

# MODERN AGRICO LIMITED

## PRE FEASIBILITY STUDY

### BITUMEN BLENDING FACILITY AND PRODUCTION OF ASPHALT CONCRETE FOR ROADS CONSTRUCTION

Prepared for:  
Modern Agrico Limited  
P.O Box 345,  
Sumbawanga.

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# **PART I**

## **1. EXECUTIVE SUMMARY**

### **1.1. Company & Project concept**

Modern Agrico Limited is limited Company incorporated in Tanzania under the Company act of 2002. The Company was incorporated in 11<sup>th</sup> May, 2016, and bears Certificate of Incorporate # 126285 with TIN 130-710-018. Company is being incorporated to execute various business activities among others include undertaking the project which belongs construction works Industry.

Our goals and objectives are straightforward and seek to ensure we run a professional, profitable and ethical company, building relationships with customers, suppliers and other investors

### **1.2. Company Goals and Objectives**

Modern Agrico Limited (T) Limited under this pre - feasibility study report aims to;

- Operate bitumen blending facility and production concrete mix gravels for roads construction in Tanzania and maintain the facility at quality standard.
- Carry out business professional of building and constructions of civil works in Tanzania
- Manage the project by human resource policies which encourage and reward individual and unified effort and achievement, provide training and personal development opportunities and create a working environment in which staff can feel a real sense of job involve
- Achieve levels of profit sufficient to provide for reinvestment and suitable returns to shareholders and investors
- Seek to comply with all statutory legislation and other external relevant authorities. Define and keep under review Company policy, allowing flexibility for local requirements.
- Adopt best commercial practice and ethical standards in dealing with clientele, suppliers of goods and services and other contacts

### **1.3. Purpose of feasibility report**

This document is prepared to the serve the purpose as a feasibility study for Modern Agrico Limited (T) Limited for establishment of bitumen blending facility and production concrete mix gravels for roads construction in Tanzania as well as to be submitted to TIC for an award of TIC Certificate of Incentives. The implementation of this project will compromise the following Investment activities:-

- Importation and installation bitumen sprayers.

- Importation of Chipping Spreaders
- Importation of Pavement Machines
- Importation of pneumatic roller
- Importation and installation of crusher machine
- Importation and Installation of Asphalt Plant
- Importation of concrete Mix truck
- Importation and Installation of Concrete production line and
- Importation of supportive utility trucks such as land cruiser pick up, tippr trucks, waters bowser and fuel tankers

#### **1.4. The project Developers**

The project will be managed and operated Modern Agrico Limited (T) Limited a project promoter of this project which is owned jointly by local Tanzanians and Shareholders from Oman with the following share distribution.

<b>Name</b>	<b>Nationality</b>	<b>Shares%</b>
Hamud Mohamed Hamud	Tanzanian	50.998%
Masoud Khalid Alesry	Oman	49.000%
Warda Soud Amour	Tanzanian	0.002

#### **1.5. Company Legality**

The legal certificates and documents such as Memorandum and Article of Association, certificate of incorporation, Tax Identification Number, and value added Tax certificates Justify that Modern Agrico Limited (T) Limited is operating within the ambit of the law of the Land

#### **1.6. Project Organization Structure**

The management of is Modern Agrico Limited (T) Limited constituted by the following organization set up:- Board of Directors, Managing Director who is responsible on the supervision on the entire operations of the Company, a company accountant, a General Manager who will be supervising general affairs of the project operation.

#### **1.7. Investment & Financing Structure**

The project is estimated to cost 5,000,000\$ the money covers value of land and building structures but also allocated fund include investment in Plants, equipment, furniture and fittings, pre expenses and working Capital. The equity which shall be contributed by the shareholders is 5,000,000 \$ equivalent to 100 % . However a financial policy of the Company state that the profits generated will be re-invested

Projected financial statements of Modern Agrico Limited (T) Limited is projected within five years. The company projected profit and Loss, account show a respectable turnover of more than 236,623\$ in the second year. The profits gained on fifth year are projected to be 731,153. The projected balance sheet, shows the net worth increase of more than 492,146\$ in the second year of operation and more than 587,199\$ in the 3<sup>rd</sup> year of the usefully lifetime of the implementation during which the business will be evaluated again. The financial documents show that the business has reputable turnover.

# **PART II**

## **2. COMPANY AND INDUSTRY INFORMATION**

### **2.1. Basic information**

<b>Name of company:</b>	Modern Agrico Limited (T) Limited
Address:	P.O. Box 345. Dar es Salaam
Telephone:	+255 776332933
Project Location	Sumbawanga Rukwa
Certificate of Incorporation no.	126285
Investment Activities	Bitumen blending g facility and production of Concrete mix gravels for roads works construction
Sector	Manufacturing
Total Cost of estimated Investment.	5,000,000\$
Shareholders	Hamud Mohamed Hamud
	Masoud Khalid Alesry
	Warda Soud Amour

### **2.2. CONSTRUCTION INDUSTRY**

The construction industry is a sector of the economy that transforms various resources into constructed physical economic and social infrastructure necessary for socio-economic development. It embraces the process by which the said physical infrastructure are planned, designed, procured, constructed or produced, altered, repaired, maintained, and demolished. The constructed infrastructures include:

- Buildings

- Transportation systems and facilities which are airports, harbours, highways, subways, bridges, railroads, transit systems, pipelines and transmission and power lines.
- Structures for fluid containment, control and distribution such as water treatment and distribution, sewage collection and treatment distribution systems, sedimentation lagoons, dams, and irrigation and canal systems.
- Underground structures, such as tunnels and mines.

