Pre-Feasibility Study

(STONE CRUSHING)

Small and Medium Enterprises Development Authority

Ministry of Industries & Production

Government of Pakistan

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June 2016

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2 EXECUTIVE SUMMARY

Stone Crushing Unit is one of the potential businesses nowadays due to the mounting construction sector in the country. This setup can be located at any rocky or barren type area distant from the urban settings like Hub, Superhighway, Manghopir, Jhampir or Nooriabad that are in near proximity of Karachi while other similar areas can be around Lahore, Multan, Faisalabad, Peshawar and Quetta where real estate development and construction projects areon peak. This business can also be undertaken in all small second tier towns, in addition to suburban towns of large cities.

The particulars of this document are mentioned as below;

Product(s) includes **crushed stones of 1" (20mm), 0.75'' (16mm), 0.5" (13mm), 0.25" (10mm) and Chips (5mm).**

Capacity; available production capacity is **3,750 CbFt. per hour or 30,000 CbFt. per day for eight (08) working hours**. However the initial utilization is **around 65%.**

Total Cost Estimates is **Rs. 66,413,119** with fixed investment of **Rs. 60,850,000** and working capital of **Rs. 5,563,119.**

For the given cost assumptions, **IRR** and **Payback Period** are **29%** and **3 years and 11 months** respectively.

The most critical considerations or factors for success of the project are:

- Most significant consideration(s)
  - Connections with the building material suppliers, well known builders and contractors.
  - Update information on legal and commercial terms of civil and construction works initiated by local, provincial and federal government.
  - Selection of products/brands to be distributed
  - Location of the Unit
  - Timely recovery of cash from builders, contractors, engineering firm etc.
  - Capacity/space optimization
  - Negotiation and marketing Skills
  - Fuel & maintenance costs of the heavy vehicles & plant
- Equally important factor(s)
  - On time delivery of orders
  - Responsiveness towards construction sector's trends and consumption norms

3 INTRODUCTION TO SMEDA

The Small and Medium Enterprises Development Authority (SMEDA) was established in October 1998 with an objective to provide fresh impetus to the economy through development of Small and Medium Enterprises (SMEs).

With a mission "to assist in employment generation and value addition to the national income, through development of the SME sector, by helping increase the number, scale and competitiveness of SMEs", SMEDA has carried out 'sectoral research' to identify policy, access to finance, business development services, strategic initiatives and institutional collaboration and networking initiatives.

Preparation and dissemination of prefeasibility studies in key areas of investment has been a successful hallmark of SME facilitation by SMEDA.

Concurrent to the prefeasibility studies, a broad spectrum of business development services is also offered to the SMEs by SMEDA. These services include identification of experts and consultants and delivery of need based capacity building programs of different types in addition to business guidance through help desk services.

4 PURPOSE OF THE DOCUMENT

The pre-feasibility study is designed to primarily facilitate potential entrepreneurs in project identification for investment. The document may form the basis of an important investment decision and in order to serve this objective the study covers various aspects of project concept, development, startup, production, finance and business management.

The rationale of this document is to facilitate potential investors in **Stone Crushing– Raw Material Industry for Construction Sector** by providing them with a general understanding of the business with the intention of supporting crucial investment decisions.

The need to come up with pre-feasibility reports for undocumented or minimally documented sectors attains greater imminence as the research that precedes such reports reveal certain thumb rules or best practices that are developed by existing enterprises by way of trial and error methods and certain industrial norms that become a guiding source regarding various aspects of business set-up and it's successful management.

Apart from carefully studying the whole document, one must also consider critical aspects other than those mentioned in this document, which forms the basis of any investment decision.

