchical road network with ample parking facilities and a separate access to main hospital, emergency and services.

The hospital will have a total built-up area of 1.40 Lac Sq. Ft. in a 1.25 acres plot with a floor area ratio of 2.5 and ground coverage of 30%. This area utilisation will meet the requirements of the local by-laws and also provide ample space for future expansion.

6.Approx.COST OF SOME MEDICAL EQUIPMENTS

SN	Location	Medical Equipment	Qty.	Approx. Unit Cost Rs.	Total Cost Rs.
1A	OPD	B.P. Instrument	10	500	5000
		Stethoscope	10	150	1500
		Weighing Machine, Adult	7	500	5000
		Weighing Machine, Child	1	350	350
		X-Ray View Box, Single	8	1200	9,600
		ENT Work Station, Complete, Servo Scientific	1	2,25,000	2,25,000
		Audiometer	1	3,00,000	3,00,000
		Tympanometer	1	Included above	
		Foetal Doppler, BPL 9613	1	12,000	12,000
		Dental Chair	1	2,50,000	2,50,000
		Ultrasonic Scaler	1	Included	0
		Light Cure Unit	1	Included	0
		Dental Instruments	1 set	Included	0
		Dental X-Ray	1	Included	0
1B	Endoscopy Room	Upper GI Video Endoscopes	1	Included below	0
		Lower GI Video Endoscope, Fuzinon	1	40,00,000	40,00,000
1C	Neurology	EEG Machine + Sleep Analysis RMS	1	3,00,000	3,00,000
		EMG Machine / BERA – RMS	1	3,00,000	3,00,000
2	Emergency	ECG Machine, BPL 108	1	24,000	24,000
		Defibrillator, BPL 2509	1	1,20,000	1,20,000
		Nebuliser, BPL Pulmomist	1	3,500	3,500
		Syringe Pump, BPL - Baxter	1	50,000	50,000
		Patient Monitor, Multipara, BPL Ultima	2	1,75,000	3,50,000
		Crash Cart	1	40,000	40,000
		Pulse Oximeter, Hand held, BPL – CLEO	1	47,000	47,000
		Suction Electric, Supreme	1	8,000	8,000
3	Minor OT	Operation Table	1	60,000	60,000
		Operation Light	1	20,000	20,000
		Anaesthesia Machine, Basic, Medisys – Indian	1	1,00,000	1,00,000
		Suction, Electric, Supreme	1	8,000	8,000
		Surgical Instruments	1 set	1,00,000	1,00,000
4	Wards, Patients Accommodation	Nebulisers, BPL Pulmomist	2	3,500	7,000
		ECG Machine, BPL 6108	1	32,000	32000

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5	ICU/ICCU	Crash Cart	1	40,000	40,000
		Defibrillator, BPL 2509	1	1,20,000	1,20,000
		Syringe Pump, BPL- Baxter	2	50,000	1,00,000
		Monitors, Multipara, BPL Ultima	5	1,75,000	7,75,000
		Ventilator, Drager – Sabina	1	7,00,000	7,00,000
		Ventilator for Transport, Medisys,	1	1,50,000	1,50,000
		Nebuliser, BPL Pulmomist	1	3,500	3,500
		ECG Machine, BPL 8408	1	95,000	95,000
		Suction Electric, Supreme	1	8,000	8,000
6	Nursery (NICU)	Monitors, Multipara, BPL Ultima	2	1,75,000	3,50,000
		Syringe Pump, BPL – Baxter	2	50,000	1,00,000
		Phototherapy Unit, Overhead, BPL - Medicaid	2	20,000	40,000
		Phototherapy Unit, Under Couch, BPL – Medicaid	2	25,000	50,000
		Radiant Warmer, BPL – Medicaid	2	40,000	80,000
		Weighing Scale, Electric	1	20,000	20,000
		Neonatal Resuscitator (Open Care System), BPL Medicaid	1	86,000	86,000
		CPAP (Ventilator), BPL Nidek	1	60,000	65,000
		Ventilator, Neonatal, Drager Babylog	1	11,00,000	11,00,000
7	Operation Theatres	Operation Table, General	1	1	75,000
		Operation Table with Ortho Attachments, electric	1	1,30,000	1,30,000
		Delivery Table	1	35,000	35,000
		Operation Light	2	70,000	1,40,000
		Surgical Cautery (ESU), Jahangir	2	70,000	1,40,000
		Video Laproscope, Maxer	1	18,00,000	18,00,000
		Anaesthesia Machine with Ventilator, Medisys India	1	3,00,000	3,00,000
		Anaesthesia Machine Basic, Medisys	1	1,00,000	1,00,000
		Operation Microscope, Towa	1	5,50,000	5,50,000
		Surgical Instruments	2 sets	2,00,000	4,00,000
		Cardiotocograph (CTG)	1	1,50,000	1,50,000
		Foetal Doppler, BPL 9613	1	12,000	12,000
		Suction Electric, Supreme	1	8,000	8,000
		Cystoscopes & Resectoscope, Maxer	1	4,25,000	4,25,000
		URS, Eagle	1	2,25,000	2,25,000