The industry comprises of organizations and persons who include companies, firms and individuals working as consultants, main contractors and sub-contractors, material and component producers, plant and equipment suppliers, builders and merchants. The industry has a close relationship with clients and financiers. The government is involved in the industry as purchaser (client), financier, regulator and operator.

Tanzania's construction sector generated USD 6.7 billion (14% of GDP) in 2018 compared to USD 4 billion in 2014, representing an increase of 68%. According to the Bank of Tanzania (BoT), the growth in the construction sector was attributed to growing public investments (construction of standard gauge railway, bridges, airports, and roads, expansion of ports), as well as on-going rehabilitation of metre-gauge railway. The construction industry in Tanzania includes real estate, transport infrastructure, and other civil works, including water supply.

Tanzania Real Estate Tanzania's real estate sector contributed 4% to the country's real GDP in 2018 with USD 1.4 billion, compared to USD 1.2 billion in 2014. This represents an increase of 17% mostly driven by the increasing demand for urban accommodation.

Tanzania Water Supply Tanzania's water supply, sewerage, and waste management activity contributed nearly 1% to the country's GDP in 2018 with USD 205 million, compared to USD 164 million in 2014, representing an increase of 25%.

Tanzania Transport Infrastructure According to the country's 2025 Development Vision, investments in Tanzania's infrastructure, particularly in the development of the road network, must be the Government's top priority.

The World Bank (WB) and the African Development Bank (AfDB) support Tanzania in achieving its infrastructure development goals by providing grants and credits for projects. The WB's Infrastructure Projects in Tanzania In 2018, the WB enhanced the Tanzania Country Partnership Framework 2018-2022 (CPF) which outlines more intensive engagement in priority areas including transport. The WB's current portfolio in Tanzania includes 20 projects with a total commitment of USD 4.07 billion, most of which is dedicated to transport development. In April 2014, the WB approved the Intermodal & Rail Development Project of Tanzania to support the development of reliable railway infrastructure on the Dar es Salaam-Isaka section of the East African Central Corridor, mainly by building new terminals and reconstructing bridges.

According to the WB, the Intermodal & Rail Development Project will consequently help to promote agricultural trade and job creation across the country. In March 2015, the WB

approved the Dar es Salaam Metropolitan Development Project to improve urban services in Dar es Salaam by upgrading and building priority roads and drainage systems. In 2018, the WB approved a loan of USD 350 million to improve water supply and sanitation services in rural Tanzania.

The AfDB's Infrastructure Projects in Tanzania The focus of the projects funded by the AfDB in Tanzania is mostly on infrastructure development and governance. In 2019, the AfDB approved a USD 272.12 million loan to Tanzania for the construction of a new international airport in the capital Dodoma. Work will be carried out over four years and will include a passenger terminal, a runway, air navigation equipment. In the same year, the AfDB approved a EUR 345 million financing package for road construction in Tanzania and Kenya. The road is a key component of the East African transport corridors network, connecting Tanzania and Kenya. Producers, manufacturers, and traders will be able to move goods more quickly and cheaply.

### **2.3. TANZANIA CONSTRUCTION POLICY**

The National Construction Industry Policy takes into account of the fact that the realization of the objectives and goals of the identified priority sectors such as education, health, water, agriculture, manufacturing, tourism, mining, energy, construction, land and good governance operates on the availability of reliable, strong and competitive local construction industry which is capable of delivering quality services to its stakeholders. New investments in the construction and rehabilitation of infrastructure will be given priority parallel with the maintenance of the existing constructed facilities so as to enable speedy development of the other sectors which depend upon the performance of the local construction industry. The interim policy is anticipated to provide guidance towards the increased involvement of the local construction industry in construction activities. The Construction Industry Policy emphasises the development of an efficient and self sustaining roads network that is capable of meeting the diverse needs for construction, rehabilitation and maintenance of civil works for trunk, regional, districts and feeder roads network through the involvement of private sector. Public sector involvement in the enhancement of housing, infrastructure and other constructed facilities to assist in the mobilization of financial resources as well as capital investment will be emphasized. The pursuance of all the above general goals will be carried out in tandem with all the other key national sectoral policies, e.g. agricultural policy, land policy, investment policy, industry and trade policy, energy policy, housing policy, health, education and all other sectoral policies which have direct or indirect impact on the construction sector.

### **2.4. SOCIAL AND ECONOMIC IMPACT OF THE PROJECT**

The proposed project will result into the following social and economic impacts:

- Increase the supply of bitumen and allied products as well as concrete gravels in construction Industry in Tanzania

- Increased competitiveness among supplier of bitumen in Tanzania
- The project will provide employment for more than 200 people
- The Government and other agencies will benefit from various taxes, fees and commissions that will be paid to the Treasury etc. by Community Capital Group Limited.