5 BRIEF DESCRIPTION OF PROJECT & PRODUCT

- **Product:** It has been suggested that for the proposed Stone Crushing Unit, the products would include stones of **1"** (20mm), **0.75''** (16mm), **0.5"** (13mm), **0.25"** (10mm) and **Chips** (5mm) as industry's requirements.
- **Target Market:** The demand of Stone Crushing units is increasing across the country which is proportionate to the increased growth of Real Estate and Construction Sector reflecting improved economic growth and rising consumerism. Therefore the potential target market for the proposed Stone Crushing setup are the construction and engineering firms, builders and contractors having alive projects in densely populated cities like Karachi,Lahore, Multan, Faisalabad, Peshawar and Quetta.
- **Location:** Keeping in view the proximities of target market the proposed unit can be located at any rocky or barren type area distant from the urban settings like Hub, Superhighway, Manghopir, Jhampir or Nooriabad that are in near proximity of Karachi while other similar areas can be around Lahore, Multan, Faisalabad, Peshawar and Quetta where real estate development and construction projects are on peak.
- **Employment Generation:** The proposed project will provide employment to 41-45 people in the roles of sales/marketing, supervisor, technical, labor & security.
- **Technology:** The setup would include:
  - Plant; Vibrators, Hammer Crusher, Rotor, Conveyer Belts, Motors (ranging from 10-250hps) and Support Structure.
  - Heavy Vehicles; Loader, Jackhammer, Excavator, Dumpers and Bulldozer.
  - Laptops & printers for the management staff.
  - Personal Protective Equipments (PPEs) for the safety of the labors.

5.1 Stone Crushing - Production Process

The main machinery involved in the stone crushing industry is Hammer Crusher, Vibrators, Rotor, Conveyers and Support Structure. The process involved is to feed the stone in to the Hammer Crushers to make it further smaller in size as required by the customer. In the hammer crusher, the stone is crushed. The crushed stone is screened to separate the produce in different sizes by the separator. The crushed stone is conveyed by the conveyors to trucks for transport to the market place or storage area.

- **Material Sourcing**

  Hard Lime Stone is the basic raw material which is used for the production of quality crushed stone. God has bestowed Pakistan with huge reserves of mineral wealth which are spreading all over the country and especially enormous reserves of Hard Lime Stone are generally found around the country in all provinces. Hard Lime

Stone will be used as raw material for manufacturing crushed stone. Raw stone could be purchased directly from the excavator (quarry lease holder) or crusher may hold his own quarry lease to produce raw stone. For the purpose of this pre-feasibility, it is proposed to obtain a quarry lease holding to avoid any possible threat in procuring raw stone as well as to keep the project economically stable.

5.2 Installed and Operational Capacities

For the proposed business, an area of 500 acres has been acquired on rent and with the provided Plant specifications, there is 30,000 CbFt. production capacity per day for an Eight Hour (08) shift which will be utilized 65% i.e. 19500 CbFt. initially. While this capacity utilization will be increased 11% per year till the achievement of 100% capacity in the 5th year. From 6th to 10 year the setup would operate on 100 % capacity. This capacity is distributed in equal proportions on the following products;

1. **1”** (20mm)
2. **0.75’’** (16mm)
3. **0.5”** (13mm)
4. **0.25”** (10mm)
5. **Chips** (5mm)

6 CRITICAL FACTORS

The main critical success factors that affect the decision to invest in the proposed business setup are:

6.1 Business Model and Distribution

Crushed Stone business is dependent on the pricing and margins given to builders, suppliers and retail customers. It also depends on efficient supply of crush to the customer and communication facilities provided to the prospective clients, retailers and order bookers. Generally crushed stone units pile the produce on quarry sites (mostly outside the city) in huge volumes in the open space. Construction contractors, retail customers and builders contact crusher in order to obtain crushed stone.

6.2 Market Entry Timing

Stone Crushing business depends on activity and movement in construction industry. Housing and construction plus government initiated development projects demand mass availability of crushed stone all over the year. Therefore, a crushed stone manufacturing unit could be established at any time of the year. Most importantly, as the construction industry in Pakistan is on peak which many private and public real estate developmental projects in pipeline so therefore it is high time to enter in the market serving the gap in the industry.

6.2 Conventional Order Booking Arrangements

As stone crushing is one of the allied sector of construction industry. Therefore, all raw material suppliers to the construction industry are considered to be the part of the distribution network for the crushed stone.

