PROFILE ON HIGHER CLINIC

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I. SUMMARY

This profile envisages the establishment of a higher clinic with a capacity to treat 7,320 out-patients and 1,464 in- patients per year.

The market study shows that in Addis Ababa currently an additional 122 higher clinics are required. If additional higher clinics are not established the requirement will increase to 376 higher clinics by the year 2022.

The total investment requirement is estimated at about Birr 3.84 million, out of which Birr 834.37 thousand is required for medical equipment. The service will create employment opportunities for 10 persons.

The project is financially viable with an internal rate of return (IRR) of 14.46 % and a net present value (NPV) of Birr 1.13 million, discounted at 8.5 %.

II. SERVICE DESCRIPTION

Higher Clinic is an institution run by a general medical practitioner or specialist assisted by various other specialists; and where diverse out-patient medical services are given. A Higher Clinic can have 1-5 beds for delivery and emergency cases.

Specifically, the Higher Clinic would provide the following services:

- Antenatal out-patient emergency services;
- Diagnostic services on laboratory, x-ray, sonography;
- Minor surgery; and
- Other services allowed to the medical members;

III. MARKET STUDY AND SERVICE CAPACITY

A. MARKET STUDY

1. Past Supply and Present Demand

Health services are essential elements in ensuring a full and meaningful life for people. Good health contributes to increased production of goods and services while poor health puts labor force out of income. This implies the necessity of providing adequate health services through establishment of health facilities that are adequately staffed and well supplied with qualified medical personnel, equipment and drugs.

Current health service providers in the city include Federal Government Agencies, Addis Ababa Health Bureau, Non Governmental Organizations (NOGs), factories, and the private sector. There are 603 health facilities registered and licensed by the City Administration in 2004/05 including 28 hospitals, 26 health centers, 507 clinics, and 42 health posts. Currently the private sector is leading in terms of ownership of number of health facilities. It owns and operates 64.68% of the number of health facilities.

Though there have been some improvements in health status of residents in recent years it is still at a low level. HIV/AIDS is registering a declining trend but the prevalence rate is still very high in the city, which is another indication to the low level of development of health service in the city.

According to the Ministry of Health one clinic is to serve a maximum of 5,000 people to achieve a reasonable level of quality and coverage standard in health service in the country. Supply gap/shortfall in health service in the city is calculated based on this standard parameter. The result is that the supply of clinic is short of the demand by 30.3%, and to achieve the standard set by the Ministry of Health additional clinics are required.

Therefore, considering the shortage of medical service in the city, it is assumed that the envisaged higher clinic will have adequate present and future market.

2. Projected Demand

The demand for health service facilities has unfilled gaps when compared to the standard set by the Ministry of Health. The present observed gap is expected to be influenced in the future by the rate of population growth and economic development. Accordingly, based on the population projection by CSA and the standard requirement for clinics as set by Ministry of Health and assuming the present existing clinics continue operating, the number of additional higher clinics required is shown in Table 3.1 below.

Table 3.1

PROJECTED DEMAND FOR TOTAL ADDITIONAL HIGHER CLINICS

Year	Total Additional Higher Clinics
2006	88
2007	105
2008	122
2009	140
2010	159
2011	177
2012	195
2013	214
2014	233
2015	251
2016	270
2017	288
2018	306
2019	324
2020	342
2021	359
2022	376

3. Pricing

For the purpose of this study a price of Birr 50 and Birr 150 per check up for out-patients and per night for in-patients respectively is adopted. More over, for x-ray check up and laboratory analysis of blood and stool, the envisaged clinic will charge Birr 40 and Birr 25 respectively.

B. SERVICE CAPACITY AND PROGRAMME

1. Capacity

The clinic will have a capacity to treat 20 out patients per day. Therefore, the clinic will treat 7,320 out-patients per year, Moreover, the clinic will have 12 beds for in-patients and assuming that one patient will stay 3 days on average, the total annual number of in-patients will be 1,464. Out of the total 8,784 patients that will be treated in the envisaged clinic in a year, 80 % are assumed to make x-ray and laboratory check ups.

2. Service Programme

The Higher Clinic can deliver 24 hour medical service throughout the year from the very beginning of its operation.

IV. MEDICAL SUPPLIES & UTILITIES

A. MEDICAL SUPPLIES

Emergency drugs and medical supplies required by the higher clinic are outlined in Table 4.1 below. The total cost is estimated to be about Birr 27,000. The materials can be sourced locally from establishments such as PHARMID or pharmacies.