## PART III

### 3.0 MANAGEMENT AND ORGANIZATION STRUCTURE

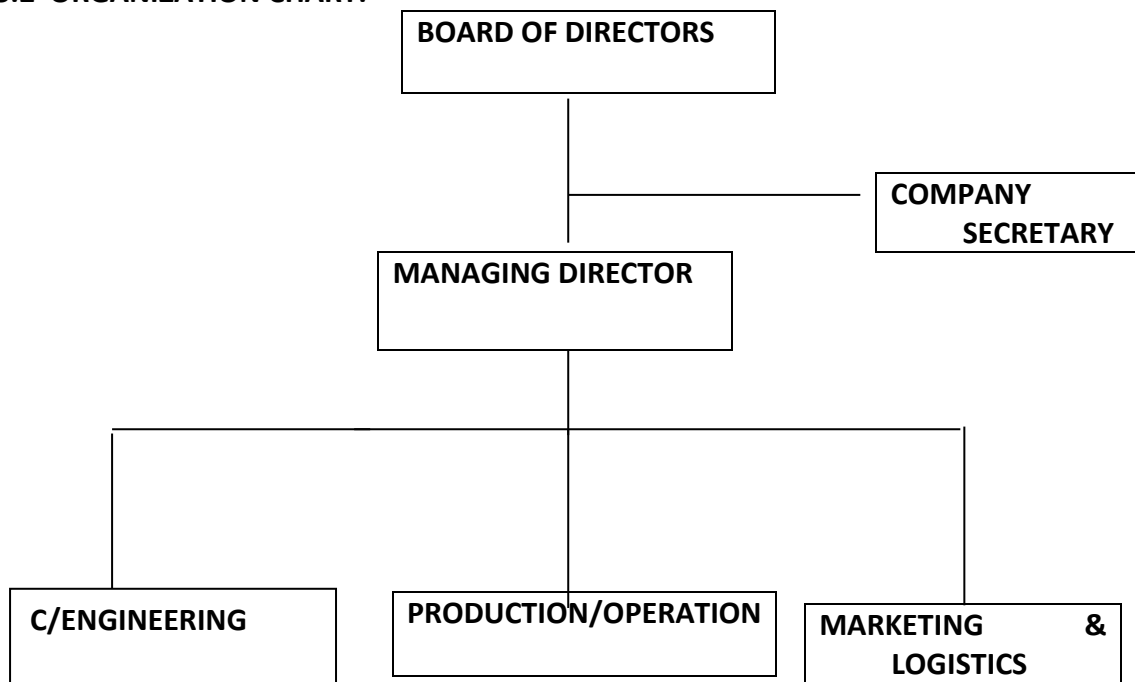
#### 3.1. PROPOSED PERSONNEL.

The organization of the envisaged manpower for the proposed project is divided into three departments namely:

- Production/Business Development.
- Marketing & Logistics
- Structural & Civil engineering

The personnel falling under the Production/Business Development shall include the Marketing and Logistics, Account Clerk, Clerical Staff, and Watchmen. Those falling under the Business Development shall be the Marketing Officer and the Sales staff. Those falling under Structural & Civil Engineering shall be Chief Engineer and Technical Officer.

#### 3.2 ORGANIZATION CHART.



#### 3.3. STAFF TRAINING.

The project is expected to employ a total of 200 people as direct Labour During Construction the total labour force to be employed will be 800. For training and educational purpose all administration and operational procedures will be written down in manuals.

### 3.4. RECRUITMENT

It has been agreed that the initial personnel to be employed by this project will be those with sufficient experiences and must have worked in reputed construction companies. Posts that require professional training, the personnel thus employed shall have been trained from recognized institutions.

## **PART IV**

### 4.0 PROJECTS ENGINEERING & TECHNOLOGY

#### 4.1 NATURE OF THE PROJECT

The project is focusing in establishing bitumen blending facility and production of Asphalt Concrete which is a composite material commonly used in construction of roads, highways, airports, parking lots, and many other types of pavement. It is commonly called simply asphalt or blacktop.

#### 4.2. TECHNICAL REQUIREMENTS OF THE PROJECT

- i) **Batch plant:**  
Mixing plants shall be of sufficient capacity to adequately handle the proposed bituminous construction in a smooth continuous operation.
- ii) **Cold Feed System.**  
The plant shall have not less than 4 cold feed bins of a width sufficient to ensure that, with the loading equipment proposed by the Contractor, each bin can be charged without spill or overflow into adjacent bins. The cold feed bins shall be fitted with an adjustable feed mechanism which shall be in good working order.
- iii) **Dryer.**  
The dryer shall be of a capacity suitable for the rated output of the plant. Its burner or burners shall be oil fired and controlled automatically by sensors to ensure the aggregate temperature remains reasonably uniform. The burners shall be in good condition and capable of producing a clean flame without leaving a residue of soot or unburnt fuel on the surface of the aggregate.
- iv) **Dust extractor.**  
The plant shall be fitted with an efficient dust extractor with water sprinkler, automatic damper control, adjustable venture and centrifugal separator and fan which shall remove the maximum possible amount of fine material from the exhaust gases. The extractor system shall have the capability of returning some or all of the extracted fine material to the hot elevator or to spoil as required.
- v) **Hot elevator.**  
The hot elevator shall be enclosed and fitted with an accurate temperature sensing device, the output from which shall be displayed in the plant's control room.
- vi) **Screens.**  
The vibrating screens shall be in good condition and of mesh sizes suitable for producing the specified mix. The screens shall be replaced if openings are larger than the nominal size due to wear.
- vii) **Hot aggregate bins.**