A stone crusher when setting up a crushing unit, initiate and institute contacts with the construction material suppliers, retailers and signup a contract in order to appoint them as order booking agents. Generally, construction and building material supplier, who is the part of the whole chain, links up customer and operator [of stone crushing unit]. Sometimes he has his own delivery vehicles and in most of the cases, keeps arrangement with the commercial vehicle operators, material manufacturers, and buyer, thereby assuming a significant role in the value chain.

6.3 Ordering and Delivery Procedure:

Crusher appoints order booking agents (building material suppliers) within the city who entertains the customer. Customers usually send someone or personally go to the booking office and place the order which includes details indicating quantity, quality, size and time of delivery etc. Booking agent gets the payment in cash (mostly) and issues an order / delivery slip to the customer, showing order details.

Buyer produces the order slip (in local term called ‘parchi’) to the person responsible for the physical delivery of the crush. That person renders the order as given on the slip. After loading the vehicle, he hands over it to the buyer /order booker and here ends the role of the crusher.

Crushed stone producers also book direct orders at crushing site office for the construction contractors, retail customers and builders on phone and supply directly to the identified delivery points. However, these types of facilities are mostly provided for bulk orders.

6.4 Product Marketing

In the manufacturing industry, marketing is considered to be of significant importance. In the Stone Crushing industry, marketing parameters are very limited and usually in some degree associated with the construction sector. Some of the marketing promotion activities which should duly be rendered are given below:

- Connection development with the building material suppliers, well known builders and contractors.
- Update information on civil and construction works initiated by local, provincial and central government.
- Draw linkages with material suppliers to the housing industry at town level.
- Emphasis on image development and acquaintance across individual contractors who are serving private sector.
- Establish contacts with local civil engineering firms, individuals and professionals.

7 GEOGRAPHICAL POTENTIAL FOR INVESTMENT

For crushed stone manufacturing purpose, majority of the crushing units use Hard Lime Stone, the reason lies in its extreme hardness and it also gives maximum strength to the building structure. Another reason is that it is easily available across the country in large quantities; however, granite could also be used for this purpose, as it is used by many other countries, though its excavation is comparatively difficult.

Hard Lime Stone is found almost in every part of the country; however, in case of Granite, so far known sources of workable granites in the country which could be used for crushing purposes are only found in Nagarparkar, South East (Sindh) and Manshera in the North (NWFP). Gilgit Region (Northern Areas) does indicate great potential of variety, quality and quantity of granites that according to geological evidences have superiority over other granites in Pakistan. The reserves of Hard Lime Stone in Pakistan have not been specifically estimated, yet broad figure of tens of billions of tones is generally quoted.

Based on discussions with the industry experts and entrepreneurs, only in province of Punjab there are more than 650 stone crushers operating in Chakwal, Jhelum, Gujranwala, Rawalpindi, Lahore, Dera Ghazi Khan, Mianwali, Gujrat, Bhakkar, Attock and Sargodha. The number increases when we move towards Sindh, Baluchistan and Khyber Pakhtunkhwa as the material reserves for the industry also increases plus the construction projects are even more in numbers there.

7.2 Environmental & Protection Aspects

Persistent exposure to asbestos which is a natural fiber found in the dust particles of crushed stone, are produced in stone-crushing factories during the crushing process. To avoid its harmful effect on human health, it is suggested to follow complete instructions and procedures provided by the provincial agency of environment protection.

The major environmental aspects for stone crushing units are discussed as follows:

- Location of plant has to be such that ingress of heavy vehicles does not block the traffic. Evening and late night operation is to be avoided if passage is through residential areas. Payload area is covered by tarpaulins when transporting crush to prevent fall out of fines and emissions of dust.
- Dust containment enclosures are required for the purpose of containing the emissions within an enclosure and to prevent wind currents, which can spread the dust to larger areas.
- The enclosures should be, complete from all four sides and roof. There should not be open windows/ openings etc. The gaps should be sealed using gaskets or wool type packing etc.
- The Dust Suppression System should comprise of a covered water storage tank, a pump, an online water filter, connecting GI pipes, spray nozzles each fitted with flow regulating valves.
- Volume and strength reduction of the effluent is to be achieved by preventing mixing of waters from washing activities and processing activities
- Liquid effluent is to be treated by sedimentation process meaning subjecting the effluent to flow through settling tanks

- Effluent is to be treated by coagulation, i.e. adding any coagulant to the settling tanks. Though this treatment is expensive as compared to the sedimentation process, it is reportedly more efficient.