Table 4.1

DRUG & MEDICAL SUPPLIES REQUIREMENTS & COST (PACKETS)

Sr. No.	Description	Quantity	Cost 'Birr		
			FC	LC	Total
1	Adrenaline injection	20	13,000	7,000	20,000
2	Minophyllioc injection	10	8,125	4,375	12,500
3	Savlon (Chlorhexidine + Cotrimide)	25	17,875	9,625	27,500
4	Alcohol Solution 79%	15	7,313	3,938	11,250
5	Dextrese 40% injection	5	1,625	875	2,500
6	Ergometrine maleate injection, tabs	10	8,775	4,725	13,500
7	Hydrocortisone sodium succinate	5	6,500	3,500	10,000
8	Lidocaine hydrochloride injection	5	5,688	3,063	8,750
9	Procaine hydrochloride injection	5	4,388	2,363	6,750
10	Vitamin k injection	5	6,500	3,500	10,000
11	Hyoscine hydropromide injection	10	7,475	4,025	11,500
12	Bandage different sizes	20	14,560	7,840	22,400
13	Cotton	20	-	13,000	13,000
14	Disposabel syringe different types	10	8,775	4,725	13,500
15	Disposable needle different types	10	6,175	3,325	9,500
	Grand Total		**116,773**	**75,878**	**192,650**

B. UTILITIES

The major utilities required by a higher clinic are electricity and water. These are given in Table 4.2.

Table 4.2

ANNUAL UTILITIES REQUIREMENT & COST

Item	Unit Of Measure	Qty	Unit Rate	Cost (Birr)
Electricity	kWh	110,000	0.4736	52096
Water	m^3	1,000	3.25	3250
	Total			**55,346**

V. TECHNOLOGY AND ENGINEERING

A. TECHNOLOGY

1) Process Description

The processes involved in the delivery of medical services at a higher clinic include:

- Receiving/registering of patients;
- Arranging orders to see doctors;
- Seeing doctors; laboratory/other tests, and
- Diagnosis and prescription.

Waste from the clinic is disposed off through Incinerator - incorporated –while other waste is disposed off through connection to the city`s drainage system.
A higher clinic does not have negative impact on the environment.

2. Source of Technology:

An agent of equipment supplier is PHARMID

B. ENGINEERING

1. Equipment

Equipment required for a higher clinic are outlined in Table 5.1 below. The estimated cost of the equipment is about Birr 834,365.

Table 5.1

EQUIPMENT RQUIREMENT & COST

Sr. No.	Items	Qty	Cost (Birr)
1	Sphygmomanometer	1	350
2	Clinical Thermometers	2 set	20
3	Diagnostic set	1	200
4	Adult Scale	1	750
5	Infant Scale	1	425
6	Examination bed	1	1,500
7	Infusion stand	1	300
8	Dressing Trolleys	1	500
9	Refrigerator	1	4,000
10	Catheter	1	20
11	Stethoscope	1	150
12	Binocular Microscope	1	10,000
13	Centrifuge	1	3,000
14	Lab bench	1	1,100
15	Timer	1	120
16	Photometer	1	50,000
17	Waterbath	1	1,260
18	Test Tube racks	1 set	500
19	Slides	1 set	80
20	Cover Slides	1	70
21	Hemocytometer with cover slide	1	350
22	Electrical boiler	1	1,500
23	Delivery table	1	1,200
24	Foetal monitor	1	4,250
25	Vacuum extractor/low forceps	1	2,450
26	Aspirator/manual	1	100
27	Breast pump	1	400
28	Resuscitator/Ambu bag	1	800

Sr. No.	Items	Qty	Cost (Birr)
29	Suction machine	1	9,000
30	Portable light/mobile	1	4,900
31	Auxiliary operating light	1	10,000
32	Vaginal speculum	1	70
33	Minor operating set	1	500
34	Autoclave	1	14,000
35	Delivery Kit	1	500
36	Ultra sound	1	200,000
37	X-ray Machine	1	500,000
38	Oxygen Cylinder	1	2,500
39	Incinerator	1	7,500
	Total		**834,365**

2. Land, Building and Civil Works

The total land area required for higher clinic is estimated to be about 600 m^2. The built-up area is about 200m^2. It is estimated that building cost would be about Birr 500,000.

According to the Federal Legislation on the Lease Holding of Urban Land (Proclamation No 272/2002) in principle, urban land permit by lease is on auction or negotiation basis, however, the time and condition of applying the proclamation shall be determined by the concerned regional or city governments depending on the level of development.