There shall minimum of four hot bins, each of sufficient capacity to allow continuous operation of the plant at its rated capacity. Each bin is to be fitted with a contents indicator and a temperature sensing device, each displaying its output in the plant control cabin. A suitable sampling gate shall be provided at the base of each bin. The hot bin gates shall be mechanically operated, quick acting and tight fitting.

viii) **Filler feed.**

The plant shall be fitted with separate filler feed and weighing arrangement which feeds directly into the pug mill.

ix) **Weigh box.**

The weigh box shall have a capacity greater than the rated batch size and shall be capable of being calibrated by the sequential addition of standard weights. The Contractor shall make available at all times at the plant site a range of such weights, of sizes directed by the Engineer, to enable the calibration to be checked. The output from weigh box scales shall be displayed in the control cabin.

x) **Binder proportioning device.**

Binder shall be fed into the mix by means of a spray bar fed from the plant's binder metering device. This device shall be capable of adding binder to an accuracy of within 1 kg of the required amount. It shall be capable of being calibrated and shall display its output in the control cabin. A temperature sensor shall be fitted in the binder feed line adjacent to the metering device and its output shall also be displayed in the control cabin.

xi) **Pug mill:**

The pug mill shall have a minimum rated capacity of 1000 kg of mix. It shall be of the double shaft type and its paddles, paddle tips and liners shall not be significantly worn. The clear gap between paddle tip and liner at any point shall not be more than half the maximum aggregate size in the mix. Where this limit is exceeded the paddle tips and pug mill liners shall be replaced.

xii) **Controls.**

The plant shall be fitted with fully functional automatic mixing controls. As a minimum the process from discharge of aggregates into the weigh hopper and subsequent discharge of the mix into a truck shall be controlled to pre-set requirements, which shall include mix proportions and mixing time. Manual operation for other than plant checking or start up shall not be permitted.

xiii) **Control cabin.**

The control cabin shall be an air-conditioned room separate from but having a full view of the plant. It shall contain all necessary devices to monitor all aspects of the plant from cold feed bin contents through to discharge of the mix into the truck. Where the Contractor provides his own weigh bridge to weigh trucks it shall be installed adjacent to this control cabin

xiv) **Water Sprinkler**

The water sprinkler shall have efficient spray equipment, capable of spraying a uniform film of water over the whole area to be primed.

xv) **Mechanical sweepers**

Mechanical sweepers shall be power operated, self-propelled or towed rotary brooms. All sweeping equipment shall be fitted with pneumatic tires.

xvi) **Air blowers**

Air blowers or compressors shall be designed and operated to assist in the removal of loose or deleterious material from the surface of pavement layers.

xvii) **Other Equipment**

Other equipment shall include hand brooms, reinforced paper for joints, string, nails, and all other ancillary equipment required to carry out the operation efficiently and neatly

**4.2.1 LIST OF EQUIPMENT**

LIST OF MACHINES AND EQUIPMENTS

SN	description	Qty
1	Motor Grader Caterpillar 140K	8
2	Chipping Spreader	4
3	Bitumen Sprayer (BS)	6
4	Pavement Machine	3
5	Pneumatic Roller	5
6	Road Roller	6
8	Mobile Crusher Machine	2
9	Asphalt Plant	2
10	Concrete Mixer Truck	2
11	Concrete Production Line/Plant	2
12	Tipper/damper Trucks	20
13	Water bowser truck	6
14	Fuel Tankkers truck	6
16	Batch plant	2
17	Cold feed bins	4
18	Dryer	4
19	Dust extractor	4
20	Hot elevator	2
21	Screens	4
22	Hot aggregate bins	4
24	Filler feed	2
25	Pug mill capacity of 1000 kg	2
26	Water Sprinkler	2
27	Mechanical sweepers	2
28	Air blowers	2
29	Land Cruseir Pick up	8

**4.3. OPERATIONALIZATION OF THE PROJECT**

The envisaged project will be managed and owned by a limited liability company with its head office in Chanji Sumbawanga Rukwa. However its operations shall be carried out throughout the United Republic of Tanzania. According to the company's objectives the company may open branches anywhere in the United Republic of Tanzania and outside the country.

The project is expected to be a multipurpose since it will provide premises to those who would like lease residential apartments and outlets shopping mall and Offices for the corporate institutions.

#### **4.4 LOCATION**

Sumbawanga is a fast expanding District Council bordering other regions like Katavi and Rukwa whereby there are great potential of road works construction projects.

#### **4.5 INPUTS**

The necessary inputs, which include the granite rocks and concrete gravels are abundantly available in the western regions of Tanzania. Bitumen will be imported from UEA, Pakistan or Iran. However as this is a multi-complex project and calls for several special inputs which have to be imported from outside the country, the sponsors are advised to apply for a certificate of investment incentives from the Tanzania Investment Centre.

# PART V

## 5.0 MARKET INFORMATION

### 5.1 MARKETING DEMAND

Road transport is the most widely used form of transport in Tanzania, carrying over 90% of the passengers and 75% of the freight traffic in the country.