8 POTENTIAL TARGET CUSTOMERS / MARKETS

Construction sector has been registered with a growth rate of 7.05 percent. The seven plus growth in this sub-sector is due to rapid execution of work on various projects, increased investment in small scale construction and rapid implementation of development schemes and other projects of federal and provincial governments.[1] The highlighted reasons for this growth rate can be mainly infrastructural projects like highways/motorways, CPEC, new public transport setups etc.

Increased construction material requirements for private mega housing projects across the country is also one of the major drivers of growth in more than 70-100 other small industries that are directly or indirectly part of the construction industry[2]. While various other construction and real estate development projects that includes the projects under public sector development and private public partnership heads are continuously being commissioned which will also be having high demand of crushed stone's material all over the country. Moreover, as the construction sector has been showing consistent growth rates in the range of 7-8% over the last few years and so this has resulted multiplier growth in more than 40 allied industries including that of Stone Crushing.

The potential target market for the proposed Stone Crushing setup are the construction and engineering firms, builders and contractors having alive projects in densely populated urban cities like Karachi, Lahore, Multan, Faisalabad, Peshawar and Quetta whereby intense growth of Real Estate and Construction Sector reflecting improved economic growth and rising consumerism.

8.1 Market Potential

Stone Crushing units across the country are working mostly as unorganized sector and no reliable data is available for the installed capacity and the number of operational units. However, since it is an allied industry of the construction sector, growth in construction sector as mentioned above can be considered as proxy for the growth in stone crushing sector, i.e. around 7-8%. The market scope for crushed stone is found to be encouraging in local market with the increased demand from building

[1] Pakistan Economic Survey 2014-15

[2] Association of Builders and Developers (ABAD)

industry & construction fields. There is also a sufficient demand from Govt. contractors for laying of roads and construction of industries etc.

8.2 Problem/Threats to the Stone Crushing Sector[3]

- Local customs and traditions, non-availability of infrastructure facilities like roads and electricity are the major hurdles in the development of the sector.
- Poor law and order situation particularly in geologically promising areas.
- Non-availability of modern machinery in local market at cheaper rates.
- Lack of reliable and comprehensive geological data base/ mapping.
- Non-availability of latest and modern exploration techniques/ machinery.
- Non development oriented Mineral Concession Rules
- Lack of investment friendly environment created by the relevant government agencies.
- Lack of coordination among various mineral sector agencies.

9 PROJECT COST SUMMARY

A detailed financial model has been developed to analyze the commercial viability of this project. Various costs and revenue related assumptions along with results of the analysis are outlined in this section.

9.1 Project Economics

All the figures in this financial model have been calculated for an estimated sales of Rs. 66,413,119 million in the year one. The capacity utilization during year one is worked out at 65% with 11% increase in subsequent 4 years up to the maximum capacity utilization of 100% approximately.

The following table shows **Internal Rate of Return**, **Payback Period** and **Net Present Value** of the proposed venture:

Table 9.1: Project Economics

Description	Details
Internal Rate of Return (IRR)	29%
Payback Period (yrs.)	3.94
Net Present Value (Rs.)	71,436,875

[3] Digest of Industrial Investment in Pakistan, Expert Advisory Cell

9.2 Project Financing

Following table provides details of the equity required and variables related to bank loan:

Table 9.2: Project Financing

Description	Details
Total Equity (100%)	Rs. 66,413,119
Bank Loan (0%)	Rs. 0

9.3 Project Cost

Following fixed and working capital requirements have been identified for operations of the proposed business:

Table 9.3: Project Cost

Description	Amount Rs.
Capital Cost	
Furniture & Electronics	265,000
Plant Machinery	7,985,000
Heavy Machinery & Equipments	49,500,000
Construction, Renovation & Fixtures	2,500,000
Pre-operating Expenses	500,000
Preliminary Expenses	100,000
Total Capital Cost	**60,850,000**
Working Capital	
Rent (Advance and Deposits)	1,350,000
Cash in Hand	1,000,000
Fuel Consumption per Month (=1 Month)	3,213,119
Total Working Capital	**5,563,119**
Total Project Cost	**66,413,119**

9.4 Space Requirement

The space requirement for the proposed **Stone Crushing unit** is given below:

Table 9.4: Space Requirement

Description	Estimated Area (Sqft)	Unit Cost (Rs.)	Total Cost (Rs.)
Loading/ Parking Space	500	300	150,000
Total			**150,000**

Note: For the purpose of this prefeasibility the rate of land has been based on the rates prevailing in Nooriabad Industrial Estate near Karachi, therefore the rates can be changed in case of change in location.

9.5 Plant / Equipment's Requirement

Plant, machinery and equipment for the proposed project are stated below:

Table 9.5: Plant & Equipment Requirements

Description	Units	Rate	Amount
Plant Related			
Vibrators	3	350,000	1,050,000
Hammer Crusher	1	1,200,000	1,200,000
Rotor	1	400,000	400,000
Conveyer Belt	13	230,000	2,990,000
Motor (10-15hp)	9	60,000	540,000
Motor (20-25hp)	7	75,000	525,000
Motor (30hp)	1	80,000	80,000
Motor (250hp)	1	700,000	700,000
Support Structure		500,000	500,000
Total			**7,985,000**
Machinery/Equipment Related			
Loader	1	8,500,000	8,500,000
Jackhammer & Excavator	2	11,000,000	22,000,000
Dumper 450-500 CbFt.	2	4,500,000	9,000,000
Bulldozer	1	10,000,000	10,000,000
Total			**49,500,000**

9.6 Furniture & Fixtures Requirement

Details of the furniture and fixture required for the project are given below:

Table 9.6: Furniture &Electronics

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Tables	2	6,000	12,000
Chairs	5	5,000	25,000
Sitting Benches	2	7,000	14,000
Storage Racks	1	7,000	7,000
Air Conditioners (with specs)	1	43,500	43,500
Electrical Fans	5	2,500	12,500
Lights	5	1,500	7,500
Water Filter	1	5,000	5,000
Total			**126,500**

9.7 Office Equipment Requirement

Following office equipment will be required for **Stone Crushing** are as follows:

Table 9.7: Office Equipment

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Laptop	3	44,000	132,000
Printer cum Copier cum Scanner	1	3,500	3,500
Telephone sets	2	1,500	3,000
Total			**138,500**

9.8 Human Resource Requirement

In order to run operations of Stone Crushing Unit smoothly, details of human resources required along with number of employees and monthly salary are recommended as under:

Table 9.8: Human Resource Requirement

Description	No. of Employees	Monthly Salary (Rs)	Monthly Salary per person (Rs)
Administration Related			
Sales Staff/Order Booker	2	30,000	60,000
Total	2		60,000
Plant Related Salaries			
Labor (Plant)	8	16,500	132,000
Supervisor (Plant-Mech)	1	40,000	40,000
Supervisor (Plant-Elect)	1	40,000	40,000
Labor (Maintenance)	3	16,000	48,000
Supervisor (Plant)	2	30,000	60,000
Drivers (Heavy Vehicles)	12	22,000	264,000
Helper with drivers	12	14,000	168,000
Site Manager	2	45,000	90,000
Total	**43**		**842,000**

9.9 Utilities and other costs

An essential utilities' cost to be borne by the project is the cost of electricity, water and telephone. The electricity expenses, being the most essential expenditure, are estimated to be around Rs. 900,000 per month, telephone expenses would be Rs. 5,000 per month whereas the water charges are assumed to be Rs. 120,000 per month. The total would therefore be around Rs. 1,025,000 per month.