In Addis Ababa the city's Land Administration And Development Authority is directly responsible in dealing with matters concerning land. Accordingly, the initial land lease rate in Addis Ababa set by the Authority based on the location of land is as shown in Table 5.2.

Table 5.2

INITIAL LAND LEASE RATE IN ADDIS ABABA

Sr. No	Location of the land	Land Grade	Initial Price in m^2
1	Central Business zones	1 2 3 4 5	1167.3 1062.9 916.2 751.5 619.2
2	Places That are Under Transit	 1 2 3 4 5	 716.4 647.1 559.8 472.5 384.3
3	Expansion Zones	1 2 3 4	245.7 207 150.3 132.3

Source; Addis Ababa City Land Administration Authority

As can be seen from Table 5.3, the initial land lease rate ranges from Birr 1,167.3 to 132.3 per m^2 .

Currently, most of the health facilities in Addis Ababa are located on the central business zones of the city. Therefore, places under transit and expansion zones are recommended as the best locations for the project. Accordingly, the average of the highest land lease rates in places under transit and expansion zones, which is Birr 481.05 m^2 is adopted.

The Federal Legislation on the Lease Holding of Urban Land legislation has also set the maximum on lease period and the payment of lease prices (see Table 5.3 and Table 5.4).

Table 5.3

LEASE PERIOD

Type of Service	Lease Period (Years)
Residential area	99
Industry	80
Education, cultural research health, sport, NGO and religious	99
Trade	70
Urban Agriculture	15
Other service	70

Table 5.4

LEASE PAYMENT PERIOD

Sr. No.	Service Type	Period of Payment According to the Grade of Towns
1	Private residential are obtained through tender or negotiation	50 - 60 years
2	Trade	40 - 50 years
3	Industry	40 - 50 years
4	Real estate	40 years
5	Urban Agriculture	8 - 10 years
6	Trade and social service	40 - 50 years
7	Others	40 years

Moreover, advance payment of lease based on the type of investment ranges from 5% to 10%. For those that pay the entire amount of the lease will receive 0.5% discount from the total lease value and those that pay in installments will be charged interest based on the prevailing interest rate of banks. Moreover, based on the type of investment, two to seven years grace period shall also be provided. The lease price is payable after the grace period annually.

Regarding, the terms and conditions of land lease the Addis Ababa City Government have adopted Article 6 of the Federal Legislation with very minimal changes. Therefore, for the purpose of this project profile since the project is engaged in social service , 99 years lease period, 50 years lease payment completion period, 5% down payment and seven years grace period is used.

Accordingly, the land lease cost of the project, at rate of Birr 481.05 per m^2 for 99 years of holding is estimated at Birr 28.57 million. Assuming 5% of the total cost (Birr 1.42) will be paid in advance as down payment and the remaining Birr 27.14 million will be paid in equal installments with in 50 years, the annual lease payment is estimated at Birr 542,913**.**

VI. MANPOWER AND TRAINING REQUIREMENT

A. MANPOWER REQUIREMENT

The manpower requirement for higher clinic is given in Table 6.1 below. The annual salary requirement is estimated to be about Birr 381,000.

Table 6.1

MANPOWER REQUIREMENT & LABOUR COST

Sr. No.	Description	Req. No.	Salary (Birr)	
			Monthly	Annual
1	Specialist/General Practioner – Head	1	12,000	144,000
2	Specialist	1	12,000	144,000
3	Nurse	2	3,000	36,000
4	Receptionist	1	600	7,200
5	X-ray Technician	1	1,500	18,000
6	Laboratory Technician	1	1,500	18,000
7	Cleaner	1	350	4,200
8	Guard	2	800	9,600
	Total	**10**	**31,750**	**381,000**

B. TRAINING REQUIREMENT

The qualification of the professionals would be adequate for the operation of the higher clinic.

VII. FINANCIAL ANALYSIS

The financial analysis of the higher clinic project is based on the data presented in the previous chapters and the following assumptions:-

Construction period	1 year
Source of finance	30 % equity
	70 % loan
Bank interest	8.5%
Discount cash flow	8.5%
Accounts receivable	30 days
Medicine and medical supplies	30 days
Cash in hand	5 days
Accounts payable	30 days
Repair and maintenance	5% of medical equipment

A. TOTAL INITIAL INVESTMENT COST

The total investment cost of the project including working capital is estimated at Birr 3.84 million. The major breakdown of the total initial investment cost is shown in Table 7.1.