The road network in Tanzania currently comprises 86,472 km of roads, of which 12,786 km are trunk roads, 21,105 km are regional roads and the remaining 52,581 km are district, urban and feeder roads.

Tanzania's Ministry of Works, Transport, and Communication through the Tanzania National Roads Agency (TANROADS) is managing the national road network of about 33,891km, comprising 12,786 km of trunk and 21,105 km of regional roads.

The remaining network of about 53,460km of urban, district and feeder roads is under the responsibility of the Prime Minister's Office Regional Administration and Local Government (PMO-RALG). As of 2019, more than 22% of Tanzania's national roads (6,439.29km) and 4% of its district roads (1,069.2km) are paved

The current increasing demand of paving the urban centre and rural roads under TARURA is caused by many factors. The factors governing the demand for improving roads in Tanzania are as follows:-

- Zeal of the government to connect and interconnect Inlands roads .
- Vision of the government to create access roads to every district in Tanzania.

**On the other hand, the demand for roads accessibility has been growing due to:-**

- The increase in urban population.
- Increasing standards of living.
- Reduction costs of transport both goods and movement of people.

### 5.2 ASSUMPTIONS IN ASSESSING FUTURE DEMAND

- In assessing the future demand for roads works construction and maintenance both in urban centers and rural areas in Tanzania and the potential market share, the following assumptions have been made.
- The demand for improving or upgrading roads network shall continue to increase for the next 20 years.

### **5.3 JUSTIFICATION OF THE PROJECT**

Modern Agrico Limited (T) Limited has decided aggressively to invest into this project of establishing bitumen blending facility and Asphalt concrete plant in Sumbawanga Rukwa . The Company has been impressed by the Government of Tanzania's realization of the important role played by the construction Industry in the country's economic and social development. But also has confidence that as regions like Rukwa, Kigoma and Katavi are highly are in a programme of upgrading roads network and hence will require contractors who have integrated projects which produce both bitumen and asphalt plant that support roads construction activities.

### **5.4 MARKETING STRATEGY**

The plan is to penetrate into peripheral regions where there is potential of roads construction works like west and south west regions of Tanzania.

### **5.5. SWOT ANALYSIS**

#### **5.5.1 The Strength**

The strength of Modern Agrico Limited (T) Limited depends on the experiences of managing other projects managed by sister companies. They include:-

- Strong leadership from directors
- Small team, fleet footed and able to move quickly.
- Experienced and focused Management team
- Quality products and services
- Skills in best commercial practice and ethical standards in dealing with clients

#### **5.5.2 Weakness**

The main hindrance likely to face the company is capacity to procure construction projects in neighboring country like Burundi. This has been a critical problem to most of small business in the united republic of Tanzania.

#### **5.5.3 Opportunities**

Modern Agrico Limited (T) Limited capitalizes the optional advantage of the following:-

- Stable economic and political environment
- The increased attractiveness of the country as a quality tourist destination of choice and investment.
- Invest on friendly government policies including:- Market liberalization, Lucrative investment incentive packages, Provisional of land and on aid off site infrastructure, Duty exemption on capital goods

#### **5.5.4 Threats**

Most threatening and detrimental tactics to the company operation include the following:-

- ❖ The taxation system; there still duplicity of taxes.

- ❖ Unpredictability of investments incentives facilitation system.
- ❖ Unfair competitive practices among stakeholders such as negative publicity, manpower draining and agent/client poaching.

#### **5.5.5 Pricing strategy**

Modern Agrico Limited (T) Limited will determine the pricing structure for unit per cost of production of bitumen and asphalt concrete

Modern Agrico Limited (T) Limited intends to offer best quality services that justify value for money. After three (3) years of operations the company will analyze its pricing structure once again to reflect the cost of the various components of its products and will adjust accordingly.

# PART VI

## 6.0 INVESTMENT AND FINANCING

### 6.1 SUMMARY OF CAPITAL COSTS

The planned project does not require any investment in terms of leverages for executing the activities. The essential requirement is in hard cash capital for implementing the intended buildings constructions. The Company will require a total of 5,000,000 USD to implement the project as shown in the table below.

<b>FINANCING PLAN</b>	<b>PHASE 1 AMOUNT USD \$</b>	<b>PHASE 2 AMOUNT USD \$</b>	<b>PHASE 3 AMOUNT USD \$</b>	<b>PHASE 4&amp;5 AMOUNT USD \$</b>	<b>% AMOUNT USD \$</b>
EQUITY	1,000,000	1,000,000	1,000,000	2,000,000	50
LOAN	0	0	0	0	0
<b>TOTAL FINANCING</b>	<b>1,000,000</b>	<b>1,000,000</b>	<b>1,000,000</b>	<b>2,000,000</b>	<b>100</b>