9.10 Revenue Generation

Based on the initial utilization of 65% of the production capacity in the first year equally occupied by all the five product types i.e. **1"** (20mm), **0.75"** (16mm), **0.5"** (13mm), **0.25"** (10mm) and **Chips** (5mm) respectively, the total sales revenue would be follows:

Table 9.10: Revenue Generation – Year 1

Description	CbFt. Produced per day	Price per CbFt.	Total Sales (360 days)
1"(20mm)	3,900	16	22,464,000
.75"(16mm)	3,900	16	22,464,000
.50"(13mm)	3,900	15	21,060,000
.25"(10mm)	3,900	14	19,656,000
Chips(5mm)	3,900	12	16,848,000
Total	**19,500**		**102,492,000**

10 CONTACT DETAILS

In order to facilitate potential investors, contact details of private sector Service Providers relevant to the proposed project be given.

10.1 Machinery Suppliers

Machinery/Equipment Supplier -1

Name of Supplier /Organization	VPL Limited
Address	D-68, Estate Avenue, S.I.T.E, Karachi − 74000
Phone	021 111 875 875
E-mail	info.khi@vpl.com.pk

Machinery Supplier -2

Name of Supplier /Organization	High-Techs Machineries
Address	N-3291 Block-1, Metrovile-3rd, Scheme-33, Sector-14/A, Gulshan-e-Iqbal, Karachi
Phone	0333-2219843

10.2 Technical Experts / Consultants

Technical Experts / Consultants -1

Name of Expert/Organization	Saeed-ur-Rehman Stone Crushing Plant
Address	Main Superhighway, nearby 10th Chowki, Nooriabad
Phone	0333-7484094 / 0300-3685312

11 USEFUL WEB LINKS

Small & Medium Enterprises Development Authority (SMEDA)	www.smeda.org.pk
Government of Pakistan	www.pakistan.gov.pk
Ministry of Industries & Production	www.moip.gov.pk
Ministry of Education, Training & Standards in Higher Education	http://moptt.gov.pk
Government of Punjab	www.punjab.gov.pk
Government of Sindh	www.sindh.gov.pk
Government of Khyber Pakhtunkhwa	www.khyberpakhtunkhwa.gov.pk
Government of Balochistan	www.balochistan.gov.pk
Government of Gilgit Baltistan	www.gilgitbaltistan.gov.pk
Government of Azad Jamu Kashmir	www.ajk.gov.pk
Trade Development Authority of Pakistan (TDAP)	www.tdap.gov.pk
Security Commission of Pakistan (SECP)	www.secp.gov.pk
Federation of Pakistan Chambers of Commerce and Industry (FPCCI)	www.fpcci.com.pk
State Bank of Pakistan (SBP)	www.sbp.org.pk
Punjab Small Industries Corporation	www.psic.gop.pk
Sindh Small Industries Corporation	www.ssic.gos.pk
Pakistan Horticulture Development and Export Company (PHDEC)	www.**phdec**.org.pk
Punjab Vocational Training Council (PVTC)	www.**pvtc**.gop.pk
Technical Education and Vocational Training Authority (TEVTA)	www.**tevta**.org
Pakistan Readymade Garment Technical Training Institute	www.prgmea.org/**prgtti/**
Livestock & Dairy Development Department, Government of Punjab.	www.**livestock**punjab.gov.pk
Punjab Industrial Estates (PIE)	www.pie.com.pk
Faisalabad Industrial Estate Development and Management Company (FIEDMC)	www.fiedmc.com.pk