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8	Radiology (X-Ray)	X-Ray Machine, Digital, 300 mA, Allenger	1	25,00,000	25,00,000
		X-Ray Machine Mobile, Siemens	1	2,75,000	2,75,000
		C-Arm IITV, Allenger	1	10,00,000	10,00,000
		Dark Room Accessories, local	1 set	75,000	75,000
9	Laboratory (Pathology)	Biochemistry Analyser, Semi automatic, Transasia	1	1,55,000	1,55,000
		Electrolyte Analyser, Rosche	1	1,40,000	1,40,000
		Haematology Analyser (Cell Counter) Transasia Sysmex KX-21	1	3,50,000	3,50,000
		Microscope, Labomed	2	25,000	50,000
		Misc Laboratory Equipment, Embee	1 set	1,00,000	1,00,000
10	Blood Bank	Blood Storage Refrigerator	2	50,000	1,00,000
		Other Misc. equipment as per list for basic Blood bank	1 set	3,00,000	3,00,000
11	Non Invasive Diagnostics	ECG Machine – 12 leads, BPL 8408	1	95,000	95,000
		Ultrasound Machine, Hitachi 3 probes	1	18,00,000	18,00,000
12	Physiotherapy	Short wave Diathermy Unit, IMI	1	38,000 / 5,72,000	38,000
		Ultrasound Therapy Unit, IMI	1	16,000 / 1,42,000	16,000
		Interferential Therapy Unit, IMI	1	35,000	35,000
		TENS, IMI	1	4500	4,500
		Traction System, IMI	1	68,000	68,000
		Exercise Equipment	1 set	1,00,000	1,00,000
13	Sterilisation Department (CSSD)	Autoclave, Horizontal, Yorco	1	2,00,000	2,00,000
		Autoclave, Vertical	1	75,000	75,000

7. PROJECT COST & MEANS OF FINANCING – 1st Phase (SUMMARY)

7.1 PROJECT COST:

S.N.	Description	Rs in Lacs	Total
1.	BUILDING & Engineering Services 45800 Sq. Ft.	420.00	420.00
2.	HOSPITAL SERVICES		
2.1	Medical Gases & Vacuum: including Oxygen & Nitrous Oxide Manifold, Central Vacuum & Alarms systems, piping and Outlet points	10.00	
2.2	Hospital Kitchen (Mechanised): including cookers, fryers, burners, appliances, refrigerators, deep freezers, racks, tables & Trolleys	10.00	
2.3	Computers	8.00	
2.4	Waste Disposal Systems	3.00	
2.5	Solar Heating Systems + Boiler	10.00	
2.6	Ambulance x 1	5.00	
2.7	Hospital Mortuary: including body storage & trolleys	4.00	
2.8	Lifts x 2 (Both Stretcher Lifts)	30.00	80.00
3.	HOSPITAL FURNITURE & FABRICATION		
3.1	Medical Furniture: including beds, lockers, stools, tables & trolleys including interiors	30.00	
3.2	Hospital Fabrications: including counters, cabinets, shelves & desks	5.00	
3.3	Coloured TVs / Refrigerators & other accessories	15.00	50.00
4.	MEDICAL EQUIPMENT & INSTRUMENTS:	300.00	300.00
5.	PRELIMINARY & PRE-OPERATIVE:		
5.1	Expenses during Implementation Period: including salaries, training & travel expenses	10.00	
5.2	Advertisement & stationary expenses	10.00	
5.3	Consultancy Fee	10.00	30.00
6.	PROVISION FOR CONTINGENCIES:		
6.1	On all items @ 5 % of total cost of site development, building works, engineering & hospital furniture & fabrications, administrative services, medical equipment & preliminary and pre-operative expenses.	40.00	40.00
7.	MARGIN MONEY FOR WORKING CAPITAL:	10.00	10.00
GRAND TOTAL		=====	930.00 =====

7.2 Means of Financing

Donations & Contributions