<b>PROJECT COST SUMMARY</b>	<b>PHASE 1 AMOUNT USD \$</b>	<b>PHASE 2 AMOUNT USD \$</b>	<b>PHASE 3 AMOUNT USD \$</b>	<b>PHASE 4 AMOUNT USD \$</b>	<b>TOTAL AMOUNT USD \$</b>
Land & Buildings	100,000	1,00,000	0	0	200,000
Plant Machinery & Equipment	1,000,000	1,000,000	1,000,000	1,000,000	4,000,000
Motor Vehicles	200,000	100,000	100,000	100,000	500,000
Furniture & Fittings	50,000	50,000	0	0	100,000
Pre operational Expenses	50,000	50,000	0	0	100,000
<b>Total Capital Cost</b>	<b>1,400,000</b>	<b>1,200,000</b>	<b>1,100,000</b>	<b>1,100,000</b>	<b>4,900,000</b>
Working Capital	50,000	50,000	0	0	100,000
<b>TOTAL PROJECT COST</b>	<b>1,450,000</b>	<b>1,250,000</b>	<b>1,100,000</b>	<b>1,100,000</b>	<b>5,000,000</b>

### 6.2 FINANCIAL VIABILITY

Our analysis of the financial viability of the project indicates that the operations of the proposed project are profitable and that they can generate sufficient cash to meet both short and long-term financial obligations. We have assumed that the sponsors will put more effort to ensure the project operates at rated capacity immediately after completion of construction this minimize the stagnation period.

### **6.3 FUNDAMENTAL ASSUMPTIONS**

In preparing the financial projections we made the following assumptions:-

- (a) The operating period for which the viability of the project is evaluated is five years.
- (b) The capital costs of the project **5,000,000 USD** as can be seen in the in annex table
- (c) Cost of sale is 74% of total sale over period of 5 years.
- (d) All calculations throughout the evaluation period have been taken at constant prices. We have assumed the capital expenditure to be incurred between first year to fifth year of the project implementation
- (e) Financial projections are projected at increasing rate of 12%
- (f) The project shall come into operation on 2025
- (g) Economic depreciation has been calculated based on the useful lifetime of the various capital items as can be seen below.

### **6.4 PROJECT PROFITABILITY:-**

The projected profit and loss statements of the envisaged project it shows that the initial net loss in the first year will be 264,603 USD The annexure I schedule demonstrates that the profits will be realized from the second year amounting to 263,627\$ rising up to 713,151 \$ at the end of the five year of operations. The rise in profit is quite encouraging.

### **6.5 LIQUIDITY PROJECTIONS:-**

Detailed cash flow forecasts are shown in Appendix II . These projections take into account the assumed sources and applications of funds over the planned period and show the ability of the project to meet its financial obligations and capital expenditure requirements. In the first year of operations there is a cash inflow to **699,746 USD**. However the whole cash generations seems to be reasonable with funds building up from **2,083,345 USD** in the second year of operation and accumulated to over **4,936,573.02 USD** at the end of the fifth year.

Our forecast shows a healthy cash position for the project during the review period and therefore we believe that the project will be able to honour its short and long term obligations without any undue hardships.

### **6.6 BALANCE SHEET PROJECT**

Our balance sheet calculations shown in annex III where the strength of the balance sheet demonstratives an attractive debt; equity ratio

### **6.7 FINANCIAL REVIEW:-**

Our financial review of the project demonstrates that:-

- (a) The project is profitable
- (b) The liquidity position of the project is sound and that it should be able to meet its financial obligations without any undue difficulties
- (c) The operations are financially viable.

#### **6.8 THE NATIONAL ECONOMIC BENEFITS**

The project has a number of economic benefits such as:-

- Employment during construction is anticipated to be 208 as direct labour whereas casual labour are anticipated to be more than 400 employees who will be employed.
- Revenue to the Government through rent withholding tax and property tax
- Indirect taxes from import duty on imported materials
- Increment of accommodation

#### **6.9 CONCLUSIONS**

The demand for Commercial, residential and Office premises in the City of Dar es Salaam is high and will remain so for many years to come. The city is expanding at a fast pace because it is the main gateway of Tanzania's Inland Regions, its temperate climate plus accessibility to the rest of the world are other attractions which attract many international organizations to establish their offices here than anywhere else. Furthermore, as investment continues to flow into Dar es Salaam, demand for rental premises shall increase two-fold. The demand for commercial, residential and office premises in the City of Dar es Salaam proposed project is therefore quite viable and should be supported.

**MODERN AGRICO LIMITED  
PROJECTED INCOME STATEMENTS FOR THE PERIOD FIVE  
YEARS**

**APPENDIX 1**

<b>MORDEN AGRICO LIMITED</b>					
<b>Projected Income Statement</b>					
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
	\$	\$	\$	\$	\$
<b>SALES</b>	20,505,600	24,480,000	28,454,400	28,795,853	29,141,403
<b>COST OF SALES</b>	16,517,644	19,455,200	22,395,256	22,663,999	22,935,967
<b>GROSS MARGIN</b>	3,987,956	5,024,800	6,059,144	6,131,854	6,205,436
<b>OPERATING COSTS</b>					
Advertising	17,000	18,700	20,570	20,817	21,067
Automotive	232,000	255,200	280,720	284,089	287,498
Bank charges	61,400	67,540	74,294	75,186	76,088
Business taxes	292,000	321,200	353,320	357,560	361,851
Casual wages	319,000	350,900	385,990	390,622	395,309
Depreciation	962,000	962,000	962,000	973,544	985,227
Dues, licenses and fees	125,000	137,500	151,250	153,065	154,902
Insurance	808,000	888,800	977,680	989,412	1,001,285
Interest on long-term debt	-	-	-	-	-
Management salaries	-	-	-	-	-
Miscellaneous expenses	316,000	347,600	382,360	386,948	391,592
Office costs	15,000	16,500	18,150	18,368	18,588
Postage	13,000	14,300	15,730	15,919	16,110
Professional fees	218,000	239,800	263,780	266,945	270,149
Property taxes	180,000	198,000	217,800	220,414	223,059
Repairs and maintenance	426,000	468,600	515,460	521,646	527,905
Rent	6,000	6,600	7,260	7,347	7,435
Salaries and benefits	244,860	249,757	254,752	257,809	260,903
Telephone	6,200	6,820	7,502	7,592	7,683
Utilities	124,500	136,950	150,645	152,453	154,282
	4,365,960	4,686,767	5,039,263	5,099,735	5,160,931
<b>INCOME BEFORE TAXES</b>	(378,004)	338,033	1,019,881	1,032,119	1,044,505
<b>INCOME TAXES</b>	113,401	(101,410)	(305,964)	(309,636)	(313,351)
<b>NET INCOME</b>	<b>(264,603)</b>	<b>236,623</b>	<b>713,916</b>	<b>722,483</b>	<b>731,153</b>