12 ANNEXURES

12.1 Income Statement

Income Statement

Projected Income Statement (Rs.)	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Revenue	102,492,000	119,454,426	139,224,134	162,265,728	189,120,706	201,244,077	211,306,281	221,871,595	232,965,174	244,613,433
Fuel Consumption	38,557,434	43,759,148	48,633,119	53,977,326	59,840,202	61,742,201	63,077,228	64,479,006	65,950,873	67,496,334
Rent Expense	1,800,000	1,980,000	2,178,000	2,395,800	2,635,380	2,898,918	3,188,810	3,507,691	3,858,460	4,244,306
Direct Salaries	10,536,000	11,516,400	12,568,500	13,697,019	14,906,969	16,203,671	17,013,854	17,864,547	18,757,774	19,695,663
Utilities Expense	12,300,000	12,915,000	13,560,750	14,238,788	14,950,727	15,698,263	16,483,176	17,307,335	18,172,702	19,081,337
Gross Profit	39,298,566	49,283,878	62,283,765	77,956,795	96,787,428	104,701,024	111,543,212	118,713,015	126,225,365	134,095,793
General Administrative & Selling Expenses										
Adminstrative Salaries	720,000	756,000	793,800	833,490	875,165	918,923	964,869	1,013,112	1,063,768	1,116,956
Rental Equipments	18,900,000	23,760,000	29,403,000	35,937,000	43,483,770	47,832,147	52,615,362	57,876,898	63,664,588	70,031,046
Maintenance of Plant & Heavy Machinery	6,864,000	7,207,200	7,567,560	7,945,938	8,343,235	8,760,397	9,198,416	9,658,337	10,141,254	10,648,317
Office & Miscellaneous Expenses	360,000	378,000	415,800	457,380	503,118	553,430	608,773	669,650	736,615	810,277
Amortization	120,000	120,000	120,000	120,000	120,000	-	-	-	-	-
Depreciation Expense	6,025,000	6,025,000	6,025,000	6,025,000	6,025,000	6,025,000	6,025,000	6,025,000	6,025,000	6,025,000
Subtotal	32,989,000	38,246,200	44,325,160	51,318,808	59,350,287	64,089,896	69,412,420	75,242,998	81,631,225	88,631,596
Operating Income	6,309,566	11,037,678	17,958,605	26,637,987	37,437,141	40,611,127	42,130,792	43,470,018	44,594,140	45,464,197
Financial Charges (15% Per Annum)	-	-	-	-	-	-	-	-	-	-
Earnings Before Taxes	6,309,566	11,037,678	17,958,605	26,637,987	37,437,141	40,611,127	42,130,792	43,470,018	44,594,140	45,464,197
Tax	1,430,848	3,085,687	5,508,012	8,545,795	12,325,499	13,436,395	13,968,277	14,437,006	14,830,449	15,134,969
Net Profit	4,878,718	7,951,991	12,450,593	18,092,191	25,111,641	27,174,733	28,162,515	29,033,012	29,763,691	30,329,228
Monthly Profit After Tax	406,560	662,666	1,037,549	1,507,683	2,092,637	2,264,561	2,346,876	2,419,418	2,480,308	2,527,436

12.2 Balance Sheet

Balance Sheet

Projected Balance Sheet (Rs.)	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Assets											
Current Assets											
Cash & Bank Balance	1,000,000	16,136,838	30,233,828	48,829,421	73,066,613	104,323,254	137,522,987	171,710,502	206,768,514	242,557,205	278,911,433
Prepaid Rent & Deposit	1,350,000	450,000	450,000	450,000	450,000	450,000	450,000	450,000	450,000	450,000	450,000
Pre Operating Costs	600,000	480,000	360,000	240,000	120,000	0	0	0	0	0	0
Fuel Expenditure	3,213,119										
Total Current Assets	**6,163,119**	**17,066,838**	**31,043,828**	**49,519,421**	**73,636,613**	**104,773,254**	**137,972,987**	**172,160,502**	**207,218,514**	**243,007,205**	**279,361,433**
Fixed Assets											
Plant	7,985,000	7,186,500	6,388,000	5,589,500	4,791,000	3,992,500	3,194,000	2,395,500	1,597,000	798,500	0
Heavy Machinery & Equipments	49,500,000	44,550,000	39,600,000	34,650,000	29,700,000	24,750,000	19,800,000	14,850,000	9,900,000	4,950,000	0
Furniture & Fixtures	265,000	238,500	212,000	185,500	159,000	132,500	106,000	79,500	53,000	26,500	0
Premises Renovation	2,500,000	2,250,000	2,000,000	1,750,000	1,500,000	1,250,000	1,000,000	750,000	500,000	250,000	0
Total Fixed Assets	**60,250,000**	**54,225,000**	**48,200,000**	**42,175,000**	**36,150,000**	**30,125,000**	**24,100,000**	**18,075,000**	**12,050,000**	**6,025,000**	**0**
Total Assets	**66,413,119**	**71,291,838**	**79,243,828**	**91,694,421**	**109,786,613**	**134,898,254**	**162,072,987**	**190,235,502**	**219,268,514**	**249,032,205**	**279,361,433**
Owner's Equity	66,413,119	71,291,838	79,243,828	91,694,421	109,786,613	134,898,254	162,072,987	190,235,502	219,268,514	249,032,205	279,361,433
Long Term Liability	0	0	0	0	0	0	0	0	0	0	0
Total Equity & Liabilities	**66,413,119**	**71,291,838**	**79,243,828**	**91,694,421**	**109,786,613**	**134,898,254**	**162,072,987**	**190,235,502**	**219,268,514**	**249,032,205**	**279,361,433**