Table 7.1

INITIAL INVESTMENT COST

Sr. No.	Cost Items	Local Cost	Foreign Cost	Total Cost
1	Land lease value	1,420.00	-	1,420.00
2	Building and Civil Work	500.00	-	500.00
3	Medical Equipment	834.37	-	834.37
4	Office Furniture and Equipment	150.00	-	150.00
5	Vehicle	450.00	-	450.00
6	Pre-production Expenditure*	355.08	-	355.08
7	Working Capital	130.16	-	130.16
	Total Investment Cost	**3,839.61**	-	**3,839.61**

* *N.B Pre-production expenditure includes interest during construction (Birr 255.08 thousand) and Birr 125 thousand costs of registration, licensing and formation of the company including legal fees, commissioning expenses, etc.*

B. OPERATING COST

The annual operating cost at full capacity operation is estimated at Birr 1.06 million (see Table 7.2). The major components of the operation cost are direct labour, medicine and medical supplies and cost of finance accounting for 21.42%, 18.05% and 14.33% of the total operation cost respectively. The remaining 46.20% is the share of utility, labour overhead, depreciation, repair and maintenance and administration cost.

Table 7.2

ANNUAL OPERATING COST AT FULL CAPACITY ('000 BIRR)

Items	Cost	%
Medicine and medical supplies	192.65	18.05
Utilities	55.35	5.19
Maintenance and repair	41.72	3.91
Labour direct	228.60	21.42
Labour overheads	95.25	8.92
Administration Costs	152.40	14.28
Land Lease Cost	-	-
Total Operating Costs	**765.97**	71.76
Depreciation	148.44	13.91
Cost of Finance	152.97	14.33
Total Production Cost	**1,067.38**	**100**

C. FINANCIAL EVALUATION

1. Profitability

Based on the projected profit and loss statement, the project will generate a profit through out its operation life. Annual net profit after tax will grow from Birr 283.48 thousand to Birr 429.48 thousand during the life of the project. Moreover, at the end of the project life the accumulated cash flow amounts to Birr 3.55 million.

2. Ratios

In financial analysis financial ratios and efficiency ratios are used as an index or yard stick for evaluating the financial position of a firm. It is also an indicator for the strength and weakness of the firm or a project. Using the year-end balance sheet figures and other

relevant data, the most important ratios such as return on sales which is computed by dividing net income by revenue, return on assets (operating income divided by assets), return on equity (net profit divided by equity) and return on total investment (net profit plus interest divided by total investment) has been carried out over the period of the project life and all the results are found to be satisfactory.

3. Break-even Analysis

The break-even analysis establishes a relationship between operation costs and revenues. It indicates the level at which costs and revenue are in equilibrium. To this end, the break-even point of the project including cost of finance when it starts to operate at full capacity (year 3) is estimated by using income statement projection.

$$BE = \frac{\text{Fixed Cost}}{\text{Sales} - \text{Variable Cost}} = 38\ \%$$

4. Payback Period

The pay back period, also called pay – off period is defined as the period required to recover the original investment outlay through the accumulated net cash flows earned by the project. Accordingly, based on the projected cash flow it is estimated that the project's initial investment will be fully recovered within 6 years.

5. Internal Rate of Return

The internal rate of return (IRR) is the annualized effective compounded return rate that can be earned on the invested capital, i.e., the yield on the investment. Put another way, the internal rate of return for an investment is the discount rate that makes the net present value of the investment's income stream total to zero. It is an indicator of the efficiency or quality of an investment. A project is a good investment proposition if its IRR is greater than the rate of return that could be earned by alternate investments or putting the money

in a bank account. Accordingly, the IRR of this porject is computed to be 14.46 % indicating the vaiability of the project.

6. Net Present Value

Net present value (NPV) is defined as the total present (discounted) value of a time series of cash flows. NPV aggregates cash flows that occur during different periods of time during the life of a project in to a common measuring unit i.e. present value. It is a standard method for using the time value of money to appraise long-term projects. NPV is an indicator of how much value an investment or project adds to the capital invested. In principal a project is accepted if the NPV is non-negative.

Accordingly, the net present value of the project at 8.5% discount rate is found to be Birr 1.13 million which is acceptable.

D. ECONOMIC BENEFITS

The project can create employment for 10 persons. In addition to contributing to the improvement of the city's population health, the project will generate Birr 1.16 million in terms of tax revenue. The establishment of the project will contribute to improving the life of the residents of the City Administration.