**APPENDIX II**

<b>MORDEN AGRICO LIMITED</b>					
<b>PROJECTED STATEMENT OF CASH FLOWS</b>					
<b>For Five Years Ending</b>					
	<b>YEAR 1</b>	<b>YEAR 2</b>	<b>YEAR 3</b>	<b>YEAR 4</b>	<b>YEAR 5</b>
	<b>\$</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
<b>CASH PROVIDED BY THE FOLLOWING ACTIVITIES</b>					
<b>OPERATING</b>					
Net earnings	(264,603)	236,623	713,916	799,586.43	895,536.81
Depreciation	962,000	962,000	962,000	1,077,440.00	1,206,732.80
	697,397	1,198,623	1,675,916	1,877,026.43	2,102,269.61
Changes in working capital accounts				-	-
Accounts receivable	(854,400)	(165,600)	(165,600)	(185,472.00)	(207,728.64)
Inventory	-	-	-	-	-
Other assets	-	-	-	-	-
Accounts payable	870,150	135,765	137,190	153,652.43	172,090.73
Income taxes payable	(113,401)	214,811	204,554	229,100.88	256,592.99
<b>Total</b>	<b>599,746</b>	<b>1,383,599</b>	<b>1,852,060</b>	<b>2,074,307.75</b>	<b>2,323,224.68</b>
<b>FINANCING</b>					
Repayment of long-term loan	-	-	-	-	-
				-	-
<b>CHANGE IN CASH</b>	<b>599,746</b>	<b>1,383,599</b>	<b>1,852,060</b>	<b>2,074,307.75</b>	<b>2,323,224.68</b>
<b>CASH, BEGINNING OF YEAR</b>	<b>100,000</b>	<b>699,746</b>	<b>2,083,345</b>	<b>2,333,346.74</b>	<b>2,613,348.34</b>
				-	-
<b>CASH, END OF YEAR</b>	<b>699,746</b>	<b>2,083,345</b>	<b>3,935,406</b>	<b>4,407,654.48</b>	<b>4,936,573.02</b>

APPENDIX III

<b>MORDEN AGRICO LIMITED</b>						
<b>PROJECTED BALANCE SHEET</b>						
<b>For Five Years Ending</b>						
	Opening	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
	\$	\$	\$	\$	\$	\$
<b>ASSETS</b>						
<b>CURRENT</b>						
Cash	100,000	699,746	2,083,345	3,935,406	4,407,654	4,936,573
Accounts receivable	-	854,400	1,020,000	1,185,600	1,327,872	1,487,217
Inventory	90,000	90,000	90,000	90,000	100,800	112,896
Other assets	-	-	-	-	-	-
<b>Total</b>	<b>190,000</b>	<b>1,644,146</b>	<b>3,193,345</b>	<b>5,211,006</b>	<b>5,836,326</b>	<b>6,536,686</b>
<b>CAPITAL ASSETS</b>						
Land	100,000	100,000	100,000	100,000	112,000	125,440
Building	100,000	100,000	100,000	100,000	112,000	125,440
Equipment	100,000	100,000	100,000	100,000	112,000	125,440
Furniture and fixtures	105,000	105,000	105,000	105,000	117,600	131,712
Leasehold improvements	5,000	5,000	5,000	5,000	5,600	6,272
Computer equipment	4,000,000	4,000,000	4,000,000	4,000,000	4,480,000	5,017,600
Automotive equipment	350,000	350,000	350,000	350,000	392,000	439,040
Other	50,000	50,000	50,000	50,000	56,000	62,720
	4,810,000	4,810,000	4,810,000	4,810,000	5,387,200	6,033,664
Accumulated depreciation	-	(962,000)	(1,924,000)	(2,886,000)	(3,232,320)	(3,620,198)
	4,810,000	3,848,000	2,886,000	1,924,000	2,154,880	2,413,466
<b>Total</b>	<b>5,000,000</b>	<b>5,492,146</b>	<b>6,079,345</b>	<b>7,135,006</b>	<b>7,991,206</b>	<b>8,950,151</b>
<b>LIABILITIES</b>						
<b>CURRENT</b>						
Accounts payable	-	870,150	1,005,915	1,143,105	1,280,278	1,433,911
Income taxes payable	-	(113,401)	101,410	305,964	342,680	383,801
Current portion of long-term	-	-	-	-	-	-
<b>Total</b>	<b>-</b>	<b>756,749</b>	<b>1,107,325</b>	<b>1,449,069</b>	<b>1,622,957</b>	<b>1,817,712</b>
<b>LONG-TERM DEBT</b>						
Long-term loan	-	-	-	-	-	-
Less current portion	-	-	-	-	-	-
<b>Total</b>	<b>-</b>	<b>756,749</b>	<b>1,107,325</b>	<b>1,449,069</b>	<b>1,622,957</b>	<b>1,817,712</b>
<b>OWNER'S EQUITY</b>						
Cash	4,500,000	4,500,000	4,500,000	4,500,000	5,040,000	5,644,800
Contributed asset value	500,000	500,000	500,000	500,000	560,000	627,200
Accumulated earnings	-	(264,603)	(27,980)	685,937	768,249	860,439
	5,000,000	4,735,397	4,972,020	5,685,937	6,368,249	7,132,439
<b>Total</b>	<b>5,000,000</b>	<b>5,492,146</b>	<b>6,079,345</b>	<b>7,135,006</b>	<b>7,991,206</b>	<b>8,950,151</b>
Increase in asset		492,146	587,199	1,055,660	856,201	958,945