12.3 Cash Flow Statement

Cash Flow Statement

Projected Statement of Cash Flows (Rs.	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Cash Flow From Operating Activities											
Net Profit	0	4,878,718	7,951,991	12,450,593	18,092,191	25,111,641	27,174,733	28,162,515	29,033,012	29,763,691	30,329,228
Add: Depreciation Expense	0	6,025,000	6,025,000	6,025,000	6,025,000	6,025,000	6,025,000	6,025,000	6,025,000	6,025,000	6,025,000
Amortization Expense	0	120,000	120,000	120,000	120,000	120,000	0	0	0	0	0
Fuel Expenditure	(3,213,119)	3,213,119									
Net Cash Flow From Operations	**(3,213,119)**	**14,236,838**	**14,096,991**	**18,595,593**	**24,237,191**	**31,256,641**	**33,199,733**	**34,187,515**	**35,058,012**	**35,788,691**	**36,354,228**
Cash Flow From Financing Activities											
Receipt of Long Term Debt	0										
Repayment of Long Term Debt		0	0	0	0	0					
Owner's Equity	65,413,119	0	0	0	0	0	0	0	0	0	0
Net Cash Flow From Financing Activitie	**65,413,119**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Cash Flow From Investing Activities											
Rent (Advance & Deposit)	(1,350,000)	900,000									
Renovation	(2,500,000)										
Preoperating Costs	(500,000)										
Plant	(7,985,000)										
Furniture & Electronics	(265,000)										
Equipments	(49,500,000)										
Preliminary Expenses	(100,000)										
	(62,200,000)	**900,000**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
NET CASH FLOW	**0**	**15,136,838**	**14,096,991**	**18,595,593**	**24,237,191**	**31,256,641**	**33,199,733**	**34,187,515**	**35,058,012**	**35,788,691**	**36,354,228**
Cash at the Beginning of the Period	**1,000,000**	**1,000,000**	**16,136,838**	**30,233,828**	**48,829,421**	**73,066,613**	**104,323,254**	**137,522,987**	**171,710,502**	**206,768,514**	**242,557,205**
Cash at the End of the Period	**1,000,000**	**16,136,838**	**30,233,828**	**48,829,421**	**73,066,613**	**104,323,254**	**137,522,987**	**171,710,502**	**206,768,514**	**242,557,205**	**278,911,433**

13 KEY ASSUMPTIONS

13.1 Operating Cost Assumptions

Description	Details
Vehicle's Fuel Cost	Based on the prevailing prices of Diesel and to be increased as per inflationary trends
Vehicle Maintenance Cost	Rs. 5/Km

13.2 Revenue Assumptions

Description	Details
Prices for the Products	To be increased as per inflationary trends

13.3 Financial Assumptions

Description	Details
Depreciation	Straight Line basis for all Plant, Machinery, Equipments and Fixed Assets on 10 years
Capacity Utilization	Initial capacity = 65, per year growth = 11% leading to an approximate final utilization of 100% at 5th year end.
Inflationary trends	5% as per current situation to applied on all expenses and prices of the products
Rent for the space and Heavy Equipments	To be increased 10% annually