**APPENDIX IV**

<b>MODERN AGRICO LIMITED</b>					
<b>Projected Operating Costs</b>					
	<b>YEAR 1</b>	<b>YEAR 2</b>	<b>YEAR 3</b>	<b>YEAR 4</b>	<b>YEAR 5</b>
	<b>\$</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
Advertising	17,000	18,700	20,570	23,038	25,803
Automotive	232,000	255,200	280,720	314,406	352,135
Bank charges	61,400	67,540	74,294	83,209	93,194
Business taxes	292,000	321,200	353,320	395,718	443,205
Casual wages	319,000	350,900	385,990	432,309	484,186
Dues, licenses and fees	125,000	137,500	151,250	169,400	189,728
Insurance	808,000	888,800	977,680	1,095,002	1,226,402
Misellaneous expenses	316,000	347,600	382,360	428,243	479,632
Office costs	15,000	16,500	18,150	20,328	22,767
Postage	13,000	14,300	15,730	17,618	19,732
Professional fees	218,000	239,800	263,780	295,434	330,886
Property taxes	180,000	198,000	217,800	243,936	273,208
Repairs and maintenance	426,000	468,600	515,460	577,315	646,593
Rent	6,000	6,600	7,260	8,131	9,107
Telephone	6,200	6,820	7,502	8,402	9,411
Utilities	124,500	136,950	150,645	168,722	188,969
<b>Total</b>	<b>3,159,100</b>	<b>3,475,010</b>	<b>3,822,511</b>	<b>4,281,212</b>	<b>4,794,958</b>

**APPENDIX V**

<b>MODERN AGRICO LIMITED</b>							
<b>Salaries &amp; Wages</b>							
			<b>YEAR 1</b>	<b>YEAR 2</b>	<b>YEAR 3</b>	<b>YEAR 4</b>	<b>YEAR 5</b>
<b>General salaries and benefits:</b>							
<u>Position:</u>	<u>Name:</u>						
<u>Directors</u>		2	60,000	61,200	62,424	63,672	64,946
<u>Mangers</u>		7	19,200	19,584	19,976	20,375	20,783
<u>Technical staffs</u>		193	125,400	127,908	130,466	133,075	135,737
<u>Clerck</u>		3	10,800	11,016	11,236	11,461	11,690
<u>Secretary</u>		3	7,200	7,344	7,491	7,641	7,794
<b>Total</b>		<b>208</b>				-	-
			222,600	227,052	231,593	236,225	240,949
	Estimated benefits (10%)		22,260	22,705	23,159	23,622	24,095
<b>Total salaries and benefits</b>			<b>244,860</b>	<b>249,757</b>	<b>254,752</b>	<b>259,847</b>	<b>265,044</b>

<b>COST INVESTMENT STRUCTURE</b>		<b>\$</b>
<b>Current assets</b>		
Working capital		100,000
Opening inventory		90,000
Other		-
		190,000
<b>Property and equipment</b>		
Land		100,000
Building		100,000
Equipment		100,000
Furniture and fixtures		105,000
Leasehold improvements		5,000
Plant		4,000,000
Trucks/Motor Vehicles		350,000
Pre-operating		50,000
		4,810,000
<b>Total assets</b>		<b>5,000,000</b>
<b>Financing</b>		
<b>Long-term liabilities</b>		
Long-term loan		-
<b>Owner's equity</b>		
Cash		4,500,000
Contributed asset value		500,000
<b>Total</b>		<b>5,000,000</b>

<b>Depreciation rates:</b>			
Depreciation will be calculated by the straight-line method			
at the following rates:			
			<u>Depreciation</u>
Land		0%	-
Building		5%	5,000
Equipment		20%	20,000
Furniture and fixtures		20%	21,000
Leasehold improvements		20%	1,000
Plant		20%	800,000
Motor Vehicles		30%	105,000
pre operating		20%	10,000
		<b>Total</b>	<b>962,000</b>

